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INITIAL STATEMENT OF REASONS

Energy Data Collection – Phase 3 for Natural Gas and Renewable Natural Gas Data Collection
Title 20, California Code of Regulations
Amendments and Adoptions to Sections 1302, 1308, 1309, 1314, 1353, 1382, 1383, 1384.5 in Title 20, Division 2, Chapter 3, Article 1, 2, And 4

Docket No. 25-OIR-02
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INTRODUCTION

The California Energy Commission (CEC) proposes to adopt changes to Energy Data Collection for Natural Gas, Renewable Natural Gas, and Metered Energy Use in the California Code of Regulations (CCR), Title 20, Division 2, Chapter 3, Article 1, 2, and 4, after considering all comments, objections, and recommendations regarding the proposed regulation.

The purpose of the proposed regulations is to enable the CEC to meet its statutory and analytical requirements to support the reliable operation of the state's energy systems and assess the progress of energy transitions and to inform the development of recommendations for meeting state energy goals.

This rulemaking will expand the CEC's analysis and forecasting capabilities by providing key information into the topics of:

- Natural Gas System and Metered Consumer Usage.
- Metered Electricity Use.
- Renewable Natural Gas.

PROBLEM STATEMENT

Purpose of Changes: Energy Forecasting and Assessments

The CEC is mandated by statute to "conduct assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices." (Public Resources Code (PRC) section 25301(a).) These forecasting and assessment activities are developed as part of the Integrated Energy Policy Report (IEPR) that is mandated every two years. (PRC section 25302.) As part of the IEPR process, the CEC adopts a detailed energy demand forecast that is used by other energy agencies to identify resource additions needed to ensure reliability, while still meeting California air pollution mitigation goals. (PRC section 25302(f).) In addition, the demand forecast is used "for analyzing the success of and developing policy recommendations for public interest energy strategies." (PRC section 25305.) As part of

this comprehensive energy assessment, the CEC conducts an electricity demand forecast, a natural gas demand forecast, a transportation energy demand forecast, and performs various energy market assessments and tracking assessments which evaluate energy supply constraints, system performance, and progress towards policy goals. (PRC sections 25301(a); 25303(a)(2), (a)(5), & (a)(7); 25304(a), (c), (d), (f), & (g).)

This work forms the analytical core of the IEPR and serves two fundamental purposes: 1) to identify actions needed to ensure the reliable operation of the state's electricity, natural gas, and transportation energy supply systems; and 2) to develop recommendations and assess progress toward meeting state energy goals.

The CEC is providing the following proposed changes to regulations to ensure that it has access to sufficient information for its analytical mandates.

Authority for Additions and Changes:

The scope of proposed changes is California Code of Regulations Title 20, Division 2, Chapter 3. Pursuant to PRC section 25216.5(d), the CEC "[s]erve[s] as a central repository within the state government for the collection, storage, retrieval, and dissemination of data and information on all forms of energy supply, demand, conservation, public safety, research, and related subjects." This responsibility is further codified in PRC section 25320(a) which directs the CEC to "manage a data collection system for obtaining information necessary to develop the policy reports and analyses required by sections 25301 to 25307, inclusive, the energy shortage contingency planning efforts in Chapter 8 (commencing with section 25700), and to support other duties of the commission." The statutes direct the CEC to collect and maintain information covering all aspects of energy use that gives "full consideration to the potential burdens these data requests impose on the resources of the stakeholders whose information is being requested." (Id.)

The CEC began collecting energy information in 1976, with its data collection efforts evolving over time. California Code of Regulations Title 20, Division 2, Chapter 3, Article 1 has become what is now known as the Quarterly Fuel and Energy Report (QFER) and focuses on the collection of historic electricity and natural gas data that allows the CEC to characterize the current energy supply and consumption landscape. Article 2 of Chapter 3 is directed at the forecast and assessment of energy loads, with data collection that serves the forward-looking nature of forecasting work. While much of this data feeds directly into the electric and natural gas demand forecasts, these datasets have also provided a basis for analytical work to support items such as Tracking Progress, Thermal Efficiency, the Natural Gas Outlook, and many more. In 2022, Article 4 was expanded to further the collection of emerging energy sources to improve the CEC's energy tracking abilities by including hydrogen, bio-diesel, and renewable diesel reporting, furthering the CEC's understanding of the energy transition.

Current Data Collection Requirements Do Not Track New Trends:

California's energy policy focuses on energy supply stability and reducing the carbon intensity of energy sources used within the state to achieve the goal laid out by Executive Order S-3-05 in lowering California's green-house-gas emissions to 80 percent below 1990 levels by 2050. In achieving the goal, changes in the source and patterns of energy usage have occurred at every level of California's economy. Yet old data submission requirements are often ill-equipped to capture the new energy sources, nor are they able to monitor the new patterns of energy demand that utilize the technology needed to create these emission reductions. To continue California's progress in decarbonizing and improving its efficient use of energy in residential, commercial, industrial, and transportation sectors, new data sources are necessary to ensure California and the CEC make informed recommendations in the pursuit to "ensure that a reliable supply of energy is provided consistent with protection of public health and safety, promotion of the general welfare, maintenance of a sound economy, conservation of resources, and preservation of environmental quality." (PRC section 25300(b).)

Natural Gas and Renewable Natural Gas Data:

The CEC has broad authority to evaluate supply uncertainties and the sufficiency of natural gas supplies and infrastructure to ensure electric system reliability. (PRC section 25303(a)(3) & (4).) Recent shortages of and the planned transition away from natural gas needed to maintain reliable operation of the electric grid have highlighted the problem of inadequate information for assessing the function of the natural gas system.

California produces relatively little natural gas and relies heavily on imports. In recent years, the state's natural gas and electricity systems have become increasingly interdependent. The natural gas system is designed for seasonal swings in residential and commercial demand – characterized by high demand in winter and low demand in summer. In recent years, demand swings are seen on a daily and hourly basis, as natural gas plants are called upon to accommodate the variable generation patterns of a system more dependent upon intermittent renewable resources. To address this issue, the CEC has begun hydraulic modeling efforts to simulate various scenarios for foreseeing and planning for possible problems. Yet at the same time, California is planning to move away from these fuels to alternative sources.

Per the *2024 Joint Agency Staff Paper: Progress Towards a Gas Transition: A White Paper Supporting the CPUC's Long-Term Gas Planning Rulemaking R.20-01-007 (Joint Agency White Paper),* "Fossil gas heats our homes and buildings, powers our industrial and agricultural sectors, and produces electricity—but at a cost to climate and public health. Today, fossil gas is a key pillar of the State's energy system. In fact, the State consumes about 2,131 trillion British thermal units (BTU) of fossil gas per year, more than twice the 904 trillion BTU it consumes in electricity. However, achieving California's ambitious climate targets, including economy-wide carbon neutrality by 2045 requires a

monumental shift away from this fossil fuel."[1] Assessing the various pathways to a decarbonized energy system presents formidable challenges. The CEC's Order Instituting Informational Proceeding, order No. 22-0309-7, "Decarbonizing the Gas System,"[2] says the following need to be improved to assess the gas transition:

- Natural gas demand forecasts
- Natural gas price, rate, and revenue forecasts
- Natural gas infrastructure assessment

To address these policy needs, the CEC is proposing to collect data that enhances the state's knowledge of a natural gas system in transition to renewable resources. Improving supply and demand forecasts will give policymakers more information as to which parts of the natural gas system can be derated, repurposed, or decommissioned and when. Improved natural gas price, rate, and revenue forecasts that come from more information about natural gas prices and demand improve the state's economic knowledge of the natural gas transition. Of particular interest is the impact to remaining customers on natural gas rates as the natural gas transition may mean fewer natural gas utility customers along with continued costs to preserve system reliability and safety. CEC staff will also need to better understand the existing infrastructure over time necessitating the need for information such as how many miles of pipe have been decommissioned, how many miles of pipe have been repaired or replaced which can extend the life of system components and place decommissioning further out in the future, and what are the costs of modifying infrastructure to allow increased use of low carbon fuels including hydrogen and renewable natural gas. This will enhance the state's ability to better support incoming renewable fuels and efficiently devote public funds to reduce greenhouse gas emissions.

BENEFITS

The proposed regulation will benefit: CEC energy analyses; the health, welfare, and safety of California residents; and the state's environment by improving the breadth of data the CEC can use for its analysis. Current data collection does not track new and emerging energy trends and the proposed changes will assist the CEC in capturing new energy sources and patterns of energy demand. Specifically, collection of natural gas and substituting alternative fuel data will reduce data gaps and assumptions in the CEC's analytical work and provide a better understanding of key energy supply and consumption trends that could significantly impact LSEs' short-term electricity procurement obligations, as well as inform long-term investment decisions related to the transmission and distribution systems made by CAISO and UDCs. Specifically, the three separate data subject collection areas will improve:

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1 Pg. 7, Staff from the California Energy Commission, California Public Utilities Commission, *2024 Joint Agency Staff Paper: Progress Towards a Gas Transition: A White Paper Supporting the CPUC's Long-Term Gas Planning Rulemaking R.20-01-007,*

2 California Energy Commission, Order Number 22-0309-7 Order Instituting Rulemaking in the matter of Decarbonizing the Gas System.
https://efiling.energy.ca.gov/GetDocument.aspx?tn=242287&DocumentContentId=75788

1. Natural gas data

    - Evaluate and understand the magnitude of these resources on the broader energy needs.
    - Improve demand forecasts, particularly the peak demand load forecasts.
    - Assess the need for future gas delivery infrastructure in light of changes to gas demand.
    - Improve price forecasting.
    - Improve assessments of gas system reliability.
    - Track the success or failures of specific policies and programs.

2. Renewable natural gas data

    - Assess the role of hydrogen and renewable natural gas in the electric generation, industrial, transportation, and gas utility sectors particularly as California's energy system transitions to lower carbon fuels.
    - Better understandthe types and quantities of feedstocks used to produce hydrogen and renewable natural gas.
    - Better understand costs and available quantities of renewable natural gas and hydrogen to be used as a substitute for natural gas. This includes understanding the cost of the fuels themselves along with the costs of the delivery infrastructure for these fuels, as well as tracking the success or failures of relevant policies and programs.

3. Metered Electricity Use
    - Changes to the specification of the regulatory language to better match the informational structure that utilities actually provide the CEC.

STATEMENT OF SPECIFIC PURPOSE AND NECESSITY

SECTION 1302. RULES OF CONSTRUCTION AND DEFINITIONS

Section: Subdivision 1302(b)(14)
Specific Purpose: The specific purpose of this subsection is to define the term distribution line to narrow down and make clear the type of pipeline subject to regulation.
Necessity: This subsection is necessary to make clear the meaning of "distribution line." This is a common term used in the natural gas industry and the CEC has chosen to use the same definition that is used in Title 49 of the Code of Federal Regulations Section 192.3.

Section Subdivision 1302(b)(15-30)
Specific Purpose: The specific purpose of this change is to renumber these subsections for consistency to keep definitions in alphabetical order.
Necessity: This amendment is necessary due to the addition to subsection (b)(14).

Section: Subdivision 1302(b)(31)
Specific Purpose: The specific purpose of this subsection is to add a definition for the term “gathering line” as it is used in the proposed definition for transmission line.
Necessity: This subsection is necessary to clearly define gathering line for use in this part of the California Code of Regulations. This is a common term used in the natural gas industry and the CEC has chosen to use the same definition that is used in Title 49 of the Code of Federal Regulations Section 192.3.

Section: Subdivision 1302(b)(31-47)
Specific Purpose: The specific purpose of this change is to renumber these subsections for consistency to keep definitions in alphabetical order.
Necessity: This amendment is necessary due to the addition to subsection (b)(31).

Section: Subdivision 1302(b)(48)
Specific Purpose: The specific purpose of this subsection is to define the term “main” to narrow down and make clear the pipeline subject to regulation.
Necessity: This subsection is necessary to make clear the meaning of main. This is a common term used in the natural gas industry and the CEC has chosen to use the same definition that is used in Title 49 of the Code of Federal Regulations Section 192.3.

Section: Subdivision 1302(b)(49-61)
Specific Purpose: The specific purpose of this change is to renumber these subsections for consistency to keep definitions in alphabetical order.
Necessity: This amendment is necessary due to the addition to subsection (b)(48).

Section: Subdivision 1302(b)(62)
Specific Purpose: The specific purpose of this subdivision is to define the term “pipeline” to narrow down and make clear the pipeline subject to regulation.
Necessity: This subsection is necessary to make clear the meaning of pipeline.

Section: Subdivision 1302(b)(63)
Specific Purpose: The specific purpose of this subdivision is to define the term “pipeline facility” to narrow down and make clear the pipeline subject to regulation.
Necessity: This section is necessary to make clear the meaning of pipeline facility.

Section: Subdivision 1302(b)(64-74)
Specific Purpose: The specific purpose of this change is to renumber these subsections for consistency to keep definitions in alphabetical order.
Necessity: This amendment is necessary due to the addition to subsection (b)(61) and (63).

Section: Subdivision 1302(b)(75)
Specific Purpose: The specific purpose of this subsection is to define the term “service line” to narrow down and make clear the pipeline subject to regulation.
Necessity: This subsection is necessary to make clear the meaning of service line. This is a common term used by natural gas industry and the CEC has chosen to use the same definition that is used in Title 49 of the Code of Federal Regulations Section 192.3.

Section: Subdivision 1302(b)(76-77)
Specific Purpose: The specific purpose of this change is to renumber these subsections for consistency to keep definitions in alphabetical order.
Necessity: This amendment is necessary due to the addition to subsection (b)(75).

Section: Subdivision 302(b)(78)
Specific Purpose: The specific purpose of this subdivision is to define the term “system regulator” to narrow down and make clear the pipeline subject to regulation.
Necessity: This subsection is necessary for clarity of the meaning of system regulator. This is a common term used in the industry and the CEC has chosen to use the same definition that is used in Title 49 of the Code of Federal Regulations Section 192.3.

Section: Subdivision 1302(b)(79)
Specific Purpose: The specific purpose of this change is to renumber the subsection for consistency to keep definitions in alphabetical order.
Necessity: This amendment is necessary due to the addition to subsection (b)(78).

Section: Subdivision 1302(b)(80)
Specific Purpose: The specific purpose of this subsection is to define the term “transmission pipeline” to narrow down and make clear the pipeline subject to regulation.
Necessity: This subsection is necessary to make clear the meaning of transmission line. This is a common term used by industry and the CEC has chosen to use the same definition that is used in Title 49 of the Code of Federal Regulations Section 192.3.[3]

Section: Subdivision 1302. (b)(81-90)
Specific Purpose: The specific purpose of this change is to renumber these subsections for consistency to keep definitions in alphabetical order.
Necessity: This amendment is necessary due to the addition to subsection (b)(80).

3 *Transmission line.* A large volume customer may receive similar volumes of gas as a distribution center, and includes factories, power plants, and institutional users of gas.

SECTION 1308. QUARTERLY GAS UTILITY AND ELECTRIC GENERATOR TOLLING AGREEMENT REPORTS

Section: Subdivision 1308(a)
Specific Purpose: The specific purpose of the change within 1308(a) is to remove the word "Monthly" and replace it with "Daily" and to add "each day during" to the previous three months clause and "per day" to the unit of measurements. This will change the interval of the data collected from this regulation from a monthly interval to a daily interval while leaving the reporting frequency of this requirement as quarterly. Currently, data from this regulation is collected in monthly intervals and is submitted to the CEC every quarter (one report containing three data entries, one for each month). The new reporting requirement would be a report containing daily interval information reported to the CEC every quarter.
Necessity: This change to the reporting frequency of the reporting requirement is necessary to increase the granularity of data provided to the CEC to support forecasting requirements. California has a clear goal in decarbonizing its energy system and uses various energy assessments and forecasts to inform those goals. A foundational component of the state's energy planning is the CEC's California Energy Demand Forecast. The demand forecast is a set of several forecasting products that are used in various energy planning proceedings, including the CPUC's oversight of energy procurement and the California ISO's transmission planning. The demand forecast includes annual consumption forecasts to 2040 for electricity and gas by customer sector. Additionally, the CEC continuously improves the forecast to meet the state's evolving planning needs. Advances in recent years include incorporating scenario analysis to better plan for rapid changes in the energy market, particularly in transportation and building electrification, and accounting for more extreme weather variability. The CEC will continue to advance its forecasting capabilities as part of its focus on providing science-based planning tools needed in the transition to a clean energy future[4] and increasing the granularity of historical data collected will help achieve these advancements. (PRC sections 25301(a); 25303(a)(2), (a)(5), and (a)(7); 25304(a), (c), (d), (f), and (g).) As California examines the future role of its natural gas infrastructure at ever increasing levels of detail, the CEC needs improved operational data to understand the daily conditions that determine when natural gas is used, which support CEC natural gas hydraulic modeling. These daily conditions include intraday peaks on the gas system in which gas power plants require additional fuel to meet evening demand for electricity. These peaks are more pronounced as higher proportions of renewables such as solar meet electricity demand in the morning and afternoon. This also points to the need for the state to better understand the operational and economic nexus between the gas and electricity system and better understand the

4 Pg. 97, Bailey, Stephanie, Jennifer Campagna, Mathew Cooper, Quentin Gee, Heidi Javanbakht, and Ben Wender. 2023. *2023 Integrated Energy Policy Report*. California Energy Commission. Publication Number: CEC-100-2023-001-CMF. https://efiling.energy.ca.gov/GetDocument.aspx?tn=254463.

interactions between these systems, through increased interval detail of natural gas deliveries.

Section: Subdivision 1308(a)(2)(A)-(C)
Specific Purpose: The specific purpose of the changes within section 1308(a)(2) is to add additional locations and update two locations where natural gas is received to better reflect California's natural gas system and to make non-substantive edits to numbering of these subdivisions.
Necessity: The change to this subsection is necessary to add additional delivery points and change two delivery points to be reported on. Over the last twenty years, and with the accident at Aliso Canyon, California's natural gas system has undergone several changes. To better understand those changes and better forecast and analyze those changes, the CEC needs additional information on these locations to properly characterize the new operational reality of that system to ensure system reliability.

Section: Subdivision 1308(b)
Specific Purpose: The specific purpose of the change within section 1308(b) is to remove the word "Monthly" and replace it with "Daily" and to add "each day during" to the previous three months clause and "per day" to the units. This will change the interval of the data collected from this regulation from a monthly interval to a daily interval while leaving the reporting frequency of this requirement as quarterly. Currently, data from this regulation is collected in monthly intervals and is submitted to the CEC every quarter (one report containing three months of data). The new reporting requirement would be a report containing daily interval information reported to the CEC every quarter.
Additionally, as part of this change, the CEC is removing core and non-core customer sub-grouping in favor of a total delivery value. This is being done to simplify the reporting requirement to improve the efficiency of reporting at a daily interval.
Necessity: This subsection is necessary to change the reporting frequency of the reporting requirement to increase the granularity of data provided to the CEC to support forecasting requirements. California has a clear goal in decarbonizing its energy system and uses its various energy assessments and forecasts to inform that goal. A foundational component of the state's energy planning is the CEC's California Energy Demand Forecast. The demand forecast is a set of several forecasting products that are used in various energy planning proceedings, including the CPUC's oversight of energy procurement and the California ISO's transmission planning. The demand forecast includes annual consumption forecasts to 2040 for electricity and gas by customer sector. Additionally, the CEC continuously improves the forecast to meet the state's evolving planning needs. Advances in recent years include incorporating scenario analysis to better plan for rapid changes in the energy market, particularly in transportation and building electrification, and accounting for more extreme weather variability. The CEC will continue to advance its forecasting capabilities as part of its focus on providing science-based planning tools needed in the transition to a clean

energy future.[5] (PRC sections 25301(a); 25303(a)(2), (a)(5), and (a)(7); 25304(a), (c), (d), (f), and (g).) As California examines the future role of its natural gas infrastructure at increasing levels of detail, the CEC needs improved operational data to understand the daily conditions that determine when gas is used, which support CEC natural gas hydraulic modeling.

These daily conditions include intraday peaks on the gas system in which gas power plants require additional fuel to meet evening demand for electricity. These peaks are more pronounced as higher proportions of renewables such as solar meet electricity demand in the morning and afternoon. This also points to the need for the state to better understand the operational and economic nexus between the gas and electricity system. This hydraulic modeling has been increasingly critiqued to better support electricity modeling work which through increased interval data collection has improved its forecasting framework to support hourly forecasting capabilities. To better understand the interactions between these systems, it is necessary for the CEC to increase the interval detail of natural gas deliveries where California's gas utilities receive the fuel.

Section: Subdivision 1308(b)(1)
Specific Purpose: The specific purpose of the change is to remove subsection requirements for data the is no longer needed by the CEC to complete its analytical requirements. Only "total" delivery number is now needed.
Necessity: This change is necessary to minimize the burden of data collection on the natural gas industry to better respond to required data needs.

Section: Subdivision 1308(b)(2)
Specific Purpose: The specific purpose of the change is to remove subsection requirements for data the is no longer needed by the CEC to complete its analytical requirements. Only "total" delivery number is now needed.
Necessity: This change is necessary to minimize the burden of data collection on the natural gas industry to better respond to required data needs.

Section: Subdivision 1308(b)(6)
Specific Purpose: The specific purpose of the change is to additional description to the word storage by specifically labeling it as "underground natural gas" storage.
Necessity: This change is necessary to make more specific the type of storage represented in this category in order to avoid confusion with other storage types and prevent the possibility of this reporting group to be used as a "catch-all" for gas that can't be allocated to other categories.

Section: Subdivision 1308(b)(7)
Specific Purpose: The specific purpose of the change is to add other delivery types that are currently unaccounted for.

5 Ibid.

Necessity: This change is necessary to account for newer supply delivers that better represent how natural gas is supplied to utilities and the California system. The listed delivery sources are types reported to the CEC in the past by utilities and the CEC is adding them to the regulations to now formally capture them.

Section: Subdivision 1308(b)(8)
Specific Purpose: This section is being amended to accommodate the addition of 1308(b)(7).
Necessity: This amendment is necessary as subsections (b)(7) is being added forcing this renumbering.

Section: Subdivision 1308(d)
Specific Purpose: The specific purpose of the change within 1308(d) is to remove the word “Monthly” and replace it with “Daily” and to add “each day during” to the previous three months clause and the addition of “per day” to the measurement of natural gas. This will change the interval of the data collected from this regulation from a monthly interval to a daily interval while leaving the reporting frequency of this requirement as quarterly. Currently, data from this regulation is collected in monthly intervals and is submitted to the CEC every quarter (one report containing three months of data). The new reporting requirement would be a report containing daily interval information reported to the CEC every quarter.
Necessity: This change is necessary to update the reporting frequency of the reporting requirement to increase the granularity of data provided to the CEC to support forecasting requirements. California has a clear goal in decarbonizing its energy system and uses its various energy assessments and forecasts to inform that goal. A foundational component of the state’s energy planning is the CEC’s California Energy Demand Forecast. The demand forecast is a set of several forecasting products that are used in various energy planning proceedings, including the CPUC’s oversight of energy procurement and the California ISO’s transmission planning. The demand forecast includes annual consumption forecasts to 2040 for electricity and gas by customer sector. Additionally, the CEC continuously improves the forecast to meet the state’s evolving planning needs. Advances in recent years include incorporating scenario analysis to better plan for rapid changes in the energy market, particularly in transportation and building electrification, and accounting for more extreme weather variability. The CEC will continue to advance its forecasting capabilities as part of its focus on providing science-based planning tools needed in the transition to a clean energy future[6] and increasing the granularity of historical data collected will help achieve these advancements. (PRC sections 25301(a); 25303(a)(2), (a)(5), and (a)(7); 25304(a), (c), (d), (f), and (g).) As California examines the future role of its natural gas infrastructure at ever increasing levels of detail, the CEC needs improved operational data to understand the daily conditions that determine when gas is used, which support CEC natural gas hydraulic modeling. These daily conditions include intraday peaks on

6 Ibid.

the gas system in which gas power plants require additional fuel to meet evening demand for electricity. These peaks are more pronounced as higher proportions of renewables such as solar meet electricity demand in the morning and afternoon. This also points to the need for the state to better understand the operational and economic nexus between the gas and electricity system. This hydraulic modeling has been increasingly critiqued to better support electricity modeling work which through increased interval data collection has improved its forecasting framework to support hourly forecasting capabilities. To better understand the interactions between these systems, it is necessary for the CEC to increase the interval detail of natural gas deliveries where California's gas utilities receive the fuel.

Section: Subdivision 1308(e)
Specific Purpose: The specific purpose of the addition of subsection 1308(e) is to collect average daily interval citygate prices for California citygate locations every quarter.
Necessity: This subsection is necessary to add the reporting requirement to report pricing information on natural gas citygate purchases in California. Public Resources Code section 25303 directs the CEC to "conduct electricity and natural gas forecasting and assessment activities, including, but not limited to, all of the following…." Within the following subsections, accurate citygate prices are fundamental to:

- "(1) Assessment of trends in electricity and natural gas supply and demand, and the outlook for wholesale and retail prices for commodity electricity and natural gas under current market structures and expected market conditions." Citygate natural gas prices are a necessary input to any assessment of wholesale price in natural gas as citygate prices are the wholesale prices. In the past, the CEC has relied on publicly available data on those prices, but with analysis requirements being pushed to greater resolutions due to criticism of past forecasting methodologies, the CEC now needs daily prices at specific locations to support the newer hydraulic modeling methodologies.
- "(2) Forecasts of statewide and regional electricity and natural gas demand, including annual, seasonal, and peak demand, and the factors leading to projected demand growth…" Prices are a fundamental determinant for any "demand" forecast and assessment as it is a basic economic principal that as price changes, the amount of a product consumed also changes. Thus, it is no surprise that both the natural gas and electricity (due to natural gas electricity generation) modeling apparatuses need accurate and more granular citygate natural gas prices to properly function.
- "(4) Evaluation of potential impacts of electricity and natural gas supply, demand, and infrastructure and resource additions on the electricity and natural gas systems, public health and safety, the economy, resources, and the environment." Prices are a fundamental determinant for any "demand" forecast and assessment as it is a basic economic principal that as price changes, the amount of a product consumed also changes. Thus, it is no surprise that both the

natural gas and electricity (due to natural gas electricity generation) modeling apparatuses need accurate and more granular citygate natural gas prices to properly function.

- “(5) Evaluation of the potential impacts of electricity and natural gas load management efforts, including end-user response to market price signals, as a means to ensure reliable operation of electricity and natural gas systems.” To accurately judge changes in “market price signals”, the CEC needs detailed and granular pricing data to effectively assess how end-users respond to prices. In the past, the CEC has not had access to detailed end-user consumption figure to take advantage of more frequent pricing information. With changes within this rulemaking adding daily receipts and consumption information, daily natural gas prices are needed to actually effectively calculate end-user responses to market price signals.
- “(6) Evaluation of whether electricity and natural gas markets are adequately meeting public interest objectives including the provision of all of the following: economic benefits; competitive, low-cost reliable services; customer information and protection; and environmentally sensitive electricity and natural gas supplies. This evaluation may consider the extent to which California is an element within western energy markets, the existence of appropriate incentives for market participants to provide supplies and for consumers to respond to energy prices, appropriate identification of responsibilities of various market participants, and an assessment of long-term versus short-term market performance. To the extent this evaluation identifies market shortcomings, the commission shall propose market structure changes to improve performance.”
- “(7) Identification of impending or potential problems or uncertainties in the electricity and natural gas markets, potential options and solutions, and recommendations.”

Specific elements within this section are:

- “(1) date of the purchased natural gas;” is needed to determine the day that the prices determined on.
- “(2) citygate location of the purchase;” is needed to determine the location where the price occurred to be able to isolate whether the price reported is a result of a local constraint or part of a regional determination.
- “(3) average price paid for natural gas during the day in thousand cubic feet;” is needed as this is the price that best represents cost later end-users will pay.
- “(4) total natural gas purchased in the day, and;” is needed as to determine the strength of price signal experienced on that day and at that location. If a given price is reported with little trading, that reported price more poorly reflects an agreed upon exchange rate and could be abnormal. Without this information, CEC would not know how to properly treat it.
- “(5) number of natural gas purchases that occurred during the day.” is needed as to determine the strength of price signal experienced on that day and at that location. If a given price is reported with little trading, that reported price more

poorly reflects an agreed upon exchange rate and could be abnormal. Without this information, CEC would not know how to properly treat it.

SECTION 1309. QUARTERLY INTERSTATE PIPELINE COMPANY REPORTS

Section: Subdivisions 1309(a), 1309(b), 1309(b)(1), and 1309(c)
Specific Purpose: The specific purpose of the change within 1309 is to change the interval of time that would be reported for this section from a monthly interval to a daily interval. This would leave the reporting frequency of this requirement as quarterly. Currently, data from this regulation is collected in monthly intervals and is submitted to the CEC every quarter (one report containing three months of data). The new reporting requirement would be a report containing daily interval information reported to the CEC every quarter.
Necessity: Changes to this subsection are necessary to change the reporting frequency of the reporting requirement to increase the granularity of data provided to the CEC to support forecasting requirements. California has a clear goal in decarbonizing its energy system and uses its various energy assessments and forecasts to inform those goals. A foundational component of the state's energy planning is the CEC's California Energy Demand Forecast. The demand forecast is a set of several forecasting products that are used in various energy planning proceedings, including the CPUC's oversight of energy procurement and the California ISO's transmission planning. The demand forecast includes annual consumption forecasts to 2040 for electricity and gas by customer sector. Additionally, the CEC continuously improves the forecast to meet the state's evolving planning needs. Advances in recent years include incorporating scenario analysis to better plan for rapid changes in the energy market, particularly in transportation and building electrification, and accounting for more extreme weather variability. The CEC will continue to advance its forecasting capabilities as part of its focus on providing science-based planning tools needed in the transition to a clean energy future. [7] (PRC sections 25301, subsection (a); section 25303(a)(2), (a)(5), & (a)(7); section 25304(a), (c), (d), (f), & (g).) As California examines the future role of its natural gas infrastructure at ever increasing levels of detail, the CEC needs improved operational data to understand the daily conditions that determine when gas is used, which support CEC natural gas hydraulic modeling. These daily conditions include intraday peaks on the gas system in which gas power plants require additional fuel to meet evening demand for electricity. These peaks are more pronounced as higher proportions of renewables such as solar meet electricity demand in the morning and afternoon. This also points to the need for the state to better understand the operational and economic nexus between the gas and electricity system. This hydraulic modeling has been increasingly critiqued to better support electricity modeling work which through increased interval data collection has improved its forecasting framework to support hourly forecasting capabilities. To better understand the interactions between these systems, it is necessary for the CEC to

7 Ibid.

increase the interval detail of natural gas deliveries where California's gas utilities receive the fuel.

Section: Subdivisions 1309(c)(3)(I)-(L)
Specific Purpose: The specific purpose of the change is to include new natural gas trading and aggregation terminals to better represent the California natural gas system that has changed over the last 30 years.
Necessity: Changes to this subsection are necessary to accurately characterize the California natural gas system and allow utilities to accurately report natural gas receipts as they occur in California.

SECTION 1314. NATURAL GAS SYSTEM ANALYSIS

Section: Subdivision 1314(a)(1)
Specific Purpose: The specific purpose of the change within 1314 is to change the month duration of summer days to be reported to the CEC.
Necessity: Changes to this subsection are necessary to accurately characterize the months subject to section 1314 that should be classified as summer. This change aligns with natural gas system industry standards.

Section: Subdivision 1314(e)
Specific Purpose: The specific purpose of the addition of subsection 1314(e) is to collect information on the location of natural gas pipelines and changes to those locations.
Necessity: This subdivision is necessary to add the reporting requirement to report location information on the location of natural gas pipelines. Public Resource Code section 25303 directs the CEC to "conduct electricity and natural gas forecasting and assessment activities, including, but not limited to, all of the following". Within the following subsections, the CEC is directed to perform:

- "(4) Evaluation of potential impacts of electricity and natural gas supply, demand, and infrastructure and resource additions on the electricity and natural gas systems, public health and safety, the economy, resources, and the environment."
- "(7) Identification of impending or potential problems or uncertainties in the electricity and natural gas markets, potential options and solutions, and recommendations."

While gas utility systems will be modified as a result of customers leaving the system and the delivery of lower carbon fuels, a system has to be maintained to serve remaining customers. Analysis of current and future costs, revenues, and operation of gas systems can minimize stranded costs incurred by a transitioning system. CEC staff's proposal to collect infrastructure data on annual basis enables tracking these changes as they happen and to assess future pathways for these systems.

When the Aliso Canyon leak occurred in 2015, the resulting system impacts revealed several pinch-points that have caused price spikes and supply deficiencies throughout the natural gas system. In combination with CEC's hydraulic modeling, to accurately evaluate impacts on the natural gas system and to identify potential problems with it, the CEC needs detailed pipeline connection and mapping information to perform those assessments.

SECTION 1353. DISAGGREGATED DEMAND DATA

Section: Subdivision 1353(a)(1)
Specific Purpose: The specific purpose of the change within 1353 (a) (1) is to remove the word "quarterly" and replace it with "monthly". This will change the frequency of the data being delivered to the CEC to better meet CEC processing and analytic needs and to make the submission of the data more routine for the utilities.
Necessity: Section 1353 was adopted in 2018 and reflected the input of the utilities required to file who participated in the rulemaking process. However, after the regulation went into effect, it became apparent that some of the filing requirements did not reflect the kinds of data that the utilities collect and store in the regular course of business nor the manner in which they do so. After several years of reporting, the utilities now have scripted processes to report this data and have begun reporting on a monthly basis for business purposes anyways. Thus, this change is necessary to better reflect the actual reporting frequency of the data, but also to provide the CEC with data submission certainty to create and post informational reports utilizing this data at regular frequencies.

Section: Subdivision 1353(b)
Specific Purpose: The specific purpose of the change within 1353 (b) is to remove the word "quarterly" and replace it with "monthly". This will change the frequency of the data being delivered to the CEC to better meet CEC processing and analytic needs and to make the submission of the data more routine for the utilities.
Necessity: Section 1353 was adopted in 2018 and reflected the input of the utilities required to file who participated in the rulemaking process. However, after the regulation went into effect, it became apparent that some of the filing requirements did not reflect the kinds of data that the utilities collect and store in the regular course of business nor the manner in which they do so. After several years of reporting, the utilities now have scripted processes to report this data and have begun reporting on a monthly basis for business purposes anyways. Thus, this change is necessary to better reflect the actual reporting frequency of the data, but also to provide the CEC with data submission certainty to create and post informational reports utilizing this data at regular frequencies.

Section: Subdivision 1353(b)(1)
Specific Purpose: The purpose of the proposed changes to section 1353(b)(1) is to change the reporting frequency of this report from quarterly submissions to a monthly submission.
Necessity: Section 1353 was adopted in 2018 and reflected the input of the utilities required to file who participated in the rulemaking process. After several years of reporting this information, utilities have found it easier in most cases to report the requested information on a monthly frequency which better matches CEC needs. This change better reflect actual business processes.

Section: Subdivision 1353(b)(1)(A)
Specific Purpose: This subsection is being amended to add latitude and longitude to reporting of the meter location.
Necessity: This amendment is necessary to accurately report the location of an electricity meter as analysis has found that the address of a meter alone is not always representative of where the meter exists as addresses are not always accurately reported in geospatial data sets. This level of precision will ensure consistent data quality over time for each meter allowing for more accurate comparative data analysis.

Section: Subdivision 1353(b)(1)(B)
Specific Purpose: This subsection is being amended to remove the reference to service account identification.
Necessity: This amendment is necessary to accurately report the data and to prevent confusion among utilities. Staff has determined that the reference to the service account identification is not needed for analytical purposes.

Section: Subdivision 1353(b)(1)(E)
Specific Purpose: This subsection is being amended to move the placement of meter identification number within the section.
Necessity: This amendment is necessary to accurately report the data and to prevent confusion among reporters.

Section: Subdivision 1353(b)(1)(F)
Specific Purpose: This section is being amended to add customer identification number within the section.
Necessity: This amendment is necessary to accurately report the data and to prevent confusion among reporting utilities. Customer identification is being added to the data reported to better track a location’s energy consumption patterns as the inhabitants of that location change over time.

Section: Subdivision 1353(b)(1)(G)
Specific Purpose: This section is being amended to move existing requirements within the section to better reflect reports being submitted to the CEC and the reporting stakeholders understanding of the requirement.

Necessity: This amendment is necessary to accurately report the data and to prevent confusion among reporters.

Section: Subdivision 1353(b)(1)(L)
Specific Purpose: This section is being removed as the information is still being required through other clauses.
Necessity: This removal is necessary to streamline the language of the regulations for easier understanding and elimination of redundancies.

Section: Subdivision 1353(b)(2)
Specific Purpose: This section is being amended to remove the reference to subsection (b)(1)(A) though (J) and leave the reference at (b)(1).
Necessity: This amendment is necessary as subsections (b)(1) (A) though (J) are being renumbered from changes above.

Section: Subdivision 1353(c)(1)
Specific Purpose: Section 1353 was adopted in 2018 and reflected the input of the utilities required to file who participated in the rulemaking process. In the years since its adoption, several utilities have increased their infrastructure's ability to monitor natural gas usage, now allowing for reporting of more detailed information. The purpose of this addition is to bifurcate existing non-interval meter requirements from interval meter requirements that will be introduced later.
Necessity: It is necessary to bifurcate data collection into existing non-interval meter requirements from interval meter requirements to maintain existing metered data collection, while allowing for more detailed reporting that can address state planning and analysis needs. The state's natural gas and electricity systems have become increasingly interdependent. The natural gas system is designed for seasonal swings in residential and commercial demand – characterized by high demand in winter and low demand in summer. In recent years, demand swings are seen on a daily and hourly basis, as natural gas plants are called upon to accommodate the variable generation patterns of a system more dependent upon intermittent renewable resources. To address this issue, the CEC has adopted hydraulic modeling efforts to simulate various scenarios for foreseeing and planning for possible problems. While new interval level data will provide more details on demand shifts and usage by different types of consumers, it is vital to keep existing data collection requirements for all meters that do not have interval functionality in order for the CEC to maintain a complete understanding of the California natural gas usage. Additionally, maintaining this complete understanding allows the CEC to analyze any differences in consumption patterns resulting from interval meter integration.

Section: Subdivision 1353(c)(1)(A)
Specific Purpose: This section is being amended and renumbered to allow for the bifurcation of non-interval meter requirements from interval meter requirements.
Necessity: This amendment is necessary to keep the order of the regulations while accommodating the bifurcation of interval and non-interval data.

Section: Subdivision 1353(c)(1)(B)
Specific Purpose: This section is being amended and renumbered to allow for the bifurcation of non-interval meter requirements from interval meter requirements.
Necessity: This amendment is necessary to keep the order of the regulations while accommodating the bifurcation of interval and non-interval data.

Section: Subdivision 1353(c)(1)(C)
Specific Purpose: This subsection is being amended and renumbered to allow for the bifurcation of non-interval meter requirements from interval meter requirements.
Necessity: This amendment is necessary to keep the order of the regulations while accommodating the bifurcation of interval and non-interval data.

Section: Subdivision 1353(c)(1)(D)
Specific Purpose: This subsection is being amended and renumbered to allow for the bifurcation of non-interval meter requirements from interval meter requirements.
Necessity: This amendment is necessary to keep the order of the regulations while accommodating the bifurcation of interval and non-interval data.

Section: Subdivision 1353(c)(1)(E)
Specific Purpose: This subsection is being amended and renumbered to allow for the bifurcation of non-interval meter requirements from interval meter requirements.
Necessity: This amendment is necessary to keep the order of the regulations while accommodating the bifurcation of interval and non-interval data.

Section: Subdivision 1353(c)(1)(F)
Specific Purpose: The specific purpose of this subdivision is to add the collection of the customer identification number.
Necessity: This amendment is necessary as additional data collaboration with the utilities have revealed this to be necessary information in identifying customers in metered data.

Section: Subdivision 1353(c)(1)(G)
Specific Purpose: This subsection is being amended and renumbered to allow for the bifurcation of non-interval meter requirements from interval meter requirements.
Necessity: This amendment is necessary to keep the order of the regulations while accommodating the bifurcation of interval and non-interval data.

Section: Subdivision 1353(c)(7)
Specific Purpose: This subsection is being eliminated to better reflect similar data collected for electricity and to maintain similar reporting structures and standards.
Necessity: This change is necessary to better reflect the actual reporting frequencies and structures of the data, but also to provide the CEC with data submission certainty to create and post informational reports utilizing this data at regular frequencies.

Section: Subdivision 1353(c)(1)(G)(i)
Specific Purpose: This subsection is being added to require the reporting of the start and end of the billing period of the record for non-metered information. This used to be part of subsection 1353 (c)(8).
Necessity: This change is necessary to better reflect the actual reporting frequencies and structures of the data provided by the utilities that often have different billing periods, but also to provide the CEC with data submission certainty to create and post informational reports utilizing this data at regular frequencies.

Section: Subdivision 1353(c)(1)(G)(ii)
Specific Purpose: This subsection is being amended and renumbered to allow for the bifurcation of non-interval meter requirements from interval meter requirements and to separate out billing period from this subsection. This used to be part of subsection 1353 (c)(8).
Necessity: This amendment is necessary to keep the order of the regulations while accommodating the bifurcation of interval and non-interval data.

Section: Subdivision 1353(c)(1)(G)(iii)
Specific Purpose: This subsection is being amended to specifically add natural gas volume data in addition to total energy sales.
Necessity: This addition of this subsection is necessary as deliveries of natural gas are often measured in therms and allows utilities to more easily report the amount of product that is metered. This volumetric data supports the use of Hydraulic modeling which is a process in which a pipe network is modeled using physical attributes and equations to study system behavior. This analysis will improve the CEC's ability to understand the state's natural gas system.

Section: Subdivision 1353(c)(9)
Specific Purpose: The purpose of this deletion of this subsection is to reposition and renumber this subsection as (c)(1)(G)(v).
Necessity: This change is necessary to better reflect the actual reporting structures of the data and to remove any possible confusion for stakeholders.

Section: Subdivision 1353(c)(1)(G)(iv)
Specific Purpose: This subsection is being amended and renumbered to allow for the bifurcation of non-interval meter requirements from interval meter requirements. Additionally, the removal of the word "and" allows for addition of further clauses.
Necessity: This amendment is necessary to keep the order the regulations while accommodating the bifurcation of interval and non-interval data. Additionally, the removal of the word "and" allows for addition of further clauses.

Section: Subdivision 1353(c)(1)(G)(v)
Specific Purpose: The purpose of this renumbering is to keep customer classification code to the items to be reported to the CEC for meter reporting. This used to be part of subsection 1353 (c)(9).
Necessity: This item is necessary to keep consistent reporting standards for CEC analysis.

Section: Subdivision 1353(c)(1)(G)(vi)
Specific Purpose: The purpose of this addition is to identify any third parties involved in the distribution of the metered natural gas that was dispensed.
Necessity: Generally, for core customers, the gas utility procures the gas for them. However, some core customers procure the gas from providers known as “core transport agents.” Noncore customers such as industrial customer and power plants procure gas from marketers or other supplies. In all of the arrangements above, the gas utility delivers the gas to the customer. This clarifies where the customers procured their gas supplies.

Section: Subdivision 1353(c)(1)(G)(vii)
Specific Purpose: The purpose of this addition is to add customer group which is a defined term used in other CEC reports that denote natural gas distribution.
Necessity: These classifications are needed in order to support forecasting activities. The customer groups are the following: core residential; core commercial; core industrial; core natural gas vehicle; core wholesale and international; noncore commercial; noncore industrial; noncore electric generation; noncore SMUD electric generation; noncore enhanced oil recovery streaming; and noncore natural gas vehicle; noncore wholesale and international.

Section: Subdivision 1353(c)(11)
Specific Purpose: The purpose of this removal is to remove code referencing information already provided.
Necessity: This item is necessary to remove redundant requirements for information that have already been provided to the CEC.

Section: Subdivision 1353(c)(2)
Specific Purpose: The purpose of this addition is to require interval meter reporting for all smart meters operated by a reporting utility.
Necessity: Non-interval metered customer data collected via subdivision (c) has allowed the CEC to better analyze general California household consumption patterns that have improved state forecasts. Yet as the system becomes more subject to hourly fluctuations due to electric balancing needs, natural gas consumption patterns will change drastically and analysis on these interactions with other information about end uses such as household appliances and industrial machinery, locations of customers, and the costs of providing natural gas services to California customers becomes necessary. By holding all other factors (or set of factors) constant, interval level meter

information is the only dataset the CEC can use to determine how each of the factors (or groups of factors) change customer consumption behavior to create accurate and defensible forecasts and analytical work. In addition, tracking the individual factors affecting consumption is needed for the CEC to better meet its obligations to analyze the success of and develop policy recommendations for public interest energy strategies. (Pub. Resources Code § 25305.)

Section: Subdivision 1353(c)(2)(A)
Specific Purpose: The purpose of this addition is to require all the same information for interval meter information that is already collected from non-interval information.
Necessity: The specific informational requirements of subdivision (c)(2)(A) to allow the CEC to correlate natural gas consumption patterns with other information about end uses such as household appliances and industrial machinery, locations of customers, and the costs of providing natural gas services to California customers. By holding all other factors (or set of factors) constant, interval level meter information will allow the CEC to determine how each of the factors (or groups of factors) change customer consumption behavior. This allows for more accurate local and regional forecasts. In addition, tracking the individual factors affecting consumption is needed for the CEC to better meet its obligations to analyze the success of and develop policy recommendations for public interest energy strategies. (Pub. Resources Code § 25305.) Additionally, this information can be used to check and correct customer classification provided by natural gas utilities, allowing better identification of trends and more accurate forecasts by end use and by location.

Section: Subdivision 1353(c)(2)(B)
Specific Purpose: The purpose of this addition is to require all the same information for interval meter information that has already been collected from non-interval information for the previous three years.
Necessity: It is necessary to collect the past three years of data to develop trends in household information necessary for forecasting upon enacting of these requirements. Three years of data was determined to be sufficient as CEC staff is informed that such data exists and would be adequate to establish a basic trend.

Section: Subdivision 1353(c)(2)(C)
Specific Purpose: The purpose of this addition is to require unique information for smart metered information. Interval metered information is uniquely different from regular metered billing information in that it can show changes in consumption of natural gas at levels as low as 15 minutes intervals of time allowing for more precise and in-depth analysis.
Necessity: This subdivision is necessary to capture lower resolution information provided by smart meters in California that monitor natural gas consumption to create more precise and in-depth forecasts and analysis of California household consumption.

Section: Subdivision 1353(c)(2)(C)(i)
Specific Purpose: The purpose of this addition is to require the end period of when the monitored information stops.
Necessity: This subdivision is necessary to mark the end of an interval of a natural gas consumption period for analysis purposes.

Section: Subdivision 1353(c)(2)(C)(ii)
Specific Purpose: The purpose of this addition is to require the duration of the monitored information.
Necessity: This subdivision is necessary to mark the period of time that the consumption of natural gas occurred for analysis purposes. Combined with the end period of the consumption of natural gas, beginning and end of the interval is known.

Section: Subdivision 1353(c)(2)(C)(iii)
Specific Purpose: The purpose of this addition is to require the volume of natural gas dispensed during the defined interval.
Necessity: This subdivision is necessary to mark the amount of natural gas consumed for analysis purposes.

Section: Subdivision 1353(d)(1)
Specific Purpose: The purpose of this removal is to delete the reference to service account identification.
Necessity: This subdivision is necessary as utilities have agreed to the understanding of service account number which is defined in 1302 (69).

SECTION 1382. DEFINITIONS

Section: Subdivision 1382(j)
Specific Purpose: The specific purpose of this subdivision is to define the term Renewable Natural Gas to make clear the energy resource subject to regulation.
Necessity: This subdivision is necessary to make clear the meaning of Renewable Natural Gas.

SECTION 1383. HYDROGEN PLANT DATA

Section: Subdivision 1383(b)(7)-(9).
Specific Purpose: The specific purpose of the change within 1383 is to add three new distribution types for hydrogen produced within California.
Necessity: Additions to this subdivision are necessary to understand the changing energy infrastructure within California. California has a clear goal in decarbonizing its energy system and hydrogen has now been identified as a resource to produce electricity and substitute feedstock for industrial use. The CEC needs further information on these distributions to support its various energy assessments and forecasts to inform its de-carbonization goals. Additionally, analysis of hydrogen data can help derive

estimates of how much it will cost to build out a hydrogen production and delivery infrastructure. Also, as further deliveries of hydrogen lead to less use of existing gas infrastructure, this information can support a decommissioning analysis.
SB 100 requires that the CPUC, CEC, and CARB report every four years to the Legislature (beginning in 2021) that evaluates costs; benefits; gas and electric reliability impacts of various pathways to California achieving 100 percent renewables and zero-carbon resources in its electricity system. Additional RNG and hydrogen data can support future SB 100 analyses for 2025 and beyond. Analysis in the 2021 SB 100 report and CARB's 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan Update) identify the need for a more diverse portfolio of clean energy resources beyond those currently being interconnected, particularly those that can provide electricity when solar and wind cannot. Further, some applications such as high-temperature industrial processes, aviation, off-road transportation, and long-haul trucking can be challenging or expensive or both to electrify directly with current technologies. The 2022 Scoping Plan Update encourages use of all available tools to reduce GHG emissions and remove carbon dioxide from the atmosphere. While electrification is poised to play a significant role in decarbonizing California's economy, the 2022 Scoping Plan Update finds that clean and renewable hydrogen is needed to replace fossil fuels in applications like oceangoing vessels, rail, and air transport, as well as in the industrial sector. To comply with Senate Bill 643 (Archuleta, Chapter 646, Statutes of 2021), the CEC prepared the *2023 Final Staff Report on Senate Bill 643: Clean Hydrogen Fuel Production and Refueling Infrastructure to Support Medium- and Heavy-Duty Fuel Cell Electric Vehicles (MDHD FCEV) and Off-Road Applications*. This report provides an assessment of the state's existing and planned MDHD FCEV refueling infrastructure. SB 643 requires that this report gets updated every three years through 2030. The SB 643 report and its updates shall examine existing and future fuel production and distribution infrastructure needs throughout the state, including in low-income communities. The statewide assessment shall also list synergies and estimate the potential for hydrogen to contribute to emissions reductions across sectors, including, but not limited to, the truck, bus, off-road vehicle, locomotive, maritime, and aviation sectors. The statewide assessment shall take into consideration the process for creating hydrogen and include an evaluation of the ability of hydrogen to enable a more renewable grid, provide grid services, decarbonize hard-to-electrify industries and remote locations, contribute to microgrids, and improve energy resilience. (PRC sections 25301, subsection (a); section 25303(a)(2), (a)(5), & (a)(7); section 25304(a), (c), (d), (f), & (g).) As California examines the future role of its natural gas infrastructure at ever increasing levels of detail, the CEC needs further hydrogen data as a possible substitution resource.

SECTION 1385.5. RNG PLANT DATA

Section: Subdivision 1384.5(a)
Specific Purpose: The specific purpose of the addition of subsection (a) is to establish the reporting period and production requirements for quarterly reports from major RNG producers.

Necessity: The addition of this subdivision is necessary to understand the changing energy infrastructure within California. The CEC needs further information on these distributions to support its various energy assessments and forecasts to inform California's de-carbonization goals. Defining the calendar quarter is necessary for analysis as a standard report period for RNG production data will be essential in order to evaluate the sufficiency of RNG fuel as an alternative to natural gas and transportation fuels consumption in California to fulfill PRC section 25303 and section 25304. Identifying the qualifying facilities through a general 1 billion British Thermal Units per year will reduce the reporting burden on smaller producers.
Additionally, analysis of renewable natural gas (RNG) data can help derive estimates of how much it will cost to build out a hydrogen production and delivery infrastructure. Also, as further deliveries of RNG lead to less use of existing gas infrastructure, this information can support a decommissioning analysis. Or if larger quantities of RNG are blended into existing gas systems, this proposed data collection can support analyses that estimate costs of and needs of additional infrastructure needed for blending.
SB 100 requires that the CPUC, CEC, and CARB report every four years to the Legislature (beginning in 2021) that evaluates costs; benefits; gas and electric reliability impacts of various pathways to California achieving 100 percent renewables and zero-carbon resources in its electricity system. Additional RNG and hydrogen data can support future SB 100 analyses for 2025 and beyond. Analysis in the 2021 SB 100 report and CARB's 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan Update) identify the need for a more diverse portfolio of clean energy resources beyond those currently being interconnected, particularly those that can provide electricity when solar and wind cannot. Further, some applications such as high-temperature industrial processes, aviation, off-road transportation, and long-haul trucking can be challenging or expensive or both to electrify directly with current technologies. The 2022 Scoping Plan Update encourages use of all available tools to reduce GHG emissions and remove carbon dioxide from the atmosphere. While electrification is poised to play a significant role in decarbonizing California's economy, the 2022 Scoping Plan Update finds that clean and renewable hydrogen is needed to replace fossil fuels in applications like oceangoing vessels, rail, and air transport, as well as in the industrial sector.
Data collected from this new regulation will be data submitted in monthly intervals given to the CEC every quarter.
Section: Subdivision 1384.5(b)(1)
Specific Purpose: The specific purpose of the addition of subsection (b)(1) is to enable collection of RNG production data from RNG producers.
Necessity: RNG production data is necessary to evaluate the sufficiency of fuel supplies and infrastructure. Thousand cubic feet are the current standard for measuring output and production of natural gas and RNG. A monthly interval is necessary to allow alignment of RNG data with existing natural gas and transportation fuels data. This data allows analysis of production capacity and product output of transportation fuels, to fulfill PRC sections 25303 and 25304.

Additionally, analysis of renewable natural gas (RNG) data can help derive estimates of how much it will cost to build out a hydrogen production and delivery infrastructure. Also, as further deliveries of RNG lead to less use of existing gas infrastructure, this information can support a decommissioning analysis. Or if larger quantities of RNG are blended into existing gas systems, this proposed data collection can support analyses that estimate costs of and needs of additional infrastructure needed for blending.
SB 100 requires that the CPUC, CEC, and CARB report every four years to the Legislature (beginning in 2021) that evaluates costs; benefits; gas and electric reliability impacts of various pathways to the California achieving 100 percent renewables and zero-carbon resources in its electricity system. Additional RNG and hydrogen data can support future SB 100 analyses for 2025 and beyond. Analysis in the 2021 SB 100 report and CARB's 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan Update) identify the need for a more diverse portfolio of clean energy resources beyond those currently being interconnected, particularly those that can provide electricity when solar and wind cannot. Further, some applications such as high-temperature industrial processes, aviation, off-road transportation, and long-haul trucking can be challenging or expensive or both to electrify directly with current technologies. The 2022 Scoping Plan Update encourages use of all available tools to reduce GHG emissions and remove carbon dioxide from the atmosphere. While electrification is poised to play a significant role in decarbonizing California's economy, the 2022 Scoping Plan Update finds that clean and renewable hydrogen is needed to replace fossil fuels in applications like oceangoing vessels, rail, and air transport, as well as in the industrial sector.

Section: Subdivision 1384.5(b)(2)
Specific Purpose: The specific purpose of the addition of subsection (b)(2) is to enable collection of RNG feedstock type data from RNG producers.
Necessity: The addition of this subdivision is necessary to assess the supply of natural gas fuel substitution and transportation fuel feedstock, and production capacity to fulfill PRC sections 25303 and PRC section 25304. Additionally, feedstock data can support an assessment of the environmental impacts of the production of RNG to estimate California's progress towards its clean energy goals. This data allows the assessment of the primary impacts of a future natural gas supply curtailment on RNG fuel supply and secondary impacts on petroleum refineries pursuant to PRC section 25304(d). The data also allows the CEC to evaluate the potential impacts of electricity and natural gas load management efforts, including end-user response to market price signals, as a means to ensure reliable operation of electricity and natural gas systems to fulfill PRC section 25303(a)(5).

Section: Subdivision 1384.5(b)(3)
Specific Purpose: The specific purpose of the addition of subsection (b)(3) is to enable collection of RNG feedstock input volume data from RNG producers.

Necessity: The addition of this subdivision is necessary to understand the changing energy infrastructure within California. Collection of RNG feedstock input volume is necessary to assess the supply of natural gas fuel substitutes and of transportation fuel feedstock and production capacity to fulfill PRC sections 25303 and PRC section 25304. The data allows the CEC to evaluate the potential impacts of electricity and natural gas load management efforts, including end-user response to market price signals, as a means to ensure reliable operation of electricity and natural gas systems to fulfill PRC section 25303(a)(5). Natural gas use and electricity data allows the assessment of the primary impacts of a future natural gas supply curtailment on hydrogen fuel supply and secondary impacts on petroleum refineries pursuant to PRC section 25304(d). Additionally, feedstock data can support an assessment of the environmental impacts of the production of RNG to estimate California's progress towards its clean energy goals.

Section: Subdivision 1384.5(b)(4)(A)
Specific Purpose: The specific purpose of the addition of subsection (b)(4)(a) is to enable collection of the volume of RNG distributed from RNG producers to fueling stations.
Necessity: The addition of this subdivision is necessary to assess the supply of RNG fuel, RNG distribution capacity, and RNG use pursuant to PRC section 25304(c) and allows the CEC to assess the risk of supply disruptions, price shocks/other events, and the consequences on the availability and price of transportation fuels to fulfill PRC section 25304(d). Thousand cubic feet are the current industry-wide standard for measuring output and production of RNG.

Section: Subdivision 1384.5(b)(4)(B)
Specific Purpose: The specific purpose of the addition of subsection (b)(4)(b) is to enable collection of the volume of RNG distributed from RNG producers to power plants.
Necessity: The addition of this subdivision is necessary to assess the supply of RNG fuel, RNG distribution capacity, and RNG use pursuant to PRC section 25303(a)(3) and allows the CEC to assess the risk of supply disruptions, price shocks/other events, and the consequences on the availability and price of natural gas to fulfill PRC section 25303(a)(5). Thousand cubic feet are the current industry-wide standard for measuring output and production of RNG. SB 100 requires that the CPUC, CEC, and CARB report every four years to the Legislature (beginning in 2021) that evaluates costs; benefits; gas and electric reliability impacts of various pathways to California achieving 100 percent renewables and zero-carbon resources in its electricity system. Additional RNG data can support future SB 100 analyses for 2025 and beyond. Analysis in the 2021 SB 100 report and CARB's 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan Update) identify the need for a more diverse portfolio of clean energy resources beyond those currently being interconnected, particularly those that can provide electricity when solar and wind cannot. Further, some applications such as high-

temperature industrial processes, aviation, off-road transportation, and long-haul trucking can be challenging or expensive or both to electrify directly with current technologies. The 2022 Scoping Plan Update encourages use of all available tools to reduce GHG emissions and remove carbon dioxide from the atmosphere.

Section: Subdivision 1384.5(b)(4)(C)
Specific Purpose: The specific purpose of the addition of subsection (b)(4)(c) is to enable collection of the volume of RNG distributed from RNG producers to industrial facilities.
Necessity: The addition of this subdivision is necessary to assess the supply of RNG fuel, RNG distribution capacity, and RNG use pursuant to PRC section 25303(a)(3) and allows the CEC to assess the risk of supply disruptions, price shocks/other events, and the consequences on the availability and price of natural gas to fulfill PRC section 25303(a)(5). Thousand cubic feet are the current industry-wide standard for measuring output and production of RNG. SB 100 requires that the CPUC, CEC, and CARB report every four years to the Legislature (beginning in 2021) that evaluates costs; benefits; gas and electric reliability impacts of various pathways to California achieving 100 percent renewables and zero-carbon resources in its electricity system. Additional RNG and hydrogen data can support future SB 100 analyses for 2025 and beyond. Analysis in the 2021 SB 100 report and CARB's 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan Update) identify the need for a more diverse portfolio of clean energy resources beyond those currently being interconnected, particularly those that can provide electricity when solar and wind cannot. Further, some applications such as high-temperature industrial processes, aviation, off-road transportation, and long-haul trucking can be challenging or expensive or both to electrify directly with current technologies. The 2022 Scoping Plan Update encourages use of all available tools to reduce GHG emissions and remove carbon dioxide from the atmosphere.

Section: Subdivision 1384.5(b)(4)(D)
Specific Purpose: The specific purpose of the addition of subsection (b)(4)(d) is to enable collection of the volume of RNG distributed from RNG producers to gas utility systems.
Necessity: The addition of this subdivision is necessary to assess the supply of RNG fuel, RNG distribution capacity, and RNG use pursuant to PRC section 25303(a)(3) and allows the CEC to assess the risk of supply disruptions, price shocks/other events, and the consequences on the availability and price of natural gas to fulfill PRC section 25303(a)(5). Thousand cubic feet are the current industry-wide standard for measuring output and production of RNG. CPUC Decision D.20-12-022 (December 2020) approved the Voluntary Renewable Natural Gas Tariff. This tariff allows SoCalGas and SDG&E to offer a natural gas mix containing RNG to their customers, like the green energy packages offered by many electric utilities. These tariffs would need to procure at least 50 percent of the RNG from in-state or out-of-state sources that are delivered to California. Additionally, analysis of RNG and hydrogen data can help derive estimates

of how much it will cost to build out a hydrogen production and delivery infrastructure. Also, as further deliveries of RNG and hydrogen lead to less use of existing gas infrastructure, this information can support a decommissioning analysis. Or if larger quantities of RNG and hydrogen are blended into existing gas systems, this proposed data collection can support analyses that estimate costs of and needs of additional infrastructure needed for blending.

Section: Subdivision 1384.5(b)(4)(E)
Specific Purpose: The specific purpose of the addition of subsection (b)(4)(d) is to enable collection of the volume of RNG distributed from RNG producers to others.
Necessity: The addition of this subdivision is necessary to assess the supply of RNG fuel, RNG distribution capacity, and RNG use pursuant to PRC section 25303(a)(3) and PRC section 25304(c). Additionally, it allows the CEC to assess the risk of supply disruptions, price shocks/other events, and the consequences on the availability and price of natural gas and transportation fuels pursuant to PRC 25303(a)(5) and PRC section 25303(a)(5). Thousand cubic feet are the current industry-wide standard for measuring output and production of RNG. SB 100 requires that the CPUC, CEC, and CARB report every four years to the Legislature (beginning in 2021) that evaluates costs; benefits; gas and electric reliability impacts of various pathways to the California achieving 100 percent renewables and zero-carbon resources in its electricity system. Additional RNG and hydrogen data can support future SB 100 analyses for 2025 and beyond. Analysis in the 2021 SB 100 report and CARB's 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan Update) identify the need for a more diverse portfolio of clean energy resources beyond those currently being interconnected, particularly those that can provide electricity when solar and wind cannot. Further, some applications such as high-temperature industrial processes, aviation, off-road transportation, and long-haul trucking can be challenging or expensive or both to electrify directly with current technologies. The 2022 Scoping Plan Update encourages use of all available tools to reduce GHG emissions and remove carbon dioxide from the atmosphere.

TECHNICAL, THEORETICAL, OR EMPIRICAL STUDIES, REPORTS, OR SIMILAR DOCUMENTS

The CEC has relied upon the following technical, theoretical, or empirical studies, reports, or similar documents in drafting the proposed regulations:

1. Staff from the California Energy Commission, California Public Utilities Commission. 2024 Joint Agency Staff Paper: Progress Towards a Gas Transition: A White Paper Supporting the CPUC's Long-Term Gas Planning Rulemaking R.20-01-007. https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M525/K660/525660391.PDF.
2. California Energy Commission. Order Number 22-0309-7 Order Instituting Rulemaking in the matter of Decarbonizing the Gas System.

https://efiling.energy.ca.gov/GetDocument.aspx?tn=242287&DocumentContentId=75788.
3. Bailey, Stephanie, Jennifer Campagna, Mathew Cooper, Quentin Gee, Heidi Javanbakht, and Ben Wender. 2023. 2023 Integrated Energy Policy Report. California Energy Commission. Publication Number: CEC-100-2023-001-CMF. https://efiling.energy.ca.gov/GetDocument.aspx?tn=254463.
4. United States Environmental Protection Agency Website: Section on Renewable Natural Gas from Agricultural – Based AD/Biogas Systems. https://www.epa.gov/agstar/renewable-natural-gas-agricultural-based-adbiogas-systems#:~:text=Information%20on%20RNG-,What%20is%20Renewable%20Natural%20Gas?,than%20from%20fossil%20fuel%20deposits.
5. California Occupational Employment and Wage Statistics, Bureau of Labor Statistics, May 2024: https://data.bls.gov/oes/#/area/0600000.

CONSIDERATION OF REASONABLE ALTERNATIVES, INCLUDING THOSE THAT WOULD LESSEN ANY ADVERSE IMPACT ON SMALL BUSINESS

The CEC has determined that no reasonable alternative considered by the agency, or that has otherwise been identified and brought to its attention, would be more effective in carrying out the purpose for which these regulations are proposed, would be equally effective and less burdensome to affected private persons, or would be more cost-effective to affected private persons and equally effective in implementing the statutory policy or other provision of law.

The CEC is proposing to update the data collection regulations to enable the CEC to meet its statutory and analytical responsibilities supporting the reliable operation of the state's electricity and natural gas supply systems and assessing progress in, and developing recommendations for, meeting state energy goals. Current data collection does not track new trends and the proposed changes to regulations will assist the CEC in capturing new energy sources and new patterns of energy demand.

The CEC considered two alternatives to the proposed regulations:

Under alternative one, the CEC considered not updating the data collection regulations. However, not updating the standards would not help attain California's climate and energy efficiency goals.

Under alternative two, the CEC considered estimating energy supply information and creating simulated data to perform policy analysis. In many cases, this estimated and simulated data has been used in past reports and analysis to complete CEC tasks. Yet over the years, this type of information has been routinely criticized as inaccurate and misleading, calling into question policy recommendations by the CEC. While the CEC continues to improve its data analysis techniques, it has concluded that best practice is to obtain point specific information where possible to improve analysis and avoid the accuracy challenges of simulated data.

SPECIFIC TECHNOLOGIES OR EQUIPMENT

The proposed regulations do not mandate specific technology or equipment.

ECONOMIC IMPACT ASSESSMENT

The Creation or Elimination of Jobs Within the State of California

The CEC does not expect the proposed regulations will create or eliminate jobs within the State of California. The proposed regulations will require no operational changes for businesses; rather, the proposed regulations will only require reporting on activity that would already be tracked through regular business accounting and inventory tracking activity.

The Creation of New Businesses or the Elimination of Existing Businesses Within the State of California

The CEC does not expect the proposed regulations to result in the creation of new businesses or the elimination of existing businesses within the State of California. The proposed regulations will only require reporting on activity that would already be tracked through regular business accounting and inventory tracking activity.

The Expansion of Businesses Currently Doing Business within the State of California

The CEC does not expect that the proposed regulations will result in the expansion of businesses currently doing business within the State of California. The regulations require no operational changes to industry economic behavior; rather, they only require reporting on activity that would already be tracked through regular business accounting and inventory tracking activity.

Benefits of the Regulations to the Health and Welfare of California Residents, Worker Safety, and the State's Environment

Improved data on natural gas, renewable natural gas, hydrogen, and electricity use enables earlier detection of system issues, reduces the risk of outages or safety hazards, and supports planning for cleaner and more reliable energy infrastructure. Better visibility into production levels, fuel characteristics, and demand interactions help prevent accidents, reduce emissions, and support the transition to lower-carbon fuels. These improvements indirectly enhance worker safety, protect the environment, and promote a safer, more reliable energy system for Californians.

DETERMINATION THAT THE PROPOSED REGULATIONS WILL HAVE NO SIGNIFICANT ADVERSE ECONOMIC IMPACT AFFECTING BUSINESS

The CEC has made an initial determination that the proposed regulations will not have a significant adverse economic impact directly affecting business, including the ability of

California businesses to compete with businesses in other states. Evidence supporting the CEC's initial determination that the proposed regulations will not have a significant adverse economic impact on businesses can be found attached to this Initial Statement of Reasons in *Attachment A: Economic and Fiscal Impact Modeling, Assumptions, and Calculations*.

DUPLICATION OR CONFLICTS WITH FEDERAL REGULATIONS

The CEC has determined that there are no existing comparable federal regulations or statutes.

FOR FURTHER INFORMATION

Inquiries concerning all aspects of the rulemaking process, including the substance of the proposed regulations or any other information upon which the proposed regulation is based, should be directed to the contact persons listed in the Notice of Proposed Action for this rulemaking.

ATTACHMENT A: ECONOMIC AND FISCAL IMPACT MODELING, ASSUMPTIONS, AND CALCULATIONS

ECONOMIC IMPACT STATEMENT

A. ESTIMATED PRIVATE SECTOR COST IMPACTS

A.1. Staff estimates that the proposed regulation:

- Impacts business and/or employees by implementing data reporting requirements.
- Imposes reporting requirements implementing statutorily required data reporting related to natural gas utilities and marketers, electricity utilities, hydrogen producers, and renewable natural gas producers.

A.2. CEC staff estimates that the direct costs of the proposed regulation to regulated entities in the first year of the anticipated effect of the proposed regulation after full implementation will be approximately $14,575,168. See B.1. for additional information regarding this calculation. CEC staff also estimate that there are no direct economic benefits of the proposed regulation to regulated entities or the public. See C.1. for additional information regarding the non-monetary benefits of the proposed regulation.

A.3. CEC staff estimates that the proposed regulation will impact approximately 464 businesses in California. CEC staff estimates that there are no impacted businesses that are small businesses. The CEC makes this assumption using the definition of small business contained in Government Code section 11346.3, subdivision (b)(4)(B), which defines a small business as one that is independently owned and operated, not dominant in its field of operation, and has fewer than 100 employees. Businesses impacted by this regulation include:

- Natural gas utilities and marketers: 3 natural gas utilities and 10 interstate pipeline companies. All companies owed in both these industries are not “independently owned and operated”, thus do not meet the small business definition.
- Electricity utilities: A combined 5 investor owned and public utilities are impacted by this regulation. All of these companies are not “independently owned and operated”, thus do not meet the small business definition. Additionally, these businesses are already producing the reports required via this regulation, with changes to the regulation only making the regulation better reflect what they are currently providing to the CEC, thus the 5 impacted are not included in the 464 businesses number listed above.
- Hydrogen producers: 10 industrial hydrogen producing chemical companies, 22 clean hydrogen producers, and 13 oil refineries. All companies owed in both these industries are not “independently owned and operated”, thus do not meet the small business definition.

- Renewable natural gas producers: 92 landfills, 5 wastewater treatment plants, 27 electric biomass plants, and 282 dairies. Landfills are publicly owned, failing the "independently owned and operated" requirement. Wastewater treatment plants and electric biomass plants are all large-scale chemical processing projects requiring large amounts of investment capital leading to joint ownership and management of the companies involved, thus failing the "independently owned and operated" requirement and not meeting the small business definition. While many dairies are independently owned and operated, in order for dairies collect enough material to make renewable natural gas viable, these dairies have to enter into collectives or joint production agreements[8] with the collecting processing facility no longer being "independently owned and operated" and not meeting the small business definition.

A.4. CEC staff has determined that the proposed regulation does not create businesses in California. The proposed regulation merely implements statutorily required data reporting requirements. These requirements only result in minor economic impacts that do not contribute to the creation of businesses in California.

CEC staff have determined that the proposed regulation does not eliminate businesses in California. The proposed regulation merely implements statutorily required data reporting requirements. These requirements only result in minor economic impacts that do not contribute to the elimination of businesses in California.

A.5. The proposed regulation has a statewide geographic impact.

A.6. CEC staff has determined that the proposed regulation does not create jobs in California. The proposed regulation merely implements statutorily required data reporting requirements. These requirements only result in minor economic impacts that do not contribute to the creation of jobs in California. Any additional labor required to comply with the requirements of the proposed regulations is assumed to be absorbable and billable to existing staff.

CEC staff has determined that the proposed regulation does not eliminate jobs in California. The proposed regulation merely implements statutorily required data reporting requirements. These requirements only result in minor economic impacts that do not contribute to the elimination of jobs in California. The proposed regulations do not mandate specific technologies that would result in the elimination of any positions through compliance with the implemented data reporting requirements.

A.7. CEC staff has determined that the proposed regulation will not affect the ability of California businesses to compete with other states because the proposed regulation does not make it more costly to produce goods or services here. The proposed

8 California Department of Food and Agriculture. "Capturing Methane to Create Renewable Fuels in Kern County." California Climate Investments. https://www.caclimateinvestments.ca.gov/2021-profiles/2021/4/25/dairy-digester-research-and-development-program-dairy-farms-capturing-methane-to-create-renewable-source-of-fuel-kern-county.

regulation merely implements statutorily required data reporting requirements of data elements already collected by the reporting entities. These requirements only result in minor economic impacts that do not contribute to the competitiveness of businesses or cost of produced goods or rendered services in California.

B. ESTIMATED COSTS

B.1. The CEC assumes that the proposed regulations will create economic impacts for some businesses that will be required to create new reports. The proposed regulation requires data submission of information already gathered by industry through normal business operations. To account for any additional economic burden of the proposed regulation that is non-absorbable, the CEC proposes the following assumptions and calculations.

The CEC assumes that the preparation and submission of required data pursuant to the proposed regulation will be prepared by an individual with the classification or pay of an accountant. Information collected by the CEC through this rulemaking requires information that companies collect as part of normal business processes to manage those operations. This makes any information distributed to the CEC needing only to be adjusted to the form CEC requests, but the information already exists and only requires re-specification. Based on Occupational Employment and Wage Statistics from the Bureau of Labor Statistics for the California region during the period of May 2024, the annual mean wage of an accountant is $104,710, or $50.34 hourly[9].

The proposed regulation changes contained within this package include new reporting requirements as well as modification of report cadence for existing reports. It is estimated that the CEC will receive approximately 1,663 new reports annually from these changes with another 256 reports being changed to include new requirements, for a total of 1,919 reports. These reports are sent to the CEC on monthly and quarterly timelines. Estimates of the number of reports generated was made by multiplying the number of reports required by stakeholder by the number of stakeholders that would be required to file that specific report. This results in an additional 4 reports per business per year (1,663 new reports per year in total divided by 464 businesses affected). Accounting for different report types and their varied completion times, the CEC estimates that the average report completion time is approximately 3 hours per week due to the information already existing as part of the monitoring of normal business operations or the information already being gathered as part of the formation of other state mandated reports. This average report completion time also considers the differences in automated technologies that different businesses may use to complete reports more quickly or that other businesses may not use if they are preparing the reports manually. Given this information, the CEC estimates that a typical business will require 156 working hours per report per year to comply with the implemented data

9 *California Occupational Employment and Wage Statistics, Bureau of Labor Statistics, May 2024.* https://data.bls.gov/oes/#/area/0600000.

reporting requirements. Given these figures, the per-business cost can simply be calculated as follows:

(156 (annual hours) * 4 (reports) * $50.34 (wage)) = $31,412 per business annually

As such, the annual per-business economic impact of the proposed regulation is $31,412, or a total economic impact to all affected businesses (464) of $14,575,168.

Furthermore, many of these companies have modernized reporting apparatuses that once configured could easily automate the preparation and submission of this information, further reducing costs.

B.2. CEC staff has determined that the identified economic costs of the proposed regulation only impact natural gas utilities and marketers, electricity utilities, hydrogen producers, and renewable natural gas producers. Therefore, the identified economic impacts of the proposed regulation are attributable to only these businesses.

B.3. The proposed regulation implements statutorily required data reporting requirements on natural gas utilities and marketers, electricity utilities, hydrogen producers, and renewable natural gas producers. As such, all economic impacts of the proposed regulations are attributable to reporting requirements.

B.4. The proposed regulation is not expected to impact housing costs.

B.5. The proposed regulation amends the CEC's existing regulations for the Quarterly Fuel and Energy Reports, Forecast and Assessment of Energy Loads and Resources, and Article 4. Alternative Transportation Fuels to implement statutorily mandated reporting requirements.

C. ESTIMATED BENEFITS

C.1. The proposed regulations create non-monetary benefits to CEC energy analysis, the health and welfare of California residents, worker safety, and the state's environment by improving the breadth of data the CEC can use to inform policy. The increased data collection will enable the CEC to meet its statutory and analytical responsibilities supporting the reliable operation of the state's electricity and natural gas supply systems and assessing progress in, and developing recommendations for, meeting state energy goals. Current data collection does not track emerging trends and the proposed changes to regulations will assist the CEC in capturing new energy sources and new patterns of energy demand and supply.

The benefits of this proposed action are increased transparency and accuracy in CEC's analytical and forecasting duties, which will provide more and better information to stakeholders, and reduce time spent on creating estimates and simulation data.

C.2. The benefits of the proposed regulation are a result of the specific implemented statutory requirements included in PRC sections 25216.5, 25301, 25302, 25303, and 25320.

C.3. The benefits of the proposed regulation are non-monetary and do not result in a calculable economic benefit. The proposed regulations are intended to inform future policy development and decision making that will result in the reduction of gasoline price spikes that directly affect consumers and industries in California.

C.4. The proposed regulation does not result in the expansion of businesses currently doing business within the State of California.

D. ALTERNATIVES TO THE REGULATION

D.1. No reasonable alternatives to the proposed regulation have been proposed that would lessen any adverse impact on small business or that would be less burdensome and equally effective in achieving the purposes of the regulation in a manner that achieves the purposes of the statute being implemented.

The CEC considered two alternatives to the proposed regulations:

Under alternative one, the CEC considered not updating the data collection regulations. However, not updating the standards would not help attain California's climate and energy efficiency goals by denying the CEC information on the influences of new technologies on the energy markets and systems prevent accurate forecasting and analysis of climate and energy efficiency policy.

Under alternative two, the CEC considered estimating energy information and creating simulated data to perform policy analysis and forecasting. In many cases, this estimated and simulated data has been used in past reports and analysis to complete CEC tasks. Yet over the years, this type of information has been routinely criticized as inaccurate and misleading, calling into question policy recommendations by the CEC. While the CEC continues to improve its data analysis techniques, it has concluded that best practice is to obtain point specific information where possible to avoid the accuracy challenges of simulated data and improve analysis when possible.

D.2. The proposed alternatives result in zero economic impacts as these essentially result in not promulgating regulations. As such the economic impact of either considered alternative would be zero. However, as stated in D.1., such alternatives were not considered actionable nor acceptable by the Legislature or consumers.

D.3. Quantifying the costs of the proposed regulations and considered alternatives was straightforward and did not encounter any analytical challenges. Similarly, there were no issues with calculating the benefits of the considered alternatives (no benefit) as they resulted in not promulgating regulations.

As for calculating the benefits of the proposed regulation, there are many challenges in observing any direct or indirect economic impacts. This is because the proposed regulations are intended to inform future policy decisions and market oversight by the CEC. This may tangibly result in future policy decisions or developments which may directly or indirectly create economic impacts, but it is impossible to predict those impacts with the information presently available.

D.4. The proposed regulation implements prescriptive data reporting requirements that are statutorily mandated. As such, the CEC made every effort to consider performance standards where possible. The areas where specific requirements are prescribed are necessary to ensure consistency, comply with statutory requirements, and provide benefit to the health and welfare of California residents, worker safety, and the State's environment.

E. MAJOR REGULATIONS

E.1. – E.3. These requirements are not applicable to the CEC as it is not a California Environmental Protection Agency board, office, or department.

E.4. CEC staff has determined that the proposed regulation is not a major regulation. The total economic impact of the regulation in any measured 12-month period between filing with the Secretary of State and 12 months after full implementation is a cost of $14,575,168 to businesses. This total does not exceed $50 million.

E.5. The proposed regulations will not increase or decrease investment in the State. Investment in California would remain the same as the reporting requirements only capture information that is being produced in the regular course of current business activities.

The proposed regulations are not expected to incentivize innovation in products, materials, or processes. As the proposed regulations are data reporting requirements focused on collection and dissemination of prescriptive information, there is little perceived expectation for innovation. Businesses may improve on their individual business practices in complying with the proposed reporting requirements, which may result in a reduction of the negative economic impact of the proposed regulation.

The proposed regulations create non-monetary benefits to CEC energy analysis, the health and welfare of California residents, worker safety, and the state's environment by improving the breadth of data the CEC can use to inform policy. The CEC is proposing to update the data collection regulations to enable the CEC to meet its statutory and analytical responsibilities supporting the reliable operation of the state's electricity and natural gas supply systems and assessing progress in, and developing recommendations for, meeting state energy goals. Current data collection does not track new trends, and the proposed changes to regulations will assist the CEC in capturing new energy sources and new patterns of energy demand.

FISCAL IMPACT STATEMENT

A. FISCAL EFFECT ON LOCAL GOVERNMENT

A.5. The proposed regulation has no effect on any local entity or program. The proposed regulation merely implements data reporting requirements on businesses in the natural gas and renewable natural gas-related industries.

B. FISCAL EFFECT ON STATE GOVERNMENT

B.4. The proposed regulations require the CEC to collect and process reports that are implemented as part of the data reporting requirements in the proposed regulations. As such, the CEC will use existing staff with subject matter expertise in the information being required to collect and analyze the data. Additionally, the CEC will utilize its new automated data collection submission portals to process and store the information to minimize impacts on staff work.

The CEC staff assigned to support this additional work, with hourly time per year estimated to be spent on the assignment as well as hourly wage are:

1. EGSS I: (192 * $115.00) = $22,080.00
2. Student Intern: (600 * $24.00) = $14,400.00

Staff time spent collecting and processing these reports is estimated at 192 hours per year for the EGSS I classification, and an additional 600 hours of student time per year. The hourly wage of an EGSS I is $115.00, and the hourly wage of Student Interns is $24.

As such, the annual fiscal impact of the proposed regulation on the CEC is $36,480.

C. FISCAL EFFECT ON FEDERAL FUNDING OF STATE PROGRAMS

C.3. The proposed regulation has no effect on any State agency or program which receives federal funding. The proposed regulation merely implements data reporting requirements on businesses in the natural gas and renewable natural gas-related industries.