

## DOCKETED

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*Comment Received From: Gene Nelson, Ph.D.*

*Submitted On: 6/2/2016*

*Docket Number: 16-IEPR-07*

## **DCPP and Nuclear Power - Calls to Action 06 01 16**

Attached find a set of current articles and files that I curated and summarized regarding Diablo Canyon Power Plant (DCPP) and nuclear power. There are several calls to action that are summarized on the first page, which also includes an index to this 37-page document. Please note the high capacity factor (currently over 90%) of Diablo Canyon Power Plant which is shown for Unit 2 on the first page of the document. Solar's capacity factor is about 20% and wind is about 30%. DCPP provides both voltage and frequency stability to the California power grid. On the other hand, solar and wind destabilize the power grid with random and predictable power fluctuations. Stanford researcher Mark Z. Jacobson, Ph.D. is very incorrect in his claim that nuclear power destabilizes the grid. I believe that the documented substantial fossil fuel interest donations to Stanford University's Precourt Institute for Energy influence Jacobson's conclusions. (Mark Z. Jacobson, Ph.D. was copied on this message.)

Please contact me with any questions or comments that you have. I have considerable background information and images regarding these articles and files. These materials are available upon request.

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*Additional submitted attachment is included below.*

# Californians for Green Nuclear Power

A group of independent experts supporting the continued safe operation of DCPD since 2013. <http://www.CGNP.org>

UNIT TWO			
Date of Commercial Operation		March 13, 1986	
Continuous Days	Cycle Capacity Factors		
At Pwr Record	Cycle 1	66.2%	Cycle 7 84.45%
559	Cycle 2	72.4%	Cycle 8 88.03%
Cycle 12	Cycle 3	80.6%	Cycle 9 92.78%
Lifetime Capacity Factor	Cycle 4	84.5%	Cycle 10 90.99%
Thru Previous Month	Cycle 5	86.4%	Cycle 11 90.4%
87.33%	Cycle 6	90.0%	Cycle 12 88.16%
			Cycle 13 91.51%
			Cycle 14 88.98%
			Cycle 15 85.63%
			Cycle 16 92.98%
			Cycle 17 90.68%
			Cycle 18 91.60%

DCPD Unit 2 Capacity Factors shown on side of generator. - Unit 1 performance is similar. (Photo courtesy PG&E)



2006 photo of DCPD, courtesy of the *San Francisco Chronicle*.

06 01 16 By Gene Nelson, Ph.D. , CGNP Government Liaison email: [liaison@CGNP.org](mailto:liaison@CGNP.org) cell: (805) 363 - 4697

Here are a group of relevant files regarding Diablo Canyon Power Plant (DCPD) and Nuclear Power. Key action items include getting on record as supporters of SB 968 in the California Assembly, insuring that Governor Brown supports the continued operation of DCPD, problems for nuclear power in Illinois (that we don't want repeated in California,) a call for activist comments regarding the climate harms of fugitive natural gas emissions in the CEC 16-IEPR-02 docket, and Michael Shellenberger's call for action to PG&E, California legislators, regulatory bodies, and Governor Brown to keep Diablo Canyon operating until 2065 to fight global warming, despite the current low prices for natural gas.

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BILL

[http://www.leginfo.ca.gov/pub/15-16/bill/sen/sb\\_0951-1000/sb\\_968\\_cfa\\_20160531\\_221355\\_sen\\_floor.html](http://www.leginfo.ca.gov/pub/15-16/bill/sen/sb_0951-1000/sb_968_cfa_20160531_221355_sen_floor.html)

Archived 06 01 16 by Gene A. Nelson, Ph.D. **Bold emphasis** added by GAN.

SENATE RULES COMMITTEE	SB 968
Office of Senate Floor Analyses	
(916) 651-1520	
Fax: (916) 327-4478	

**THIRD READING**

Bill No: SB 968  
Author: Monning (D), et al.  
Amended: 5/31/16  
Vote: 21

SENATE ENERGY, U. & C. COMMITTEE: 9-0, 3/29/16  
AYES: Hueso, Morrell, Cannella, Gaines, Hill, Lara, Leyva,  
McGuire, Wolk  
NO VOTE RECORDED: Hertzberg, Pavley

SENATE APPROPRIATIONS COMMITTEE: 7-0, 5/27/16  
AYES: Lara, Bates, Beall, Hill, McGuire, Mendoza, Nielsen

SUBJECT: Diablo Canyon Units 1 and 2 power plant

SOURCE: Author

DIGEST: This bill requires an assessment of the regional  
economic effect that would result from closure of the Diablo  
Canyon Power Plant.

ANALYSIS:

Existing law:

1) Authorizes the California Public Utilities Commission (CPUC)  
to fix rates, establish rules, examine records, issue  
subpoenas, administer oaths, take testimony, punish for  
contempt, and prescribe a uniform system of accounts for all  
public utilities, including electrical and gas corporations,  
subject to its jurisdiction. (Article 12 of the California  
Constitution)

- 2) Requires that all charges demanded or received by any public utility for any product, commodity or service be just and reasonable, and that every unjust or unreasonable charge is unlawful. (Public Utilities Code §451)
- 3) Authorizes the collection of funds, on a nonbypassable basis, required for site restoration when an electrical corporation's nuclear power plant is removed from service. (Public Utilities Code §379)

This bill:

- 1) Directs the CPUC to cause an assessment to be completed, by July 1, 2018, of the economic effects, and potential mitigating actions, for the region surrounding the County of San Luis Obispo that could occur if Diablo Canyon Power Plant were to temporarily or permanently shut down before the power plants current operating licenses expire or if PG&E were to decide not to pursue licensing renewal.
- 2) Requires the assessment to be conducted by an independent third party, selected by the CPUC from among qualified entities who respond to a request for proposal by the CPUC.
- 3) Requires the independent third party to consult with governmental and community-based entities in San Luis Obispo County, as well as the Center for Labor Research and Education at University of California Berkeley.
- 4) Requires the CPUC to make the assessment publicly available on its website and to place it as an agenda item on the first CPUC meeting following publication of the assessment.
- 5) Declares the need for a special law: Diablo Canyon is the only nuclear power plant operating in California.

#### **Background**

Diablo Canyon's uncertain future. There remains one operating nuclear power plant in California - PG&E's Diablo Canyon Power Plant in San Luis Obispo County. According to PG&E, the plant

produces approximately 10 percent of California's energy load and about 20 percent of PG&E's overall electricity.

Diablo Canyon is licensed by the federal Nuclear Regulatory Commission (NRC) to operate until 2024 and 2025, respectively, for units 1 and 2. In 2009, PG&E filed an application with NRC to extend Diablo Canyon's operation by 20 years. The outcome of the application is uncertain.

In addition to the application with NRC, continued operation of Diablo Canyon is subject to state permitting and regulation. Diablo Canyon sits on state tideland. It operates pursuant to leases, issued by the State Lands Commission, that expire in 2018 and 2019, for units 1 and 2, respectively. It is unknown whether the State Lands Commission will renew the leases. And, of course, the CPUC must approve ratepayer funding to pay for operation of Diablo Canyon.

These permitting uncertainties, along with the sudden and seemingly unexpected closure of the San Onofre Nuclear Generating Station (SONGS) in 2013, lead many in the region around Diablo Canyon to contemplate a future without the nuclear power plant. Whatever its other effects, **shuttering of Diablo Canyon would remove a major contributor to the economy of San Luis Obispo County and northern Santa Barbara County.**

**Bill proponents call for a study by an independent, third party that would, at a minimum, consider decreases in local tax revenues, decreases in local workforce, and indirect economic losses.** Proponents conclude that such a study, informed by the experiences of SONGS and similar facilities that have shut down elsewhere, would better prepare the communities that would be most affected by closure of Diablo, thereby enabling mitigation of the worst economic effects.

Who will pay? This bill directs the CPUC to issue a request for proposal for an independent third party, to be selected from bidding parties by the CPUC, to conduct the economic assessment of Diablo Canyon's closure. Presumably, the CPUC will require PG&E to recover the cost of the statutorily required assessment from its ratepayers.

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#### **Related/Prior Legislation**

AB 361 (Achadjian, Chapter 399, Statutes of 2015) extended the sunset date for the Nuclear Planning Assessment Special Account (NPASA) from July 1, 2019, to August 26, 2025, to continue funding emergency service programs and planning activities for the Diablo Canyon Power Plant in San Luis Obispo County. The bill passed each house of the Legislature with zero "no" votes.

SB 657 (Monning, 2015) would have required the CPUC to convene, or continue, until August 25, 2025, the independent peer review panel to review PG&E's seismic studies of PG&E's Diablo Canyon Power Plant. The bill passed the Senate on a vote of 38-0. The bill was held at the Assembly Desk.

FISCAL EFFECT:    Appropriation:        No                      Fiscal  
Com.:Yes Local:    No

According to the Senate Appropriations Committee:

One-time cost of approximately \$250,000 (Public Utilities Commission Utilities Reimbursement Account) for the CPUC to oversee the economic impact assessment process and conduct a new proceeding.

Unknown, but likely significant costs, for the completion of the assessment required by the bill (reimbursed through ratepayer funds).

**SUPPORT: (Verified 5/27/16)**

**Alliance for Nuclear Responsibility  
City of Morro Bay  
City of San Luis Obispo  
County of San Luis Obispo Board of Supervisors**

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**Economic Vitality Corporation  
Pacific Gas and Electric Company  
San Luis Coastal Unified School District  
Santa Barbara County Board of Supervisors**

**OPPOSITION: (Verified 5/27/16)**

Azul  
CodePink Women for Peace, Golden Gate Chapter  
Committee to Bridge the Gap  
Desert Protection Society  
Ecological Options Network  
Food and Water Watch  
Green Action for Health and Environmental Justice  
Green Party of San Luis Obispo  
Greenpeace  
No Nukes Action Team  
Northern Chumash Tribal Council  
Nuclear Energy Information Services  
Nuclear Hotseat  
Nuclear Information and Resource Service  
Nuclear Watch South  
People of Faith for Justice  
Physicians for Social Responsibility-Los Angeles  
Public Citizen  
Residents Organized for Safe Energy  
Rocketdyne Cleanup Coalition  
San Francisco Occupy Forum Environmental Working Group  
San Luis Obispo Mothers for Peace

San Onofre Safety  
Southern California Federation of Scientists  
Sunflower Alliance  
Teens Against Toxins  
Tri-Valley CAREs  
West Berkeley Alliance for Clean Energy and Safe Jobs  
Women For: Orange County  
Women's International League for Peace and Freedom, Santa Cruz

**ARGUMENTS IN SUPPORT: According to the author, no one can say  
for certain whether the Diablo Canyon Nuclear Power Plant will**

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**continue to operate in the near-term or long-term. Given this  
uncertainty and the region's economic reliance on the plant, it  
is critical that state regulators and the public be informed  
about the potential adverse economic impacts should the plant  
not be in operation and how to best mitigate these impacts.**

ARGUMENTS IN OPPOSITION: Opponents make numerous arguments  
against the bill, including that the assessment is unneeded  
because PG&E already commissioned a benefits assessment, and  
that the CPUC cannot be trusted to act independently of PG&E in  
selecting a third party to conduct the assessment.

Prepared by: Jay Dickenson / E., U., & C. / (916) 651-4107  
5/31/16 22:13:33

\*\*\*\* END \*\*\*\*

[http://www.leginfo.ca.gov/pub/15-16/bill/sen/sb\\_0951-1000/sb\\_968\\_bill\\_20160531\\_status.html](http://www.leginfo.ca.gov/pub/15-16/bill/sen/sb_0951-1000/sb_968_bill_20160531_status.html)  
CURRENT BILL STATUS

MEASURE : S.B. No. 968  
AUTHOR(S) : Monning (Coauthor: Senator Jackson) (Coauthor: Assembly  
Member Achadjian).  
TOPIC : Diablo Canyon Units 1 and 2 powerplant.  
HOUSE LOCATION : SEN  
+LAST AMENDED DATE : 05/31/2016

TYPE OF BILL :  
Active  
Non-Urgency  
Non-Appropriations  
Majority Vote Required  
Non-State-Mandated Local Program  
Fiscal  
Non-Tax Levy

LAST HIST. ACT. DATE: 05/31/2016  
LAST HIST. ACTION : Read second time and amended. Ordered to third  
reading.



FILE : SEN THIRD READING  
FILE DATE : 06/01/2016  
ITEM : 53

COMM. LOCATION : SEN APPROPRIATIONS

TITLE : An act to add Section 712.5 to the Public Utilities  
Code, relating to electricity.

AMENDED IN SENATE MAY 31, 2016

AMENDED IN SENATE MARCH 31, 2016

AMENDED IN SENATE MARCH 14, 2016

## SENATE BILL

**No. 968**

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**Introduced by Senator Monning**  
**(Coauthor: Senator Jackson)**  
(Coauthor: Assembly Member Achadjian)

February 8, 2016

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An act to add Section 712.5 to the Public Utilities Code, relating to electricity.

### LEGISLATIVE COUNSEL'S DIGEST

SB 968, as amended, Monning. Diablo Canyon Units 1 and 2 powerplant.

Under existing law, the Public Utilities Commission has regulatory authority over public utilities, including electrical corporations. The Diablo Canyon nuclear powerplant, composed of reactor Units 1 and 2, is operated by the Pacific Gas and Electric Company in the County of San Luis Obispo. Existing law requires the commission to convene, or continue, until August 26, 2025, an independent peer review panel to conduct an independent review of enhanced seismic studies and surveys of the Diablo Canyon Units 1 and 2 powerplant, including the surrounding areas of the facility and areas of nuclear waste storage.

This bill would ~~direct the commission to require the Pacific Gas and Electric Company to submit an assessment,~~ *require the commission to cause an assessment to be completed by no later than July 1, 2018,* conducted by an independent 3rd party, selected as specified, of the adverse and beneficial economic impacts, and net economic effects,

that could occur, and of potential ways for the state and local jurisdictions to mitigate the adverse economic impact, if the Diablo Canyon Units 1 and 2 powerplant were to temporarily or permanently shut down before the powerplant's current operating licenses expire or if the Pacific Gas and Electric Company were to decide not to pursue license renewal. ~~The bill would require the commission to consider any further assessments or reviews needed that could assist local efforts to prepare for a closure of the Diablo Canyon Units 1 and 2 powerplant.~~

This bill would make legislative findings and declarations as to the necessity of a special statute for the Pacific Gas and Electric Company.

Vote: majority. Appropriation: no. Fiscal committee: yes.  
State-mandated local program: no.

*The people of the State of California do enact as follows:*

- 1 SECTION 1. Section 712.5 is added to the Public Utilities
- 2 Code, to read:
- 3 712.5. (a) (1) ~~The commission shall require the Pacific Gas~~
- 4 ~~and Electric Company to submit an assessment, cause an~~
- 5 ~~assessment to be completed by~~ no later than July 1, 2018, of the
- 6 adverse and beneficial economic impacts for the region surrounding
- 7 the County of San Luis Obispo, and the net economic effects on
- 8 that region, that could occur if the Diablo Canyon Units 1 and 2
- 9 powerplant were to temporarily or permanently shut down before
- 10 the powerplant's current operating licenses from the Nuclear
- 11 Regulatory Commission expire or if the Pacific Gas and Electric
- 12 Company were to decide not to pursue license renewal. The
- 13 assessment shall include a review, as described in paragraph (4)
- 14 of subdivision (b), of potential actions for the state and local
- 15 jurisdictions to consider in order to mitigate the adverse economic
- 16 impact of a shutdown.
- 17 (2) The assessment shall be conducted by an independent third
- 18 party, selected in accordance with paragraph (1) of subdivision
- 19 (c).
- 20 (b) The assessment shall consist of, but not be limited to, all of
- 21 the following:
- 22 (1) Estimates of any ~~decreases~~ *changes* in local tax revenues,
- 23 ~~decreases~~ *changes* in workforce populations, ~~losses~~ *changes* in
- 24 indirect or induced economies, and potential impacts to ratepayers
- 25 from ~~an early~~ *a* shutdown.

1 (2) A review of the economic impacts that affected the region  
2 surrounding the San Onofre Nuclear Generating Station after it  
3 was decommissioned by the Southern California Edison Company  
4 and of the relevant decommissioning plans of the San Onofre  
5 Nuclear Generating Station.

6 (3) A review of regions in the United States similar to the region  
7 surrounding the County of San Luis Obispo that have experienced  
8 the decommissioning of a nuclear powerplant and of the resulting  
9 economic impacts of the decommissioning on those regions.

10 (4) Identification of any contingency plans that could mitigate  
11 the adverse economic impact of a shutdown to state and local  
12 jurisdictions, the local workforce, and entities receiving enhanced  
13 tax revenue.

14 ~~(c) (1) The commission shall require the Pacific Gas and~~  
15 ~~Electric Company to issue a request for proposal for the~~  
16 ~~independent third party that will ensure that the selected party is~~  
17 ~~able to make an independent review and analysis of the data~~  
18 ~~described in subdivision (b). The commission shall make the final~~  
19 ~~selection of the independent third party from the list of qualified~~  
20 ~~bidders.~~

21 (2) The independent third party shall consult with the Board of  
22 Supervisors of the County of San Luis Obispo, the governing board  
23 of the San Luis Coastal Unified School District, *the Center for*  
24 *Labor Research and Education at the University of California at*  
25 *Berkeley, the regional economic development group of the County*  
26 *of San Luis Obispo, and other relevant governmental entities or*  
27 *community-based organizations to assist in an accurate assessment*  
28 ~~of decreases in local tax revenues. the economic and workforce~~  
29 ~~impacts of a shutdown.~~

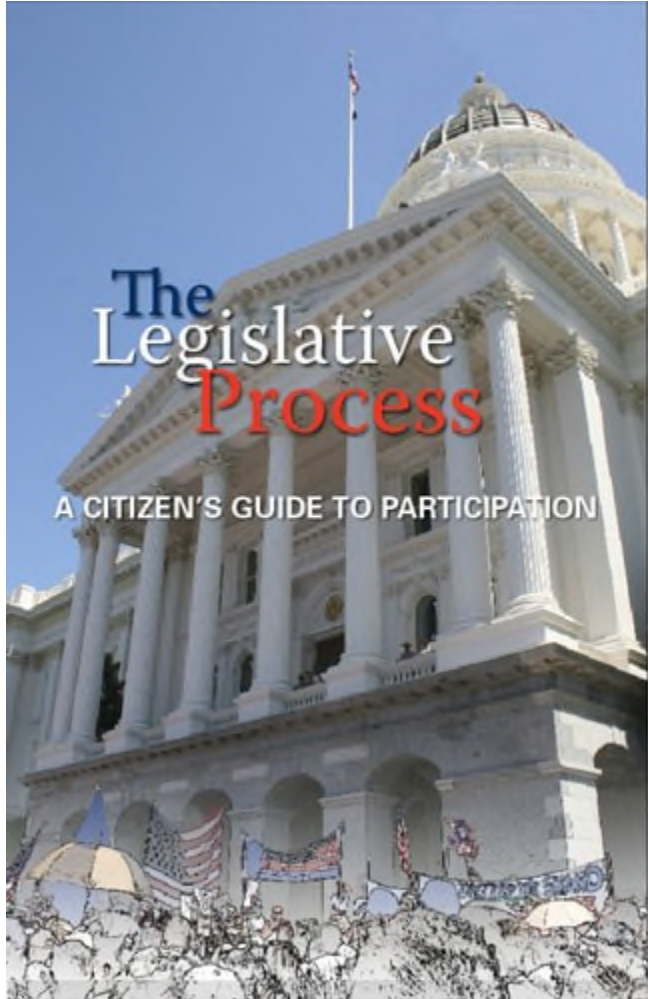
30 (d) The commission shall make the assessment publicly available  
31 on its Internet Web site and place it as an item on the agenda at  
32 the next commission meeting after the assessment is made publicly  
33 available for purposes of collecting and recording public comment,  
34 and hold any subsequent public meetings as necessary. *comment.*

35 ~~(e) The commission shall consider any further assessments or~~  
36 ~~reviews needed that could assist local efforts in the region~~  
37 ~~surrounding the County of San Luis Obispo to prepare for a closure~~  
38 ~~of the Diablo Canyon Units 1 and 2 powerplant and make those~~  
39 ~~considerations and findings publicly available.~~

1 SEC. 2. The Legislature finds and declares that a special law  
2 is necessary and that a general law cannot be made applicable  
3 within the meaning of Section 16 of Article IV of the California  
4 Constitution because, currently, the Diablo Canyon Units 1 and 2  
5 powerplant, owned and operated by the Pacific Gas and Electric  
6 Company, is the last operating nuclear powerplant in California  
7 and its continued operation is uncertain as Diablo Canyon Units  
8 1 and 2 are only authorized to operate until 2024 and 2025,  
9 respectively. Local communities were ill-prepared and given no  
10 notice after the sudden closure of the San Onofre Nuclear  
11 Generating Station was announced on June 7, 2013, and the state  
12 is still responding, at significant cost, to the sudden, permanent,  
13 and unexpected loss of baseline electricity. Therefore, an  
14 assessment is needed ~~from the Pacific Gas and Electric Company~~  
15 on the economic impact specific to a shutdown of the Diablo  
16 Canyon Units 1 and 2 powerplant to provide the state, and local  
17 communities, with valuable and necessary information to plan and  
18 prepare for that circumstance, if needed.

# California Legislative Process

<http://senate.ca.gov/legislativeprocess> Archived 06/01/16 by Gene A. Nelson, Ph.D. GAN Note: S.B. 968 passed the third reading in the California Senate on 05/31/16. Thus, SB 968 goes next to the California Assembly as noted in the bolded sentence on page 3 of 4.



[How your idea becomes a bill](#)

[What to do when your bill goes to Policy Committee](#)

[What if your bill goes to a Fiscal Committee?](#)

[After your bill passes the House of Origin and goes to the Second House](#)

[You can still act after your bill goes to the Governor](#)



## Step 1: How Your Idea Becomes A Bill

All legislation starts off as an idea. These ideas can come from anybody and the process begins when either an individual or group persuades a Member of the Legislature to author a bill. The Member then sends the idea and the language for the bill to the Legislative Counsel's Office, where it is drafted into the actual bill. The drafted bill is returned to the legislator for his or her review. Persons or groups that originated the idea for the bill may also review it to ensure that the provisions they desire are in the bill in the correct form. If the author is a Senator, the bill is introduced at the Senate Desk; if an Assemblymember, at the Assembly Desk, where it is assigned a number and read for the first time.

## Step 2: What To Do When Your Bill Goes To Policy Committee

The bill then goes to the Senate or Assembly Rules Committee, where it is assigned to a policy committee. You can find out where your bill is assigned by calling the author. Since bills are not heard in policy committee until 30 days after they have been introduced and printed, there is plenty of time to investigate a bill or contact your legislator to communicate your position on the bill.



Each bill must appear in the [Daily File](#) for four days prior to being heard in a committee. The Daily File is the agenda of the day's business, together with public notice of bills set for committee hearings. By checking the File, you can keep track of bills that are being scheduled for committee. If you live out of town and plan to testify at the hearing, it is a good idea to call the author or your legislator to make sure that the bill is going to be heard on that date. Sometimes bills are taken off the agenda at the last moment.

At this point, the role of the District Office should be emphasized. District Office staff are there to serve the needs of constituents. They can be extremely helpful in making contacts and getting information from Sacramento.

It is a good idea to schedule a meeting with your legislator while he or she is in the district. Communicate your concerns regarding legislation. Indicate that you want to work with the Member's office on a particular issue.

Most bills generate support and opposition from a variety of groups. Find out who these groups or individuals are by calling the author's office where lists of the letters and phone calls received on each bill are kept. A good strategy is to align yourself with the groups that hold your position

and work together to talk to the members of the committee BEFORE the bill is heard. Keep your letters and discussions with the legislators short



and to the point.

When testifying before the committee, first state your name and the organization that you represent or indicate that you are a concerned citizen and state where you live. The Members of the committee will be interested to hear what you have to say and usually do not grill individual citizens who testify in the same way that they do lobbyists. Keep your testimony short and to the point.

### Step 3: What If Your Bill Goes To A Fiscal Committee?

If the bill has a fiscal impact or a state cost, it will be heard in either the Senate or Assembly Appropriations Committee. At this point, you should inform the Members of the committee why you support or oppose the bill based on a fiscal argument. The finance committees are concerned about fiscal impact and not policy considerations.

Try to see the staff analysis that has been done on the bill by the policy committee, the Department of Finance, and/or the Legislative Analyst. Members of the fiscal committees read these analyses before they vote. These analyses are available on the Internet.

If you believe that the numbers or the fiscal impact of the bill are not correct as reported in these analyses, you should prepare your written comments before the committee meets. Your written material should be available to pass out to the committee Members at the hearing where you present your testimony.

After the bill passes the fiscal committee, it is read for the second time on the Floor.

### Step 4: After Your Bill Passes The House Of Origin And Goes To The Second House

**Third Reading is the last stage that a bill goes through in the house of origin before it passes to the second house to go through the committee process all over again.** On Third Reading, the author presents the bill for passage by the entire house. Most bills require a majority vote (it must pass by 21 votes in the Senate and 41 votes in the Assembly), while urgency measures and appropriation bills require a two-thirds vote (27 in the Senate, 54 in the Assembly).



At any time during the legislative process the bill may be amended, either in committee or on the Floor. After the amendments have been submitted to the author, the bill goes to another printing to reflect the changes that have been made. The Senate or Assembly History records the dates when a bill has been amended. Amendments can be substantial or technical and may affect your position on the bill.



Amendments should be followed very carefully. Contact with the District Office can be helpful in keeping track of current versions of a bill. If you subscribe to the bill, these amendments will automatically be sent to you. If you change your position on a bill due to a favorable or unfavorable amendment, you should inform the author and your legislator.

If a Senate bill is amended by the Assembly, or vice versa, and the house of origin refuses to concur in those amendments, the bill will go to a conference committee. If the house of origin does concur, the bill goes to the Governor.

Members of the conference committee are appointed by the Rules Committees; three members from the Senate and three from the Assembly meet to negotiate out the differences. If they agree on a single version, it goes back to both Floors for approval.

Communicate to your legislator or the author which amendments you prefer and why. The conference committee meetings, particularly at the end of the two-year legislative session, are scheduled quickly and can be easily missed. You must stay in close contact with the author's staff to stay on top of fast-breaking developments. It is also important to know who will be serving on the conference committee so you can inform them of your position.

## **Step 5: You Can Still Act After Your Bill Goes To The Governor**

The Governor has 12 days to sign, approve without signing, or veto a bill. A letter or phone call to the Governor's Office is appropriate to state your position on the bill.



If the bill is signed or approved without a signature, it goes to the Secretary of State to be chaptered. If the Governor vetoes the bill, a two-thirds vote in each house is needed to override the veto. The Governor's Office releases veto messages which explain the veto; these messages are available from the Governor's Office and on the Internet.

A wealth of legislative information is now available on the Internet. You can get bills, amendments, staff analyses, committee agendas, and other legislative information, plus a simple way to track legislation.

For more information, ask your Senator's office for a copy of the brochure, *"The California State Senate on the Internet: How to Use Your Computer to Find Legislative Information and Participate in California's Lawmaking Process."*



## Capitol Alert

The go-to source for news on California policy and politics

### AM Alert: Brown to talk climate change at San Francisco event

Date: Wed, 01 Jun 2016 07:01:13



The day after Gov. **Jerry Brown** [officially endorsed Hillary Clinton](#) for president and chided **Donald Trump's** description of global warming as a hoax, the state's most outspoken climate change advocate will take the stage at an inaugural meeting of subnational governments that support clean energy.

**Gov. Brown will speak at the Subnational Clean Energy Ministerial today**, a two-day event bringing together leaders of regions, provinces, states and cities around the world with similar goals of reducing greenhouse gas emissions by 2050.

Dubbed SubCEM, the event begins this morning at 9 a.m. and coincides with the seventh Clean Energy Ministerial, which gathers national energy ministers and high-ranking delegates from 23 member countries and the European Commission, also in San Francisco.

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## Photo Release: Governor Brown Convenes Inaugural Subnational Clean Energy Ministerial in San Francisco

6-1-2016 <https://www.gov.ca.gov/home.php> Archived 06 01 16 by Gene A. Nelson, Ph.D.



Image 1 of 2

CLOSE X



Image 2 of 2

CLOSE X

**Photo captions:**

- 1) Governor Brown delivers keynote remarks at the inaugural SubCEM.
- 2) Governor Brown signs Pacific Coast Collaborative agreements with Oregon Governor Kate Brown, Washington Governor Jay Inslee, San Francisco Mayor Ed Lee and Oakland Mayor Libby Schaaf.

Photo Credit: Joe McHugh, California Highway Patrol. For high resolution copies of these images, contact Danella Debel at [Danella.Debel@gov.ca.gov](mailto:Danella.Debel@gov.ca.gov).

***Signs New Pacific Coast Collaborative Agreements, Welcomes Seven New Under 2 MOU Climate Agreement Signatories***

SAN FRANCISCO - Governor Edmund G. Brown Jr. today convened leaders from states, cities and provinces from around the world at the inaugural Subnational Clean Energy Ministerial (SubCEM) in San Francisco to highlight regional clean energy and climate action and collaboration. At the event Governor Brown also joined fellow Pacific Coast Collaborative members, Oregon Governor Kate Brown, Washington Governor Jay Inslee, British Columbia Environment Minister Mary Polak and officials from major West Coast cities to announce new efforts to reduce emissions and combat climate change and welcomed seven new signatories - including the first state from India - to the Under 2 MOU climate agreement.

"This is important that you're here - that's big - but the threat and the task, the complexity, the cost and the political resistance is formidable. So this is not for the faint of heart, this business of climate change is not for wimps," said Governor Brown. "We have to renew our commitment, we have to deepen our understanding, we have to intensify our effort."

The two [Pacific Coast Collaborative](#) agreements signed today include:

**[The Pacific Coast Climate Leadership Action Plan](#):** An agreement between Pacific Coast Collaborative members California, Oregon, Washington and British Columbia, which reaffirms the key climate and clean energy commitments made in [2013](#) and extends regional collaboration in new ways, including: establishing a consistent approach for monitoring and reporting on emissions of short-lived climate pollutants such as methane and black carbon, with the aim of establishing reduction targets by 2020; promoting integration of electricity grids in Western states and increasing opportunities for cross-national energy sharing; increasing climate resilience through collaboration on drought preparedness, wildfire risk mitigation and forest restoration; and accelerating the transition to zero-emission vehicles (ZEVs) through support for a comprehensive Pacific Coast charging network and bulk vehicle purchasing programs.

**[The Pacific North America Climate Leadership Agreement](#):** A pact between Pacific Coast Collaborative members California, Oregon, Washington and British Columbia, as well as the City of Vancouver, British Columbia and U.S. cities Los Angeles, San Francisco, Oakland, Seattle and Portland in which the jurisdictions commit to achieve an 80 percent reduction in greenhouse gases by 2050 through collaboration in several areas. These include strategies to enhance the regional ZEV market; implementation of benchmarking and disclosure programs for energy use by large buildings; aiming for energy data reporting from at least 75 percent of eligible large building square footage; and reducing carbon emissions from food waste through organic waste prevention and recovery initiatives such as composting and food redistribution.

Additionally, as part of the day's events, Governor Brown welcomed seven jurisdictions - Telangana, India; Veneto, Italy; Laikipia County, Kenya; City of Budapest, Hungary; City of Santiago, Chile; City of Sacramento, USA; and the City of Portland, USA - as new signatories to the [Under 2 MOU](#) climate agreement, the global pact among cities, states and countries to limit the increase in global average temperature to below 2 degrees Celsius. A total of 135 jurisdictions representing 32 countries and six continents have now signed or endorsed the Under 2 MOU. Together, they represent more than 783 million people and \$21 trillion in GDP, equivalent to more than a quarter of the global economy. Signatories commit to either reducing greenhouse gas emissions 80 to 95 percent below 1990 levels by 2050 or achieving a per capita annual emission target of less than 2 metric tons by 2050.

Earlier in the day, Governor Brown gave keynote remarks and participated in a panel on subnational leadership in renewable energy with Governors Inslee and Brown and Environment Minister Polak to discuss the rapid scaling and expansion of renewable energy worldwide.

Tomorrow, Governor Brown will give remarks at the [seventh Clean Energy Ministerial \(CEM7\)](#), an annual meeting of national energy ministers and other high-level delegates from 23 member countries and the European Commission. The SubCEM and CEM7 events represent an opportunity to discuss how states, provinces, cities and countries will follow through on the commitments made at the UN Climate Change Conference in Paris, where Governor Brown and U.S. Secretary of Energy Ernest Moniz [first announced that California would host the CEM7](#).

### **California's Leadership on Climate Change**

**While California emits around 1 percent of the world's greenhouse gases**, the state is playing a leading role in broadening collaboration among subnational leaders.

In the past year, the Governor has traveled to the [United Nations](#) headquarters in New York, the United Nations Climate Change Conference in [Paris](#), the [Vatican](#) in Italy and the Climate Summit of the Americas in [Toronto](#), Canada to call on other leaders to join California in the fight against climate change.

Governor Brown also joined an [unprecedented alliance](#) of heads of state, city and state leaders - convened by the World Bank Group and International Monetary Fund - to urge countries and companies around the globe to put a price on carbon.

These efforts build on a number of other international climate change agreements with leaders from [the Czech Republic](#), [the Netherlands](#), [Mexico](#), [China](#), [Japan](#), [Israel](#), [Peru](#) and [Chile](#) and Governor Brown's efforts to convene hundreds of world-renowned researchers and scientists around a [groundbreaking call to action](#) - called the consensus statement - which translates key scientific climate findings from disparate fields into one

unified document.

Last October, Governor Brown signed [landmark legislation](#) - **SB 350** - to double the rate of energy efficiency savings in California buildings and **generate half of the state's electricity from renewable sources by 2030**. Governor Brown also committed to reduce today's petroleum use in cars and trucks by up to 50 percent within the next 15 years; make heating fuels cleaner; reduce the release of methane, [black carbon and other potent pollutants](#) across industries; and manage farm and rangelands, forests and wetlands so they can store carbon.

**Additionally, the Governor issued an [executive order](#) last year to reduce greenhouse gas emissions in California 40 percent below 1990 levels by 2030** - the most ambitious target in North America and consistent with California's existing commitment to reduce emissions 80 percent under 1990 levels by 2050.

The impacts of climate change are already being felt in California and will disproportionately impact the state's most vulnerable populations.



<http://www.utilitydive.com/news/time-runs-out-on-exelon-dynegy-bills-in-last-day-of-illinois-legislative-s/420091/>  
Archived 06/01/16 by Gene A. Nelson, Ph.D.

## Utility Dive

# Time runs out on Exelon, Dynegy bills in last day of Illinois legislative session

By Gavin Bade, Robert Walton | May 31, 2016

### Dive Brief:

The Illinois Legislature adjourned its session on Tuesday without addressing two bills put forward by generators Exelon and Dynegy that would have significantly altered the state's electric power industry.

Exelon's bill, the Next Generation Energy Plan, which was proposed with its utility subsidiary ComEd, would have subsidized struggling nuclear plants, altered the state's renewable portfolio standard, and reformed utility revenue models and rate structures. Without it, Exelon has said it may need to close down nuclear plants in the state.

The Dynegy bill would have integrated all of Illinois into the PJM electricity markets, shifting the southern portion of the state from its current membership in MISO, where its plants are making less revenue in power auctions.

### Dive Insight:

State Sen. Donne Trotter (D), lead sponsor of the Exelon bill, told the News-Gazette yesterday that "time has run out" on the bill to save the company's nuclear generation, and roughly 700 Illinois jobs.

"I'm disappointed because I saw and heard, by sitting in those meetings, that there was some movement," Trotter told the paper. "It was just one or two entities — and I'm not going to name them — who I think were intentionally slowing the process down. All of that was in motion so I'm disappointed that two days before we get out of here that action that was needed to pull the trigger didn't happen."

Exelon issued a statement saying the future for the legislation "remains unclear," and promised "we'll have more to say about the path forward within the next few days."

The company had said it would close the Clinton nuclear plant in 2017 absent help from the state, and a second plant, Quad Cities, would shut down in 2018. The company's plan would have added about \$0.25 to a customer's average monthly bill.

While the Next Generation Energy Plan is a vehicle to save Exelon's plants, [the legislation went far beyond that \(http://www.utilitydive.com/news/updated-exelon-says-2-nuke-plants-on-the-line-in-sweeping-new-illinois-ene/418730/\)](http://www.utilitydive.com/news/updated-exelon-says-2-nuke-plants-on-the-line-in-sweeping-new-illinois-ene/418730/). A compilation of three bills that failed to pass last session, the measure

included creation of a Zero Emission Standard that would provide make-whole payments to the Clinton and Quad City nuclear plants, along with \$140 million to accelerate the solar industry.

For ComEd, the bill would have allowed it to [institute residential demand charges \(http://www.utilitydive.com/news/comed-jumps-on-the-demand-charge-train-with-new-illinois-proposal/418735/\)](http://www.utilitydive.com/news/comed-jumps-on-the-demand-charge-train-with-new-illinois-proposal/418735/), earn a regulated rate of return on energy efficiency investments, and expand its microgrid pilot projects in Chicago. The bill was a key building block in the utility's transition to a distribution platform provider, ComEd CEO Anne Pramaggiore [told Utility Dive \(http://www.utilitydive.com/news/chicagos-rev-how-comed-is-reinventing-itself-as-a-smart-energy-platform/416623/\)](http://www.utilitydive.com/news/chicagos-rev-how-comed-is-reinventing-itself-as-a-smart-energy-platform/416623/) in an interview this spring.

Dynegy's bill, proposed just last week, would have integrated all of Illinois into the PJM electricity market, helping the company's plants in the south of the state access higher capacity prices and earn more revenue.

Dynegy has long been critical of the MISO market structure, which includes both vertically-integrated utilities along with competitive power providers like Dynegy itself. Many of the states in PJM, on the other hand, leave all the generation business to competitive suppliers while utilities only own the transmission and distribution grids.

"We knew it would be a challenge when the legislature is working through competing budget shortfall issues," David Onufer, a communications manager at Dynegy, told RTO Insider. "We will continue to work with the legislature and other interested parties throughout the summer to implement a comprehensive energy solution for Illinois."

### Recommended Reading

The News-Gazette: [Sponsor: No vote on Exelon bill; future of Clinton plant unclear \(http://www.news-gazette.com/news/local/2016-05-30/sponsor-no-vote-exelon-bill-future-clinton-plant-unclear.html\)](http://www.news-gazette.com/news/local/2016-05-30/sponsor-no-vote-exelon-bill-future-clinton-plant-unclear.html)

RTO Insider: [Ill. Lawmakers Fail to Address Exelon, Dynegy Legislation \(http://www.rtoinsider.com/illinois-legislature-exelon-27301/\)](http://www.rtoinsider.com/illinois-legislature-exelon-27301/)

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Top Image Credit: [Jason Dunnivant \(http://www.flickr.com/photos/mad\\_cows/1449765748/\)](http://www.flickr.com/photos/mad_cows/1449765748/)

Filed Under:

[Generation](#)



## DOCKETED

<b>Docket Number:</b>	16-IEPR-02
<b>Project Title:</b>	Natural Gas
<b>TN #:</b>	211616
<b>Document Title:</b>	Notice of Joint Agency Symposium/IEPR Workshop on Methane Emissions from CA's Natural Gas System: Challenges and Solutions
<b>Description:</b>	Public Notice of Workshop on June 6 and 7, 2016 at CalEPA Headquarters
<b>Filer:</b>	Laura Laurent
<b>Organization:</b>	California Energy Commission
<b>Submitter Role:</b>	Commission Staff
<b>Submission Date:</b>	5/23/2016 4:37:00 PM
<b>Docketed Date:</b>	5/23/2016



In the matter of:

*2016 Integrated Energy Policy Report  
Update (2016 IEPR Update)*

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) Docket No. 16-IEPR-02  
)  
) JOINT AGENCY WORKSHOP  
)  
) RE: Methane Emissions from  
) California's Natural Gas System

## **Notice of Joint Agency Symposium/IEPR Workshop on Methane Emissions from California's Natural Gas System: Challenges and Solutions**

The California Energy Commission's staff will conduct a joint agency workshop with staff from the California Air Resources Board and the California Public Utilities Commission to discuss methane emissions from California's natural gas system as part of the *2016 Integrated Energy Policy Report Update (2016 IEPR Update)* proceeding. Commissioner Karen Douglas is the Lead Commissioner for the *2016 IEPR Update*. Commissioner Douglas and other Commissioners at the Energy Commission may attend and participate in the workshop.

The purpose of the workshop is to bring industry, academics, government and non-government entities, and other interested stakeholders together to:

- Discuss the current understanding of methane emissions across the natural gas supply chain,
- Share ideas to increase knowledge and inform policies,
- Foster stakeholder interaction on current research and promote dialogue for next steps.

This two-day workshop will be held:

**Monday, June 6, 2016, at 8:15 a.m.**  
**Tuesday, June 7, 2016, at 9:00 a.m.**  
**Cal/EPA Headquarters Building**  
1001 I Street  
Byron Sher/Sierra Hearing Room  
Sacramento, California  
Wheelchair Accessible

This workshop will be webcast. You may access the webcast at the Cal/EPA's homepage at [www.calepa.ca.gov/broadcast/?BDO](http://www.calepa.ca.gov/broadcast/?BDO)

### **Background**

Methane, the primary component of natural gas, is also a potent greenhouse gas. Emissions from the natural gas system could undermine the climate benefit of using

conventional natural gas as a bridging fuel to renewable energy sources. The current research shows that emissions exist in all parts of the natural gas system, from production to behind-the-meter consumption. It is important to bring together different stakeholders and interested entities to identify appropriate approaches to characterize and mitigate the impact of methane emissions from California's natural gas system.

An in-depth look at methane emissions and reduction opportunities related to California's consumption of natural gas is important given California-based initiatives to reduce methane emissions, federal methane regulations introduced in 2015, and Governor Brown's emergency proclamation on the gas leakage at the Aliso Canyon Natural Gas Storage Facility.

## **Agenda**

This workshop will convene representatives of state agencies, researchers and stakeholders to discuss methane emissions from California's natural gas system. Sessions will focus on emissions from all parts of the natural gas systems and discuss the options offered by current science and technology to detect, measure, and reduce emissions related to natural gas use in California.

The workshop will include presentations and panel discussions on current research initiatives and findings, measurement technologies, stakeholder perspectives and future research needs. A showcase will feature current and emerging methane leak detection and quantification technologies. Opportunities to provide public comment will be provided as well.

## **Written Comments**

Written comments should be submitted to the Dockets Unit by **4:00 p.m. on June 21, 2016**. All written comments will become part of the public record of this proceeding.

**For the 2016 IEPR Update, the Energy Commission is using an electronic commenting system.** Visit the website at [http://www.energy.ca.gov/2016\\_energypolicy/](http://www.energy.ca.gov/2016_energypolicy/) and click on the "Submit e-Comment" link in the "Proceeding Information" box. From the drop down menu, please select the appropriate docket number. For this workshop, please select docket **16-IEPR-02 – Natural Gas**.

This will take you to the page for adding comments to that docket. Please enter your contact information and comment title. Under "subject(s)," select "IEPR 2016-06-06/07 Workshop" and "IEPR public comments." You may include comments in the box titled "Comment Text" or attach a file with your comments. Attached comments must be in a Microsoft® Word (.doc, .docx) or Adobe® Acrobat® (.pdf) formatted file.

The Energy Commission encourages use of its electronic commenting system, but written comments may also be submitted by e-mailing them to the Dockets Office, or by U.S. Mail to:

California Energy Commission  
Dockets Office, MS-4  
Re: Docket No. 16-IEPR-02  
1516 Ninth Street  
Sacramento, CA 95814-5512

If you choose not to use the electronic filing system, please include the appropriate docket number on any e-mailed or written comments. Comments may be e-mailed to [docket@energy.ca.gov](mailto:docket@energy.ca.gov) and copy the technical lead, Yu Hou, by e-mail at [yu.hou@energy.ca.gov](mailto:yu.hou@energy.ca.gov).

Please note that your electronic, e-mailed, written, and oral comments, attachments, and associated contact information (for example, address, phone, and e-mail) become part of the viewable public record. Additionally, this information may become available via Google, Yahoo, and other search engines.

## **Public Adviser and Other Commission Contacts**

The Energy Commission's Public Adviser's Office provides the public assistance in participating in Energy Commission proceedings. If you want information on how to participate in this forum, please contact the Public Adviser, Alana Mathews, by e-mail at [PublicAdviser@energy.ca.gov](mailto:PublicAdviser@energy.ca.gov) or (916) 654-4489, or toll free at (800) 822-6228.

If you have a disability and require assistance to participate, please contact Lou Quiroz by e-mail at [lou.quiroz@energy.ca.gov](mailto:lou.quiroz@energy.ca.gov) or (916) 654-5146 at least five days in advance.

Media inquiries should be sent to the Media and Public Communications Office by e-mail at [mediaoffice@energy.ca.gov](mailto:mediaoffice@energy.ca.gov) or (916) 654-4989.

If you have questions on the technical subject matter of this meeting, please contact Yu Hou, by e-mail at [yu.hou@energy.ca.gov](mailto:yu.hou@energy.ca.gov) or (916) 327-1544. For general questions regarding the IEPR proceeding, please contact Raquel Kravitz, IEPR project manager, by e-mail at [raquel.kravitz@energy.ca.gov](mailto:raquel.kravitz@energy.ca.gov) or (916) 651-8836.

The service list for the *2016 IEPR Update* is handled electronically. Notices and documents for this proceeding are posted to the Energy Commission website at [www.energy.ca.gov/2016\\_energypolicy/](http://www.energy.ca.gov/2016_energypolicy/).

When new information is posted, an e-mail will be sent to those on the energy policy e-mail listserv. We encourage those who are interested in receiving these notices to sign up for the listserv through the website at [www.energy.ca.gov/listservers/index.html](http://www.energy.ca.gov/listservers/index.html). The listserv is titled "energypolicy."

## **Remote Attendance**

**Webcast:** This meeting may be viewed via webcast. You may access the webcast at the Cal/EPA's homepage at [www.calepa.ca.gov/broadcast/?BDO](http://www.calepa.ca.gov/broadcast/?BDO)

During the webcast, we will accept feedback and questions sent via email to [byron@calepa.ca.gov](mailto:byron@calepa.ca.gov). As time permits, staff will publicly convey your questions or comments to the workshop participants. Please note that staff may not be able to convey all questions or comments received during the workshop.

**Phone:** To listen to the workshop by phone, you may dial **(800) 369-1967**. Callers will be asked to provide **participant code 6238001**. Callers will only have an opportunity to comment during the public comment period at the end of the day.

**Public Comment Period:** To remotely make comments during the public comment period at the end of each day, please call **(800) 369-1967** and provide **participant code 6238001**

(the same phone and participant code noted above). An operator will assist callers interested in making comments. Staff will endeavor to allow each commenter 3 minutes to speak, but the time allowed may be reduced to 1 minute per speaker depending upon the number of callers interested in making comments.

## **Availability of Documents**

Documents and presentations for this meeting will be available online at:  
[www.energy.ca.gov/2016\\_energypolicy/](http://www.energy.ca.gov/2016_energypolicy/).

Date: May 23, 2016

A handwritten signature in black ink, appearing to read 'K. Douglas', written over a horizontal line.

KAREN DOUGLAS  
Lead Commissioner for the  
*2016 Integrated Energy Policy Report Update*

Mail Lists: energypolicy, natural gas, electricity

## THE POLITICS AND BUSINESS OF CLIMATE CHANGE

### PEOPLE:

#### Think tank founder dives into nuclear energy activism

Umair Irfan, E&E reporter

Published: Thursday, May 19, 2016

Last December, Michael Shellenberger crossed the threshold from analysis to activism.

The co-founder of the Breakthrough Institute, an Oakland, Calif.-based environmental think tank, concluded that the threat of climate change is severe and that one of the most potent weapons to combat it, nuclear energy, is in peril.

"I really wanted to dedicate myself to our largest source of clean energy," said Shellenberger, 44. "There's just really urgency everywhere."

In the United States, where 99 reactors provide 20 percent of the nation's electricity without emitting carbon dioxide, utilities are threatening to close down some plants, and the fear is that dirtier fossil energy will fill the void, rolling back the already slow progress in cutting greenhouse gas emissions.



Breakthrough Institute co-founder Michael Shellenberger has started a new organization called Environmental Progress, focused on developing nuclear energy as a source of clean power. Photo courtesy of Environmental Progress.

Now Shellenberger is barnstorming throughout the country under the banner of his new group, Environmental Progress, in the hope of pushing languishing nuclear power plants off the ropes and back into the fight against climate change, with ambitions of taking this message global.

"We actually have a double focus," he said. "It's basically a focus on nuclear for climate and the environment, and basically liberating all humans from wood fuel."

The thinking started from his work at the Breakthrough Institute, which he established with environmental policy analyst Ted Nordhaus in 2003.

"Breakthrough was needed originally because there was, and remains, a lot of unchallenged dogma in the traditional environmental movement," said Jessica Lovering, director of energy at the Breakthrough Institute, in an email.

"There are a lot of other environmental groups that start with their conclusion, and then do analysis to prove it," she added. "Our analysis starts with much broader questions like 'What are the main challenges to decarbonization of the power sector today?', 'Which countries have been most successful and decarbonizing?', 'What policy options are available to address this market failure?'"

#### Making the case for Diablo Canyon

From Breakthrough's research, nuclear energy emerged as a potent solution to lethal air pollution and greenhouse gas emissions, as well as an important rung in the ladder out of poverty that many nations are struggling to climb.

That led to more analysis on next-generation nuclear reactors, ones that are cheaper, safer and more efficient to operate. However, fighting to keep current plants open is outside the wheelhouse of a policy research institute.

"The reason we've now focused on the advanced nuclear is that it needs much more thorough research, whereas keeping existing plants open is more of a movement building, or political coalition building, which is not the type of work we do," Lovering said.

But a problem like averting dangerous levels of climate change does not allow time for a solution that will materialize decades down the line. It demands drastic cuts in emissions over the next few years.

"Those advanced nuclear technologies are a lot farther away," Shellenberger said. "Molten salt [reactor designs] are not scheduled to be commercialized until 2040."

designs) are not scheduled to be commercialized until 2040.

With funding from the Pritzker Innovation Fund, he launched a new group to tackle the more immediate problem of keeping existing nuclear plants online.

Pacific Gas and Electric Co., for example, has said it may not seek license renewals for the two reactors at Diablo Canyon, a 2.2-gigawatt nuclear power plant in San Luis Obispo County, Calif.

The licenses are due to expire in 2024 and 2025, and Shellenberger wants a commitment from the utility to keep the plant that provides 8 percent of the state's electricity and 22 percent of the state's clean electricity running.

In January, Shellenberger co-signed a letter to California Gov. Jerry Brown (D) making the case to keep Diablo Canyon. James Hansen, a former NASA climate scientist who made a similar jump from research to climate activism, also co-signed the letter and has joined Shellenberger in many engagements laying out the case for nuclear energy.

Shellenberger is also organizing activists to defend Diablo Canyon. "We're talking a lot about Gandhi," he said. "You don't just write letters; you gotta march."

### **Many environmentalists call for a shutdown**

One group, Mothers for Nuclear, has taken this to heart. On June 24, organizers plan to march with their families almost 100 miles from Sausalito, Calif., to the state capital, Sacramento, to attend a California State Lands Commission meeting that could decide the fate of Diablo Canyon.

"I felt for many years now that working there and being able to generate greenhouse gas-free electricity, that felt like my contribution to humankind," said Heather Matteson, a co-founder of Mothers for Nuclear and a veteran employee at Diablo Canyon.

She crossed paths with Shellenberger at a public debate on nuclear energy at California Polytechnic State University and joined forces with his group when she learned that her employer, PG&E, might not keep Diablo Canyon up.

"We're definitely not representing them in what we're doing," Matteson said. "They have even told us that they don't want our help."

She is raising funds for the march through personal donations as well as sales of \$20 pendants in the shape of an atom made from uranium glass that glows under ultraviolet light.

"We're not necessarily pro-nuclear," she said. "We're pro- whatever tools can help us. We don't want people to discount nuclear due to irrational fears."

Concerns over accidents, long-term waste disposal and nuclear weapons proliferation pervade discussions on nuclear energy, and many environmental activists say these are completely rational apprehensions.

### **Making the climate call**

Friends of the Earth described Diablo Canyon on their website as "a dangerous, destructive and expensive hangover from an outdated energy production process."

The Santa Lucia Chapter of the Sierra Club has opposed the license renewal for Diablo Canyon, arguing that the California Independent System Operator has shown it can operate the grid without the plant and that its baseload generation actually makes it difficult to accommodate intermittent renewable energy.

They also pointed to a report from energy research firm E3 that found that California could meet its emissions targets without the Diablo Canyon plant.

Michael Peck, a former senior resident inspector at Diablo Canyon for the Nuclear Regulatory Commission, produced a differing professional opinion report on the plant that showed that three nearby fault lines could generate earthquakes stronger than the plant could safely withstand.

The plant also takes in 2.5 billion gallons of water a day to cool its reactors and discharges it back into the Pacific Ocean 20 degrees warmer. California decided to end this type of once-through cooling in 2011, but PG&E is lobbying for an exemption.

Mark Jacobson, a professor of civil and environmental engineering at Stanford University, noted that many of the recent nuclear power plant shutdowns in the United States were not due to environmental opposition but due to high operating costs for utilities and low prices of competing energy sources.



Though nuclear power provides a steady baseload, it has a hard time keeping up with changes in demand, which yields similar load-matching problems to renewable energy.

"Nuclear doesn't help the grid to be stable," Jacobson said. "It's just flat. Nuclear does only partial load following."

Meanwhile, the United States still does not have a long-term solution for nuclear waste, which can remain hazardous for thousands of years.

These arguments don't sway Shellenberger. "The problem with nuclear is the same everywhere: They don't like it and fear it because they see it as something that it's not," he said.

As for the nuclear plants struggling to compete with cheap natural gas, and in some markets, renewables, Shellenberger said nuclear would fare much better on a level playing field. Solar gets 140 times the level of federal subsidy of nuclear, while wind get 17 times more, he noted. States also leave nuclear out of renewable energy portfolio standards and clean energy mandates.

But in his call to arms, one argument in particular seems to resonate more loudly and change minds.

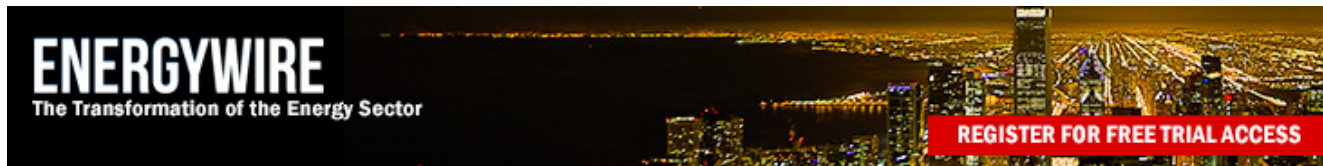
"Climate," he said. "Climate."

Shellenberger and Lovering will both be speaking on Capitol Hill today at a Department of Energy summit on the nuclear fleet in the United States.

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Twitter: [@umairfan](#) | Email: [uifan@eenews.net](mailto:uifan@eenews.net)

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## Heather Matteson May 30, 2016 (Mothers for Nuclear)

[https://groups.google.com/forum/#!search/save\\$20diablo\\$20canyon/save-diablo-canyon-workers/WqO91XqUa24/6f2ow0\\_UAwAJ](https://groups.google.com/forum/#!search/save$20diablo$20canyon/save-diablo-canyon-workers/WqO91XqUa24/6f2ow0_UAwAJ)

Friends and co-workers,

We trust by now you have read Michael Shellenberger's email from earlier today. We all know that PG&E will soon need to announce whether or not Diablo Canyon will pursue re-licensing. We can only suspect that the path has been chosen, and that we are all being led down it. We do not know exactly when the path will end. But before we reach the end, even if it's in sight, we still have time for a course-correct.

While all of us are upset to hear that PG&E may have made a decision, We hope you are also mad. Mad that our amazing plant could be shut down. And mad that there is still such controversy around the value that Diablo Canyon provides by cleanly powering nearly ten percent of our state.

Michael's message may be a good indication of which direction the wind is blowing, but this is not over yet. PG&E has not announced a decision. There is still time to make a difference.

**Diablo Canyon can still be saved, but only if Diablo Canyon workers and pro-nuclear environmentalists step it up. If we don't stand up for Diablo, who will?**

**We are seeing a huge response to the upcoming March for Environmental Hope. Participants from threatened nuclear power plants across the country have already contacted us to register. Big names like Gwyneth Cravens and Richard Rhodes will take to the streets with us.**

Governor Brown is the one we have to reach. He cares about climate change. He knows he was wrong to oppose Diablo. Now, Governor Brown can save Diablo. He's not up for re-election. He's not raising money. He's in a position to do what's right.

Why will we win? Because the universe bends toward justice. Because when Californians are asked to think about it, they love nature, and believe in science.

We can continue to speculate about the closure of Diablo Canyon, or we can do something about it. I know what I am going to do. I will march. Will you?

Please join us tomorrow evening to find out more.

Best Regards,  
Kristin & Heather

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[https://groups.google.com/forum/#!search/save\\$20diablo\\$20canyon%7Csort:date/save-diablo-canyon-workers/IR8rgl1UGro/TRenw-GuAwAJ](https://groups.google.com/forum/#!search/save$20diablo$20canyon%7Csort:date/save-diablo-canyon-workers/IR8rgl1UGro/TRenw-GuAwAJ)

## An urgent warning to Diablo Canyon workers

Michael Shellenberger

May 30, 2016

Dear employee of Diablo Canyon,

I am writing to let you know I have learned that PG&E will announce its decision to close Diablo Canyon later this summer, not long after the criminal trial against PG&E executives ends.

**But I have also learned that Governor Jerry Brown, who used to oppose the plant — indeed, spoke at an anti-Diablo Canyon rally in 1979 — is becoming increasingly concerned that his legacy as a leader on climate change will be undermined by Diablo Canyon's closure. That concern grew after the Aliso Canyon methane leak, and the potential for brown-outs this summer.**

Tomorrow night I will be at the Tap It Brewery in San Luis Obispo at 5:30 pm to share more specific information with you.

Since I launched Save Diablo Canyon in late January, several individuals have contacted me to share information they are hearing. I feel confident that the information I am receiving is accurate, for several reasons.

First, all of the individuals are in key positions in key institutions to know what is happening with Diablo Canyon. All extremely credible individuals. They are doing so because they are upset that their own institutions are in one way or another contributing to the closure of Diablo Canyon.

Second, the information I am receiving is consistent. The only information that disconfirms what I am hearing from my sources is the official position by PG&E management that the company has not yet made a decision.

The strongest defenders of Diablo Canyon inside PG&E appear to now be resigned to the plant's closure. Two years and half years ago, someone high up in PG&E leadership warned one of my sources that PG&E would likely shut down Diablo Canyon if there was no outside pressure brought to bear in support of the plant. Today, the same executive is discouraging outside pressure, fearing that it will rile up Diablo Canyon workers.

There are several uncertainties.

I have heard from one source that PG&E struck a deal with members of the California Lands Commission to receive an extension of PG&E's licenses to operate on state land in exchange for not seeking re-licensing of Diablo Canyon by NRC after 2024/2025.

However, other better-placed sources told me more recently that suggests PG&E will announce a closure of Diablo Canyon well before 2024/25 — perhaps as early as 2017 or 2018.

On June 24, the California will decide whether or not to require PG&E to undergo a full environmental impact review, which would take at least a year, before extending leases for PG&E to continue using state land. An environmental impact review could show Diablo Canyon is positive light, given it produces zero-pollution, including carbon emissions.

But my sources tell me that if the Lands Commission ordered an environmental review, PG&E would almost certainly close the plant, rather than go through the review process.

PG&E and IBEW, which works extremely close with PG&E executives, appear to be seeking an extension of the leases from the Lands Commission. But it is impossible to know what PG&E and IBEW are telling Gavin Newsom and other commissioners behind closed doors.

Newsom, who has long been close with PG&E, may be giving the company the justification it wants to close the plant. "I don't think that PG&E, in its quiet moments, would disagree that this may not have been the ideal site for a plant," Newsom said on December 18.

I am told that PG&E has several motivations for closing Diablo Canyon.

First and foremost, anti-nuclear groups and anti-nuclear state officials are putting intense pressure on PG&E and the regulators. These officials include the chairman of the CPUC, who has been an anti-nuclear activist since the 1970s, and the chairman of the CEC, a long-time renewables advocate.

Friends of the Earth (FOE) has sued PG&E over continued operation of Diablo Canyon, and I am told FOE received a significant influx of money to hire lawyers to sue nuclear plants around the country after successfully forcing the closure of San Onofre. Indeed, FOE sued Entergy last week in an effort to shut down New York's Indian Point.

More mainstream anti-nuclear groups are worried they will be blamed for increase carbon emissions if Diablo is closed, and so they have mostly operated behind the scenes, giving the green-light to regulators and others but making few public statements.

NRDC, which has sued PG&E several times over Diablo Canyon in the past, has said publicly that there is no need for baseload power and that nuclear is closing down because it is uneconomical, thus signaling to regulators and lawmakers that Diablo Canyon should be shut down.

A Sierra Club director recently called for closing Diablo Canyon in the Sacramento Bee, even as its executive director told a Wall Street Journal reporter that they are having an internal debate over the issue.

Second, PG&E is under pressure to close Diablo Canyon to meet California's renewable energy mandates. A huge amount of inflexible, baseload power on the grid is an obstacle to scaling up solar and wind, which needs the flexibility of natural gas plants to follow load. This is related to the reason above, since the mandates were lobbied for by environmental groups.

Third, many PG&E executives view Diablo Canyon as a huge hassle compared to simply operating a natural gas power plant. I am told that the previous CEO of PG&E, Peter Darbee, tried to shut down Diablo Canyon, but was over-ruled by the board.

Here are a few observations based on the information I have received.

**First, what's at stake here is more than 1,500 jobs, more air pollution, and energy sprawl. What's at stake is whether we as a society give in to fear-mongering and ideology. Californians have been hostile to nuclear in general and Diablo Canyon in particular. But the state also sided with science when it decided to disallow parents to send their unvaccinated children to school.**

**Second, Governor Jerry Brown remains the key to saving Diablo Canyon. He made the wrong choice in 1979 when he came out against Diablo. Since then he acknowledged he might have been wrong. The Governor has everything to gain and nothing to lose by trying to keep Diablo Canyon open. If he lets Diablo Canyon close, his climate legacy will be ruined.**

**Third, the anti-nuclear groups have to be held accountable. Those individuals and groups trying to kill Diablo Canyon and replace it with natural gas and solar farms that require 150 times more land should be called what they are: anti-environmentalists, not environmentalists. They should be publicly denounced, and protested.**

**Fourth, I believe Diablo Canyon can still be saved, but only if Diablo Canyon workers and pro-nuclear environmentalists step up their game. Nobody will want to save Diablo Canyon if they don't see Diablo Canyon workers trying to save Diablo Canyon.**

**The problem facing Diablo Canyon and many other nuclear plants is that they are undervalued first by the society, then by public policies, and then by the market. We have to increase their value in the society, change public policies, in order for nuclear to be treated as the highly valuable resources that they are.**

**There are many scenarios for Diablo Canyon to be saved, and operate until 2065 (since the plant is a strong contender to run for 80 years). For example, Warren Buffett could buy PG&E. But for him to keep Diablo Canyon running, he would need to see that there's a growing movement to save it.**

**I'll end by saying that this summer may be our last chance to save Diablo Canyon. I encourage you to consider how you will look back on this moment 10, 20 and 30 years in the future. Will you be able to tell your children and grandchildren you stood up and fought for what was right?**

**From June 24 - 28, I was scheduled to take my children (ages 16 and 10 years old) on a camping trip. Instead I decided to take them on the March for Environmental Hope! being jointly organized by Mothers for Nuclear, Save Diablo Canyon and my new group, Environmental Progress.**

**The March is being organized by Eric Meyer, a pro-nuclear environmentalist who quit his job as a labor organizer in Minnesota, three weeks ago, and moved all of his belongings to California, even though we could only offer him a three month contract, given our lack of funding, and our refusal to take any money from corporate donors.**

**Diablo Canyon is a special plant in a special place, and these are special times. Diablo Canyon is the plant that resulted in the environmental movement going from pro-nuclear to anti-nuclear — now it help motivate the environmental movement go from anti-nuclear to pro-nuclear.**

I hope you'll consider coming to the meeting tomorrow night, at the Tap it Brewery at 5:30, and making a commitment to participate in the March this June.

Yours in solidarity,

Michael

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## EMISSIONS:

### Among climate scientists, a fraught debate on the path forward

Umair Irfan, E&E reporter

ClimateWire: Wednesday, June 1, 2016 <http://www.eenews.net/stories/1060038117>

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Archived 06 01 16 and emphasis added by Gene A. Nelson, Ph.D. (Note that Michael Z. Jacobson, Ph.D.'s work at Stanford University's *Precourt Institute for Energy* <https://energy.stanford.edu/> has received substantial financial donations from fossil-fuel interests. A sample of Jacobson's antinuclear fear-mongering from 2012 regarding Fukushima dai-ichi is found here: <https://energy.stanford.edu/news/mark-jacobsons-lab-calculates-health-costs-fukushima-accident> Quoting from the article, "Because of inherent uncertainties in the emissions and the health-effects model, the researchers found a range of possible death tolls, from 15 to 1,300, with a best estimate of 130. A wide span of cancer morbidities was also predicted, anywhere from 24 to 2,500, with a best estimate of 180." - The actual U.N. estimate is zero deaths. )

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Clinton Nuclear Generating Station in Clinton, Ill., the focus of a recent effort to save the state's nuclear power. Photo by Daniel Schwen, courtesy of Wikipedia.

In a rented 15-passenger van barreling south on Interstate 55 out of Chicago in April, a group of environmental activists, a legendary scientist and a camera crew embarked on a quixotic rescue effort.

Their goal: saving Illinois nukes.

"We shouldn't be taking them off the table, in my opinion," said James Hansen, a former scientist at NASA famous for raising the alarm about climate change before Congress in 1988, speaking from the van. "It's our biggest source of carbon-free energy at this time."

Hansen and the bandwagon headed for Clinton, 160 miles southwest of Chicago, to meet employees at the Clinton Power Station, a sky blue and gray 1-gigawatt nuclear power plant.

#### AN E&E SERIES

## NUCLEAR VS Renewables

Nations have agreed on the need for global emissions to peak as soon as possible. So what's the best way to get there?

The 29-year-old boiling water reactor's future is grim as the Illinois Legislature missed the deadline yesterday to pass new energy rules and rates that would extend Clinton a lifeline.

Exelon Corp., the plant's operator, punted last October on a decision to close the plant, but previously said if it didn't get to raise electric rates for customers by May 31, it would shut down the money-losing facility by 2017.

"We'll have more to say about the path forward within the next few days," said Exelon spokesman Paul Adams in an email.

**Pro-nuclear activists want lawmakers to treat the Clinton plant and other fission reactors as some of the most powerful weapons in the fight against global warming, a rationale that would give them a new lease on life.**

**"The rules of the game are so rigged against nuclear in Illinois," said Michael Shellenberger, a nuclear energy supporter and founder of Environmental Progress who rode with Hansen. He pointed out that nuclear energy is excluded from the state's renewable portfolio standards and that wind energy is subsidized at more than double the rate Exelon was seeking.**

However, the push to extend lifelines to nuclear power has collided with the goals of other environmental activists who have spent decades railing against reactors as expensive and unsafe, creating cracks in the coalition that helped bring nations to an international agreement to fight climate change.

Nuclear energy supporters, renewable power purists and all flavors of environmental activists in between gathered in Paris last December and applauded as world leaders inked a global agreement to combat climate change, the fruit of 20 years of fraught negotiation. But getting nations to acknowledge that the climate is changing, that the leading cause is human activity and that everyone is obligated to act is only the first step.



Former NASA scientist James Hansen argues for more nuclear reactors to cut coal consumption. Photo courtesy of NASA.

The harder part is figuring out a path forward. Nations have agreed to targets, but the road to achieving them remains uncharted. And some of the scientists, engineers, activists and policymakers that converged to assemble the Paris Agreement want to move in opposite directions.

Is the objective to take emissions to zero or to keep warming in check? Should nations run with the clean technologies now in existence or invest in finding better solutions? Can geoengineering play a role? Is the enemy short-term air pollution or long-term carbon emissions? Does everyone shoulder an equal burden, or should rich nations go first and further?

The push to peak global emissions and keep warming below 2 degrees Celsius has opened rifts over whether the world should embrace stepping stones like nuclear and natural gas power or go full tilt toward a 100 percent zero-carbon renewable energy economy. The debate is especially fractious among climate scientists, who ostensibly agree on the scale and urgency of climate change ([ClimateWire](#), Dec. 21, 2015).

**Billions of dollars in public and private capital for energy investment are up for grabs as developed countries like the United States and emerging economies like India get down to brass tacks on how they will hit their greenhouse gas emissions pledges and move their energy systems away from fossil fuels.**

And without a firm hand on the rudder steering the world's energy, both nuclear and renewable advocates warn that the planet may miss its climate change targets.

"Now, the question has shifted from whether global warming is happening to what to do about it," said Naomi Oreskes, a science historian at Harvard University, in an email.

"For that we need to look to a different set of experts."

### **A scientific debate or an ideological one?**

Among climate scientists, however, both the nuclear energy proponents and the renewable energy purists claim authority.

**"I'm a physicist, and I'm looking at energy data," Hansen said. "I have as high a level of expertise as anyone I know."**

**Broadly, Hansen said the world should impose a stiff carbon fee while remaining agnostic about the technology solutions. Part of this strategy includes saving aging nuclear plants from shutting down and may lead to building new ones.**



Stanford University professor Mark Jacobson. Photo by Umair Irfan.

On the other side, atmospheric scientists like Mark Jacobson at Stanford University say that wind, water and solar are all that's needed to power the modern world. The avoided health and environmental damages offset the costs of building up this grid, and nuclear energy is an expensive, time-consuming distraction from this effort. The only thing lacking, he argues, is political will.

"He's a great climate scientist, and he's real passionate about solving the problem. I completely admire him for that," Jacobson said about Hansen. However, he said that Hansen and many scientists who have joined him haven't published any peer-reviewed research on comparing energy sources, while Jacobson has published dozens.

"Most of the people who do talk about it, they're not actually doing an evaluation of the science," Jacobson said. "They've examined the problem, but they've never examined the solutions."

Though researchers on either side of the debate remain largely cordial, the divide has become a flash point in public debates and even in otherwise stolid scientific meetings, leading to testy exchanges and heated arguments over whose approach is most rational.

**At a tense debate in February at UCLA where Jacobson argued over the merits of supporting nuclear versus ramping up renewables, sharing the stage with nuclear supporters like Environmental Progress' Shellenberger and fellow Stanford climate scientist Ken Caldeira, the question-and-answer session with the audience devolved into a shouting match.**

Some scientists suggest that these differences arise from ideology rather than scientific disagreements.

"In my mind, the word 'renewable' is more of a tribal identifier than a technical basis for energy," said Caldeira, adding that researchers shouldn't inveigh on energy engineering issues in general.



"I don't think climate scientists should be pretending they're in some kind of privileged position to know what kind of technology could meet economic and environmental power restraints," he said.

Michael Mann, a climatologist at Pennsylvania State University, suggested that some of the strident opposition to 100 percent renewable energy stems from fears over losing public credibility.

"I've encountered folks who have an irrational dislike of renewable energy. Perhaps they associate it with granola-chewing socialists," he wrote in an email. "Who knows -- but it really colors the way that they look at this issue, and leads to an irrational dismissiveness about prospects for meeting much or all of our projected future energy demand through renewable energy."

### **The 'old geezers' are passing the torch**

The divide among scientists has a corresponding fissure among activists.

"To me Jacobson's work seems rigorous and detailed, and more to the point countries like Denmark are now showing it's entirely possible. The technology is there; we need the political will to match," said environmental activist Bill McKibben, founder of 350.org, in an email. "I'm convinced by the careful work of Mark Jacobson and others that this is possible."

Others argue that the 100 percent renewable energy vision is a luxury afforded by wealth,

**"In rich countries, people turn against nuclear," said Shellenberger. "A lot of it is [not in my back yard]-ism. A lot of it is Malthusianism."**

"Malthusianism" is often shorthand for population control, building on the ideas of 18th-century scholar Thomas Robert Malthus who projected that without checks, the number of people on Earth would grow faster than the resources available to sustain them.

"In order to maintain the fiction of energy shortages, you have to take nuclear off the table," Shellenberger said.

Other countries that are counting on kilowatt-hours to cut infant mortality aren't so picky, nuclear advocates note, and it would behoove wealthier parts of the world to help them gain access to energy, even if it's not the cleanest available.

The concern now is which vision will be codified in policy. **In March, Democrats introduced a bicameral resolution that would set a target of 50 percent clean energy in the United States by 2030, not mentioning whether or not nuclear would fit on the "clean" side of the portfolio ([E&ENews PM](#), March 3).**

**"What the climate science tells us is that we have to leave most of the remaining fossil fuels in the ground," Hansen said. "Unfortunately, our governments have become so dominated by money that both parties are heavily dependent on contributions from industry, including especially the fossil fuel industry."**

Ultimately, most of the people who will have to live with the worst consequences of climate change are not old enough to vote, and Hansen argues that they should be the ones that make the final decisions about their energy sources.

"It shouldn't be the old geezers who are running the system now," he said.

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