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# Natural Gas Demand Forecast Forms And Instructions

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## Who Must File

Gas utilities with annual natural gas deliveries of 200 million therms or more in both of the two previous calendar years are required to provide natural gas information pursuant to Section 1345 of Title 20 of the California Code of Regulations to the California Energy Commission for its *Integrated Energy Policy Report*.

## Format For Collecting Information

The format for collecting this information will be two forms (along with supporting data) that apply to various aspects of the natural gas demand forecast and transportation rates used to generate the demand forecast. More information on the supporting data requested will be listed later in this

document. The underlying purpose is to obtain the utility data necessary to improve the Energy Commission's natural gas demand forecast.

## Forms

Form 1 covers the utilities' natural gas demand forecasts.

- Form 1.1 seeks each utility's forecast of average year natural gas demand by customer class and month.
- Form 1.2 seeks each utility's forecast of 1-in-10 cold year natural gas demand by customer class and month.
- Form 1.3 seeks each utility's forecast of winter peak day natural gas demand by customer class and hour.
- Form 1.4 seeks each utility's forecast of summer peak day natural gas demand by customer class and hour.
- Form 1.5 seeks each utility's forecast of 1-in-10 hot year natural gas demand by customer class and month.
- Form 1.6 seeks the natural gas commodity price in \$ per million cubic feet assumed as an input to the demand forecast, the electricity price in cents per kWh, if any, and the average natural gas transportation rate charged to each customer class in \$ per million cubic feet in developing the utility's natural gas demand forecast. It also seeks the price for any renewable gas, synthetic gas or hydrogen that may be blended into the commodity price used as an input to the demand forecast and to identify what portion of the overall commodity price is comprised by these fuels.
- Form 1.7 requests the assumed heating and cooling degree days by month and year used to derive the forecast and a description of how they were determined. These should include degree days for each of the demand cases: i.e., average temperature, 1-in-35 (SoCalGas) or 1-in-90 (PG&E), 1-in-10 cold and dry hydro, a hot temperature year and a summer peak day under both average and hot temperature conditions. Form 1.7 also seeks temperature zones used to derive the forecast, identification of the weather stations that define each zone and the weight accorded each weather zone in developing any of the forecasts.
- Form 1.8 seeks the macro-level economic and demographic assumptions behind each utility's natural gas demand forecast. This includes annual gross state product for California and, if used in the demand forecast, the utility service area as well as any estimate of inflation or deflator series if embedded in any of the costs used to develop the forecast. This form also seeks population, # of households, personal income, taxable sales or commercial floorspace (in millions of square feet), and employment by economic sector. Employment sectors include: (Economic and demographic assumptions)

1. Agriculture
2. Mining
3. Construction
4. Manufacturing
5. Transportation, Information, Utilities
6. Trade
  - a. Retail
  - b. Wholesale (including warehousing)
  - c. Restaurants
  - d. Finance, Insurance & Real Estate
  - e. Services
  - f. Accommodation
  - g. Personal & Laundry Services
  - h. Professional & Business Services
7. Health & Social Services
8. Miscellaneous Services
9. Government & Education
- Form 1.9 seeks base year and forecast years of end-use equipment data. The utility should provide, for each customer class, the end use equipment and saturations assumed in the forecast.
- Form 1.10 requests information about energy efficiency and demand response. Here the utility is to report cumulative incremental impacts of energy efficiency.
- Form 1.11 seeks each gas utility's forecast of demand reduction or increase due to a) climate change; b) electrification; or c) introduction of renewable gas, hydrogen, or synthetic gas. It also asks for the quantity of alternatives that the utility forecasts it or others will blend into the gas system. The utility should indicate each local jurisdiction it knows has or is expected to adopt some sort of local ordinance or building code reducing natural gas use and whether the utility has taken that into account in its forecast.
- Form 1.12 asks how much of the forecast represents new business. The utility should indicate the number of million cubic feet per day in the demand forecast, for each customer class, that represents new business.

Section 1348 of Title 20 of the California Code Regulations requires gas utilities to submit a forecast of retail gas prices. Form 2 pertains to natural gas transportation rates and revenue requirements.

- Form 2.1 seeks the natural gas revenue requirement by functional asset category (i.e., distribution, transmission, storage, customer and other) and the associated factors used to allocate costs for each functional category to customer classes. Costs for major programs such as Pipeline Safety Enhancement Program should be broken out separately, as should Storage Integrity Management Program, the Transmission Integrity Management Program, the Distribution Integrity Management Program, Work for Others, and New Business. Capital expenditures should be broken out by functional asset category. O&M expense should likewise be broken out by functional cost category,

also identifying administrative and general costs as well as uncollectibles, franchise fees, depreciation, income taxes, the net to gross multiplier and overall rate of return. Additional lines should identify O&M cost associated with procurement, customer service, information technology, engineering, support services or other.

This form also seeks the resulting allocation of costs for each asset category to each customer class, as follows:

	Backbone Transmission	Local Transmission	Storage	Distribution	Customer	Other
Residential						
Core Commercial						
Core Industrial						
Noncore Commercial						
Noncore non-EG						
EG						
Wholesale						
EOR						
Other						
Total						

- Form 2.2 seeks the count of customers by class and climate zone.
- Form 2.3 seeks total dollars of ratebase for each functional category, split into depreciated versus undepreciated asset value and climate zone.
- Form 2.4 seeks facilities and miles by functional category and climate zone. This means miles of backbone transmission pipe, miles of local transmission pipe, miles of high pressure distribution mains, miles of low pressure distribution mains, and number of regulators along each functional type as well as the number of miles of each type that the utility expects to replace in each of the next three years. The utility should break these into climate zones and identify the number of miles it considers to be at high risk of failure or incident as identified in its most recent Risk Asset and Mitigation Proceeding report.

### Supporting Data

Please submit the following in a .doc or PDF File or in an Excel file using the .xlsx format:

- A description and map of the gas utility service area and, if different, the area for which the gas utility forecasts demand; Please identify if this includes small gas providers within the utility service territory.
- Presentation of the demographic and economic assumptions that under-ly the forecast, including assumptions about geographic changes in the service area or movement of customers to or from other utilities.
- Describe how the forecasts account for energy efficiency, additional achievable energy efficiency, etc.
- Plausibility, sensitivity, and alternative economic scenario analyses.
- Estimation of the additional cost-effective conservation potential and the impact of possible methods to achieve this potential, and a description of each conservation activity carried out by the gas utility and those proposed for future implementation.
- Detailed forecast workpapers.

## **Confidentiality Applications**

### **How to Request Confidentiality**

The executive director of the Energy Commission has responsibility for determining what information submitted with an application for confidentiality will be deemed confidential. Parties who seek such a designation for data they submit must make a separate, written request that identifies the specific information and provides a discussion of why the information should be protected from release, the length of time such protection is sought, and whether the information can be released in aggregated form. The term of confidentiality is granted on a case-by-case basis.

Certain categories of data provided to the Energy Commission, when submitted with a request for confidentiality, will be automatically designated as confidential and do not require an application. The types of data that are eligible and the process for obtaining this confidential designation are specified in CCR, Title 20, Section 2505(a) (5). The Commission has its own regulations distinct from those governing the CPUC. CPUC determinations on confidentiality are not applicable to data submitted to the Commission.

### **What a New or Repeated Confidentiality Application Must Have**

Applications for confidentiality and the confidential documents must be uploaded directly to Dockets through the Energy Commission's e-filing system. Paper copies or CDs do not need to be submitted. Links to the e-filing system are provided on each proceeding's webpage under "Submit e-filing." Registration is necessary the first time documents are uploaded. Once registration is complete, submit a confidential filing by selecting "Quick Actions" from the Dashboard then selecting "Submit Confidential e-filing" from the dropdown tab. Upload the application first and then any confidential materials. The application will then be reviewed by the executive director in consultation with the chief counsel. Below are the three IEPR subdockets that are applicable to plans and demand forecasts:

XX-IEPR-XX

A signed “penalty of perjury certification” must be included in the application.

Suggested language is as follows:

“I certify under penalty of perjury that the information contained in this application for confidential designation is true, correct, and complete to the best of my knowledge. I also certify that I am authorized to make the application and certification on behalf of (ABC Utility or Corporation).

For e-filings containing a signature, including submissions into electronic databases requiring a signature as attestation of information, the signature may be in electronic form and represented as a scanned signature graphic, or “Original Signed By,” an “/S/” or similar notation followed by a typewritten name.”

### **What Happens If a New or Repeated Application Is Incomplete?**

Applications that have been docketed will be reviewed by Energy Commission staff within 30 calendar days of receipt for clarity, completeness, content, and context. If the application is incomplete or ambiguous in one or more respects, or if the data are incomplete or questionable, staff will contact the filer to resolve uncertainties or obtain additional information.

Applications deemed incomplete may result in a delay in processing until the deficiency is corrected. The filer will be notified by staff about deficient attributes and has 14 calendar days to submit an amended application to the Energy Commission.

### **Determinations and Additional Information for New Applications**

The executive director signs confidentiality determination letters in response to new applications for confidentiality. The applicant has 14 calendar days to appeal the decision.

An applicant can request confidentiality at any time, but once information is publicly released, confidentiality cannot be granted. Information that is public elsewhere cannot be granted confidentiality. The Energy Commission strongly encourages filers to provide data and confidentiality requests concurrently.

More specific questions about confidentiality may be directed to Jared Babula at [Jared.Babula@energy.ca.gov](mailto:Jared.Babula@energy.ca.gov) or (916) 651-1462.

## Definitions

### Definitions Of Terms Used In the Natural Gas Data Forecast Forms and Instructions

Gas Deliveries – The volume of gas delivered to customers in million cubic feet per day, or where applicable, per hour.

Peak Day Winter – this is demand on the coldest day each winter for all customer classes. For PG&E, core customer demand is to be based on a 1-in-90 temperature day; for SoCalGas, core customer demand is to be based on a 1-in-35 temperature cold day. Noncore demand is to be based on 1-in-10 temperatures.

Peak Day Summer – this is the summer day with the highest demand.

Cold and Dry Winter – temperature and hydro conditions expected to occur 1-in-10 years.

Average Year – temperature and hydro conditions expected to occur 1-in-2 years.

Hot Year - warm temperature conditions expected to occur 1-in-10 years.

Load Shape – demand broken down by month or by hour.

Shrinkage - gas used by the utility to operate its system or that is unaccounted for.

Electrification – demand that is decreased because it switches to electricity.

Commodity Price – the price of natural gas in \$ per million British thermal units that is purchased by a utility and passed through to customers on their monthly bill.

Customer Count – the number of customers served in each customer class (should match the customer count used for setting rates).

Cost Allocator – the factor used by the gas utility to allocate costs by category among customer classes.

Functional Asset Category – the typical asset categories as defined by function: e.g., Transmission, Storage, Distribution, Customer and Other used for cost allocation and ratemaking.

Customer Class –

- a) residential: customers consuming natural gas at a residence;
- b) commercial: customers consuming natural gas at a retail location, offices or similar commercial purposes;
- c) industrial: customers consuming natural gas for industrial purposes;
- d) electric generation: customers consuming natural gas to generate electricity;
- e) wholesale: customers who deliver to customers gas they received from a gas utility;
- f) EOR: customers who use natural gas to create steam for enhanced oil recovery;
- g) other: customers consuming natural gas for other purposes; and

h) shrinkage: gas used by the utility to operate its system or that is unaccounted for

## **Definitions in subdivision (b) of Section 1302 of Title 20 Associated Used in the Natural Gas Forecast Forms and Instructions**

- (5) “Core customer” means a natural gas customer that consumes less than 20,800 therms of natural gas per month.
- (6) “Customer” means an active billed account, of a UDC, an LSE, or a gas utility.
- (7) “Customer Classification Code” means NAICS codes and the following codes:
- (A) RE0000 for residential service;
  - (B) 925190 for streetlighting service;
  - (B) 221311 for water supply service;
  - (D) 221312 for irrigation system service; and
  - (E) 999999 for unclassified service.
- (8) “Customer sector” means the following:
- (A) residential customer sector: private households, including single and multiple family dwellings, plus NAICS code 81411;
  - (B) commercial building customer sector: NAICS codes 115, 2372, 326212, 42, 44-45, 48841, 493, 512, 516, 518, 519, 52-55, 561, 61, 62 (excluding 62191), 71, 72, 81 (excluding 81411), and 92 (excluding 92811);
  - (C) other commercial customer sector: NAICS codes 221 (excluding 22131), 48 (excluding 48841), 49 (excluding 493), 515, 517, 562, 62191, and 92811;
  - (D) industry customer sector: NAICS codes 11331, 31-33, 511, and 54171;
  - (E) other industry customer sector: NAICS codes 21 and 23 (excluding 2372);
  - (F) agriculture customer sector: NAICS codes 111, 112, 113 (excluding 11331), and 114;
  - (G) water pumping customer sector: NAICS code 22131;
  - (H) street lighting customer sector: lighting of streets, highways, other public thoroughfares, other outdoor area lighting, and traffic control lighting.
- (9) “Customer group” means the following:
- (A) residential: customers consuming electricity for residential purposes;
  - (B) commercial: customers consuming electricity for commercial purposes;
  - (C) industrial: customers consuming electricity for industrial purposes; and
  - (D) other: customers consuming electricity for other purposes.
- (10) “Demand” means the rate at which electricity is delivered by generation, transmission, and distribution systems, measured in units of watts or standard multiples thereof, (e.g., 1,000 Watts = 1 kilowatt, 1000 kilowatt = 1 megawatt) or the rate at which natural gas, measured as million cubic feet per day, is consumed by the customer.
- (14) “Electric generator” means a machine that converts mechanical energy into electrical energy; or a device that converts non-mechanical energy to electricity directly, including without limitation photovoltaic solar cells and fuel cells.
- (17) “End user” means any company that consumes electricity or natural gas for its own use and not for resale.

- (19) "Executive Director" means the Executive Director of the Commission, or his or her designee.
- (22) "Gas processor" means any company that extracts, in California, natural gas liquids from natural gas produced from California reservoirs.
- (23) "Gas retailer" means any company that (a) sells natural gas to end users or customers located in California, (b) produces and consumes natural gas on-site in California (except for gas consumed for gathering, processing, or compressing purposes), or (c) produces natural gas at one site and consumes natural gas at another site that is in California and that is owned or controlled by the company.
- (24) "Gas service area" means the geographic area where a gas utility distributes, or has distributed during an applicable reporting period, natural gas to customers.
- (25) "Gas utility" means any company that is (a) engaged in, or authorized to engage in, distributing or transporting natural gas or natural gas liquids, and that is (b) either owned or operated by a governmental public entity or regulated by the California Public Utilities Commission.
- (33) "Interstate pipeline" means any pipeline that crosses a state border and that is under the regulatory authority of the Federal Energy Regulatory Commission or its successors.
- (34) "Interstate pipeline company" means a company that owns or operates an interstate pipeline that delivers natural gas to California at the state's border or inside California's borders.
- (40) "Major customer sector" means the following:
- (A) "residential major customer sector," which means residential customer sector;
  - (B) "commercial major customer sector," which means commercial building customer sector;
  - (C) "industrial major customer sector", which means the sum of industry customer sector, and other industry customer sector; and
  - (D) "other major customer sector", which means the sum of agriculture customer sector, other commercial customer sector, street lighting customer sector, and water pumping customer sector.
- (42) "Monthly system peak demand" means the highest system hourly demand in a calendar month.
- (44) "Natural gas liquids" means liquid products that are produced at natural gas processing facilities and that are gaseous at reservoir temperatures and pressures but are recoverable by condensation or absorption.
- (45) "Natural gas sales" means the amount of natural gas sold by a Gas Retailer to a customer.
- (47) "Noncore customer" means a natural gas customer that is not a core customer.
- (48) "North American Industry Classification System" or "NAICS" means the system of classification for business establishments set forth in the most recent version of the North American Industry

Classification System United States Manual (Executive Office of the President, Office of Management and Budget, Washington, D.C.), and as revised thereafter in the Federal Register.

(49) "NAICS Code" means the applicable 6-digit (unless otherwise specified) code in the NAICS for the entity being classified.

51) "Peak demand" means the highest integrated net energy for load within a certain period (e.g., in a month, a season, or a year).

(A) For a UDC, peak demand is the sum of all net energy for load, within a specific operating hour, for all LSEs providing generation services within a UDC's service area.

(B) For each LSE, peak demand is the sum of all net energy for load, including assignable losses, within a specific operating hour for the specific customers to which the LSE provides generation services.

(C) "Net energy for load" means generation energy injected into a specific electrical system, plus energy received from other systems less energy delivered to other systems through interchange. It includes losses, but excludes energy required to operate storage facilities or plant use by a generator.

(52) "Person" means an individual human being.

(54) "Power plant" means a plant located in California or a California control area that contains one or more prime movers, one or more electric generators, and appropriate auxiliary equipment.

(62) "Stocks" means quantities of oil, natural gas, or natural gas liquids representing actual measured inventories corrected to 60 degrees Fahrenheit less basic sediment and water where an actual physical measurement is possible. Stocks include domestic and foreign quantities held at facility and in transit thereto, except those in transit by a pipeline.

(63) "Submitted" means, with regard to data, a report, or an application that must be submitted by a specified date, that the data is received at the Commission by that date and that the data, report, or application is complete, accurate, and in compliance with the applicable requirements of this Article and with the forms and instructions specified under Section 1303 and 1342.

(64) "Therm" means a unit of heat equal to 100,000 British thermal units (1.054 x 10<sup>8</sup> joules).

(65) "Tolling Agreement" means a contractual arrangement whereby the buyer of electricity agrees to provide specified amounts of natural gas to a power plant for conversion to specified amounts of electric energy over a specified period of time.

(66) "Useful thermal output" means the thermal energy made available in a cogeneration system for use in any industrial or commercial process, heating or cooling application, or delivered to other end users, i.e., total thermal energy made available for processes and applications other than electrical generation.

(68) "Waste heat" means the thermal energy produced during electrical generation but not utilized for a useful purpose as defined in "useful thermal output," i.e., the total heat content of the fuel used to generate electricity minus the energy content of the useful thermal output and electricity production.

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## **Text of Title 20 Section 1345**

(c) Each gas utility shall submit the following:

(1) A description and map of the gas utility service area and, if different, the area for which the gas utility forecasts demand;

(2) Presentation of the demographic and economic assumptions that under-lie the forecast, including assumptions about geographic changes in the service area or movement of customers to or from other utilities;

(3) Forecasted demand for each year of the forecast, accounting for conservation reasonably expected to occur, beginning with the year in which the forecast is submitted, including:

(A) Annual and monthly energy demand, and annual peak demand; and

(B) The annual energy forecast and peak forecast presented by major customer sector.

(4) Plausibility, sensitivity, and alternative economic scenario analyses;

(5) Estimation of the additional cost-effective conservation potential and the impact of possible methods to achieve this potential, and a description of each conservation activity carried out by the gas utility and those proposed for future implementation; and

(6) Additional information and analysis consistent with these regulations as required in the forms and instructions adopted by the Commission.

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**Text of Title 20 Section 1348(c)**

(c) Each gas utility company and interstate pipeline company shall submit a forecast of retail gas prices.

Note: Authority cited: Sections 25213, 25218(e) and 25320, Public Resources Code. Reference: Sections 25005.5, 25216, 25216.5, 25300, 25301, 25302 and 25303, Public Resources Code.

## **Title 20, Section 2505(a) (5)**

(5) Automatic Designation. Information submitted by a private third party shall be designated confidential without an application for confidentiality if the requirements of subsections (a)(5)(A) and (B) of this Section are met. If the requirements of subsection (a)(5)(A) and (B) are not met, the Executive Director shall inform the private third party that the record will not be deemed confidential. Except as provided in Section 2507 of this Article, the record for which confidentiality was requested shall not be disclosed for fourteen days to allow the requirements of subsection (a)(5)(A) and (B) to be met or to allow the filing of an application pursuant to subsection (a)(1) of this section.

(A) The entity submitting the information shall label each individual item of the submittal that is entitled to be designated confidential.

(B) The entity submitting the information shall attest under penalty of perjury that the information submitted has not been previously released and that it falls within one of the following categories:

1. Information that is derived from energy consumption metering, energy load metering research projects, or energy surveys provided pursuant to Section 1343 or 1344 of Article 2 of Chapter 3, and that is one or more of the following:

a. for the residential customer sector and the commercial customer sector - customer identifiers, energy consumption, and any other information that could allow a third party to uniquely identify a specific respondent;

b. industrial major customer sector - all information;

c. survey design information - all information used to design a survey, stratify billing records, devise a sample scheme, select a sample, sample specific end-users for participation in a survey or a pre-test of a questionnaire or interview form.

2. Energy sales data provided pursuant to Section 1306, 1307, or 1308(c) of Article 1 of Chapter 3, if the data is at the greatest level of disaggregation required therein.

3. Information submitted by each LSE that is not a UDC that consists of:

a. Load forecasts and supporting customer projections by UDC distribution service area submitted pursuant to subdivision (b) of Section 1345 of Article 2 of Chapter 3.

b. Retail electricity price forecasts submitted pursuant to subdivision (a) of Section 1348 of Article 2 of Chapter 3.

4. Fuel cost data provided for individual electric generators under Section 1304 and fuel price data provided pursuant to subdivision (d) of Section 1308 of Article 1 of Chapter 3.

5. Records of Native American graves, cemeteries, and sacred places maintained by the Native American Heritage Commission.

6. Electric power plant-specific hourly generation data.

7. Electric power plant name, nameplate capacity, voltage at which the power plant is interconnected with a UDC system or transmission grid, address where the power plant is physically located, power plant owner's full legal name and address or longitude and latitude, if power plant is privately owned and its identity as a power plant is not public knowledge, (e.g., backup generator or solar installation at residence or business) under Section 1304 of Article 1 of Chapter 3.

8. Information the release of which is prohibited pursuant to the Information Practices Act (Civil Code Section 1798 et seq.)

9. All information provided pursuant to Section 1314 of Article 1 of Chapter 3 and Section 1353 of Article 2 of Chapter 3.

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