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In the matter of:	)	Docket No. 21-IEPR-01
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Preparation of the	)	
<i>2021 Integrated Energy Policy Report</i>	)	
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## **Notice of Request for Public Comments on the Draft Scoping Order for the 2021 Integrated Energy Policy Report**

The California Energy Commission’s (CEC’s) Commissioner J. Andrew McAllister is the Lead Commissioner for the 2021 Integrated Energy Policy Report (*2021 IEPR*). Commissioner McAllister is seeking comments on the proposed scope and general schedule for the *2021 IEPR*.

### **Legislative Authority**

Public Resources Code (PRC) Section 25301(a) requires the CEC to “conduct assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices.” These assessments and forecasts are used to develop recommendations for energy policies that conserve state resources, protect the environment, provide reliable energy, enhance the state’s economy, and protect public health and safety. The CEC includes these energy policy recommendations in its biennial Integrated Energy Policy Report that is issued in odd-numbered years.

Pursuant to PRC Section 25300(d), “The Legislature further finds and declares that timely reporting, assessment, forecasting, and data collection activities are essential to serve the information and policy development needs of the Governor, the Legislature, public agencies, market participants, and the public.”

Consistent with past practices, the CEC intends to open an informational proceeding for the development of the *2021 IEPR*. Pursuant to PRC Section 25210 and California Code of Regulations, Title 20, Section 1220, informational proceedings allow the CEC to hold hearings and take other actions to gather and assess information needed to assist it in formulating policies. Instituting an informational proceeding through the adoption of an order by the Commission ensures that the IEPR Lead Commissioner, who will be responsible for overseeing the preparation of the IEPR, can take all action necessary to collect the information needed to complete the required analyses and assessments, including the issuance of subpoenas.

Further, PRC 25302(d) requires the CEC to consult with various entities in preparing the IEPR including the: California Public Utilities Commission (CPUC), CPUC Public Advocates Office, California Air Resources Board, California Independent System Operator (California ISO), Department of Water Resources, Department of Transportation, and Department of Motor Vehicles, and any federal, state, and local agencies it deems necessary. The statute states that: “For the purpose of ensuring consistency in the underlying information that forms the foundation of energy policies and decisions affecting the state, those entities shall

carry out their energy-related duties and responsibilities based upon the information and analyses contained in the report.” Additionally, the CEC will collaborate with federal and state agencies, local governments, and tribes to meet mutual decarbonization and energy equity goals.

## Background

California has enacted a suite of policies aimed at reducing the state’s greenhouse gas (GHG) emissions, while also maintaining energy reliability, controlling costs, and ensuring that all Californians benefit from the state’s clean energy initiatives. Key legislative actions and executive orders (EOs) are listed below and build toward achieving an electricity system that is 100 percent zero carbon by 2045, and, more broadly, a statewide goal of carbon neutrality by 2045. These innovative policies, coupled with rapid market changes and the growing effects of a changing climate, create new opportunities and require creative solutions to transform the state’s energy system.

The heat storm experienced in August 2020 that led to rotating power outages prompted a redoubling of efforts to assure energy reliability in this changing climate. The CEC, CPUC, and the California ISO are working to ensure grid reliability in response to the heat storm and other increasingly severe events related to climate change. In the October 2020 *Preliminary Root Cause Analysis, Mid-August 2020 Heat Storm*, the CEC, CPUC, and California ISO identified factors that led to the two rolling outages, and recommended actions for improving resource planning, procurement and market practices (<http://www.caiso.com/Documents/Final-Root-Cause-Analysis-Mid-August-2020-Extreme-Heat-Wave.pdf>). Implementation of these actions is underway. The *2021 IEPR* can provide additional information to inform these actions, particularly those aimed at improving near-term reliability.

Energy use and the resulting emissions in building sector remains a key focus for the state as it aims to decarbonize the economy by 2045. The Lead Commissioner proposes the *2021 IEPR* build on the goals and work responding to Assembly Bill (AB) 758 (Skinner, Chapter 470, Statutes of 2009), Senate Bill (SB) 350 (De León, Chapter 547, Statutes of 2015), AB 3232 (Friedman, Chapter 373, Statutes of 2018), and the *2019 IEPR* to further a comprehensive approach toward decarbonizing buildings in a cost-effective and equitable manner.

Also, as the state decarbonizes its energy system, it must prudently manage its aging gas-pipeline infrastructure. Factors driving an evolving role of the gas system include:

- Potentially widespread electrification of buildings and reduction of other pipeline gas end-uses would significantly reduce demand for fossil gas over the next few decades, presenting opportunities to strategically downsize and or repurpose the gas system to reduce system costs.
- Critical interdependencies between the gas and electricity systems create the need to ensure reliability for both systems, particularly to meet ramping requirements associated with additional renewable electricity generation, as zero-carbon solutions are being developed.
- Opportunities to increase and accelerate the use of renewable gas and hydrogen.

- Energy equity opportunities to concentrate benefits and defray costs to low-income and disadvantaged customers.

Finally, in every odd numbered year (such as 2021), the CEC undertakes a new 10-year energy demand forecast. For the *2021 IEPR*, the CEC proposes to make the following enhancements to the forecast; 1) extend the forecast timeframe to 15 years to coincide with several state goals that are planned for 2035, and 2) improve methodologies to better quantify and predict the likelihood, severity, and duration of future extreme heat events. In addition to the forecast, beginning with 2021 IEPR, CEC will further the development of demand scenario analyses to help address the growing magnitude of uncertainty in long-term energy planning due to economy-wide decarbonization efforts. Transportation was the focus of the *2020 IEPR Update*, which identifies important changes and trends in the state's transportation system. While not the focus of the *2021 IEPR*, planning for changes in the transportation system is a major element of energy planning.

## **Key Legislative Initiatives and Executive Orders**

The *2021 IEPR* will reflect the many key policy initiatives that shape California's energy policies, including:

- AB 758 (Skinner, Chapter 470, Statutes of 2009): required the CEC to develop and periodically update an action plan to increase energy efficiency savings in existing buildings.
- EO B-16-2012: set a goal of reaching 1.5 million ZEVs on California's roadways by 2025.
- SB 1383 (Lara, Chapter 523, Statutes of 2014): set a target of achieving a 40 percent reduction in statewide methane emissions below 2013 levels by 2030.
- SB 350: elevated the need for energy equity and updated renewables and energy efficiency goals towards reducing GHG emissions by 2030.
- SB 32 (Pavley, Chapter 249, Statutes of 2016): set a statewide goal to reduce California's GHG emissions 40 percent below 1990 levels by 2030.
- AB 197 (Garcia, Chapter 250, Statutes of 2016): assured that the state's implementation of its climate change policies is transparent and equitable, with the benefits reaching disadvantaged communities being fundamental to these efforts.
- SB 100 (De León, Chapter 312, Statutes of 2018): accelerated the state's renewables goal to 60 percent by 2030 and put into law the state's commitment to 100 percent renewable and a zero-carbon electricity system by 2045.
- EO B-55-18: established a statewide goal to achieve carbon neutrality by 2045.
- AB 3232: called on CEC to assess potential to reduce GHG emissions 40 percent below 1990 levels from residential and commercial buildings by 2030.
- SB 1477 (Stern, Chapter 378, Statutes of 2018): required the CPUC, in consultation with the CEC, to create two incentive programs to promote the installation of low-emission and near-zero-emission space- and water-heating technologies in new and

existing homes (the Building Initiative for Low-Emissions Development [BUILD] and Technology and Equipment for Clean Heating [TECH]).

- SB 49 (Skinner, Chapter 697, Statutes of 2019): gave the CEC new authority to develop flexible demand appliance standards within Title 20 and requires the CEC to report on implementation in the IEPR.
- EO B-48-18: called for at least 5 million ZEVs on California's roads by 2030 and spurs the installation of 250,000 plug-in electric vehicle chargers, including 10,000 direct current fast chargers and 200 hydrogen refueling stations by 2025.
- EO N-79-20: called for 100 percent of in-state sales of new passenger cars and trucks to be zero-emission by 2035, set a goal of 100 percent of medium- and heavy-duty vehicles in the state be zero-emission by 2045 for all operations where feasible and by 2035 for drayage trucks, and set a goal for the state to transition to 100 percent zero-emission off-road vehicles and equipment by 2035 where feasible.

## **Proposed Scope of the 2021 IEPR**

The 2021 IEPR will continue and expand on previous efforts to decarbonize California's energy system while ensuring that the benefits are equitably spread. The Lead Commissioner proposes that the 2021 IEPR address four major topics as described below:

1. Energy reliability over the next five years
2. Evolving role of the pipeline gas system
3. Building decarbonization and energy efficiency
4. Energy demand

The Lead Commissioner also proposes that the 2021 IEPR include an analysis of the benefits of transitioning to a clean transportation system, as required by statute.

### **1. Energy Reliability Over the Next Five Years**

**Electric Reliability:** In coordination with CPUC, California ISO and other statewide Balancing Authorities (BAAs), the 2021 IEPR will discuss opportunities to improve electric reliability in California ISO territory as well as California as a whole with specific focus over the next five years. Specific areas for discussion will include:

- Electric reliability assessments in the California ISO footprint as well as all of California over the next five years. This will include an evaluation of progress towards ensuring sufficient replacement resources are available to enable the most expedient retirement of the remaining once-through cooling power plants (consistent with recommendations in the 2019 IEPR) and of the Diablo Nuclear Power Plant.
- Opportunities to reduce reliance on fossil gas-fired electric generation in California over the next five years while maintaining electric reliability.
- Opportunities to increase reliability in California through better integration with the western regional grid.
- Whether it is economically workable to retrofit existing pipeline gas-fired electric generation resources to improve their efficiency to support achieving policy goals.

- Opportunities to address issues and barriers related to expanding the role of distributed energy resources and demand response in supporting reliability and resource sufficiency both in the near term and in long-term planning. This exploration will consider market trends and will examine the current and potential roles of smart meter data in enabling these resources.
- Publicly owned utility (POU) compliance with energy storage system procurement targets and policies adopted by their governing boards (Public Utilities Code 9506).

**Southern California:** The *2021 IEPR* will identify and address remaining challenges in ensuring energy reliability in Southern California. Infrastructure challenges with the pipeline gas system in Southern California continue as result of aging pipelines and limitations on the use of the Aliso Canyon pipeline gas storage facility. As replacement resources from retirement of the San Onofre Nuclear Generating Station continue to be developed, ongoing assessments of near-term summer and winter reliability for the electric and natural gas systems are needed.

## 2. Evolving Role of Pipeline Gas: Trends and Outlook

In the *2021 IEPR*, the CEC proposes to assess pipeline gas supply and demand issues including the role the gas system may play in meeting California’s GHG emissions reduction goals and the transition planning needed to ensure a safe and reliable gas system while protecting gas consumers from undue cost burdens. Key topics of focus will include:

- Assess the outlook for gas use in California both in the 10-year and 25-year planning horizons across key sectors through development and refinements to gas demand forecasts and scenarios, to accurately reflect the impacts of decarbonization policies and goals of the state.
- In coordination with CPUC, begin the discussion and development of necessary analytical assessments to inform how the state can potentially reduce, repurpose, and transform its pipeline gas infrastructure as the demand for fossil gas declines. Key areas of focus include gas prices, gas system costs, impacts on rates, and electric and gas system reliability.
- Explore the role of renewable gas, hydrogen, and other zero-carbon alternatives such as engineered carbon removal (ECR) in a low carbon future, to replace and/or complement the use of fossil gas with focus on: identification of the most suitable applications; availability and pricing; and opportunities to repurpose existing infrastructure to integrate the usage of renewable gas, hydrogen, and ECR.

## 3. Building Decarbonization and Energy Efficiency

Decarbonizing California’s building stock is an essential element of meeting the state’s long-term carbon neutrality goals. The Lead Commissioner proposes the *2021 IEPR* include an in-depth discussion on building decarbonization policies and strategies, provide updates and analysis of the various standards and incentive programs aimed at supporting building decarbonization and maintaining system reliability, and assess the contributions of existing and potential policies and programs toward meeting the state’s decarbonization goals in an equitable manner. Expanding on the building

decarbonization assessment called for by AB 3232, the 2021 IEPR building decarbonization analysis will include discussion of:

- Residential and commercial building decarbonization strategies, as well as strategies to decarbonize industrial and agricultural sectors.
- An update on targets towards a statewide doubling of energy efficiency, as required by SB 350.
- The development of load flexibility standards for technologies that have the ability to make operational adjustments in response to signals from the grid. SB 49 gave the CEC new authority to develop flexible demand appliance standards within Title 20 and requires the CEC to report on implementation in the IEPR.
- Analysis of equity considerations related to decarbonization to support equitable decarbonization measures.
- Strategies to increase innovative financing approaches – removing the upfront costs barriers – for the comprehensive retrofits of existing buildings that support California’s decarbonization goals, including expanded financing opportunities for renters and low-income Californians, to be done in collaboration with CPUC initiatives (for example, CPUC Rulemaking 20-08-022).
- The Building Energy Efficiency Standards 2022 Update and future updates.
- POU energy efficiency targets in comparison with actual savings (Public Utilities Code 9505, PRC 25305.2).
- Needed data and analytical tools to enhance assessments and measure progress of decarbonization of California’s building stock.

#### 4. Energy Demand

**Electricity, Natural Gas, and Transportation Demand Forecasts:** The CEC will prepare new end-user electricity, natural gas, and transportation fuel demand forecasts to 2035. Several forecasting products will be developed, including forecasts of electricity consumption and peak electricity demand for California and for individual utility planning areas and forecast zones in the state and analysis of procurement trends amongst load serving entities. In this, the CEC will reassess the impacts on electricity demand of climate change, behind-the-meter generation, adoption of battery storage, energy efficiency standards, fuel substitution programs, and transportation electrification trends. In developing the peak demand forecast, the CEC will improve methodologies for quantifying the likelihood, severity, and duration of future extreme heat events. The CEC will also develop exploratory transportation demand scenarios to assess energy impacts of state goals, proposed policies, and other potential market changes.

**Energy Demand Scenarios:** Staff proposes to initiate a process to develop economy-wide energy demand scenarios through a “what if” analysis geared towards policy compliance and aspirational goal setting. Staff will explore new programs, policies, potential market changes, and other demand-side strategies that are (1) needed to meet California’s long-term decarbonization goals, and (2) outside the scope of the ten-year energy demand forecast.

The demand scenarios will be designed to assess options for achieving several goals related to a renewable and carbon-free electricity system by 2045, GHG emissions reductions, and the sale of zero-emission vehicles. The demand scenarios are a tool to assess the potential of policies and strategies needed to meet decarbonization goals, as well as their impact on state energy system planning.

## **2021 IEPR Proposed Schedule**

The Lead Commissioner directs the CEC staff to use the following general schedule. As workshop topics and dates are finalized, the CEC will post notices on its website and notify stakeholders at least 10 days in advance of each workshop date. The schedule will be posted and regularly updated at <https://www.energy.ca.gov/data-reports/reports/integrated-energy-policy-report/2021-integrated-energy-policy-report>.

<b>Task/Event</b>	<b>Date(s)</b>
Public workshops on specific topics	February 2021 – December 2021
Final Scoping Order released	March 2021
Adopt order instituting investigation for 2021 IEPR	March 2021
Release draft <i>2021 IEPR</i>	October 2021
Release final <i>2021 IEPR</i>	January 2022
Adopt <i>2021 IEPR</i>	February 2022

## **Participation in the Integrated Energy Policy Report Proceeding**

Policy recommendations contained in the *2021 IEPR* will be based on the record developed during the proceeding, including data and technical analyses by the staff and stakeholders. Analysis and information developed in other proceedings at the CEC and by other agencies will be incorporated as appropriate. Participants should use the IEPR docket number 21-IEPR-01 and associated dockets when submitting information for the Lead Commissioner's consideration.

The Lead Commissioner encourages the active participation of all interested and affected participants because public input is essential to ensure a complete and thorough record. As in previous proceedings, the Lead Commissioner recognizes that close coordination with federal, state, local, and other agencies is critical to identifying and addressing energy infrastructure and related environmental challenges. The Lead Commissioner directs staff to continue working with these agencies to ensure their participation in this proceeding.

## **Public Comment**

**Written comments:** Written comments must be submitted to the Docket Unit by **5:00 p.m. on February 19, 2021.**

Written attachments, and associated contact information (including address, phone number, email address) will become part of the public record of this proceeding with access available via any Internet search engine.

**The CEC encourages use of its electronic commenting system.**

Visit <https://efiling.energy.ca.gov/Ecomment/Ecomment.aspx?docketnumber=21-IEPR-01>, which links to the comment page for this docket. Select or enter a proceeding to be taken to

the “Add Comment” page. Enter your contact information and a comment title describing the subject of your comment(s). Comments may be included in the “Comment Text” box or attached as a downloadable, searchable in Microsoft® Word (.doc, .docx) or Adobe® Acrobat® (.pdf) file. Maximum file size is 10 MB.

Written comments may also be submitted by email or mail if you choose not to use the electronic filing system. Include the docket number **21-IEPR-01- 2021 Scoping Order** in the subject line and send to [docket@energy.ca.gov](mailto:docket@energy.ca.gov).

If preferred, a paper copy may be sent to:

California Energy Commission  
Docket Unit, MS-4  
Re: Docket No. 21-IEPR-01  
1516 Ninth Street  
Sacramento, California 95814-5512

## **Contacts**

The Energy Commission’s Public Adviser’s Office provides the public with assistance in participating in Commission proceedings. For information on how to participate in this forum, please contact the public adviser at [publicadviser@energy.ca.gov](mailto:publicadviser@energy.ca.gov), (916) 654-4489, or toll free at (800) 822-6228. Requests for interpreting services and reasonable accommodations should be made at least five days in advance. The CEC will work diligently to accommodate all requests.

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

Questions on the technical subject matter of this meeting should be directed to Heather Raitt, Assistant Executive Director for Policy Development, at (916) 628-2355 or by email at [Heather.Raitt@energy.ca.gov](mailto:Heather.Raitt@energy.ca.gov).

## **Availability of Documents**

When new information is posted, an email will be sent to those on the energypolicy listserv. Those interested in receiving these notices can subscribe in the lower right corner at <https://www.energy.ca.gov/data-reports/reports/integrated-energy-policy-report/2021-integrated-energy-policy-report> or alternatively manage existing listservs or sign up for others here <http://www.energy.ca.gov/listservers/index.html>.

Dated: February 05, 2021, at Sacramento, California

CEC List Servers: energypolicy, diversity, dcag, barriers, climatechange, efficiency, existing\_buildings, decarbonization, electricity, natural gas