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December 21, 2018

The Honorable Ronald D. Kouchi
President of the Senate
State Capitol, Room 409
415 South Beretania Street
Honolulu, Hawaii 96813

The Honorable Scott K. Saiki
Speaker of the House
State Capitol, Room 431
415 South Beretania Street
Honolulu, Hawaii 96813

Re: Docket No. 2017-0105, The Gas Company, LLC dba Hawaii Gas – Application for Approval of Rate Increases and Revised Rate Schedules and Rules, 2018 Test Year

Dear Senate President Kouchi and House Speaker Saiki:

The Public Utilities Commission ("Commission") respectfully submits this report in accordance with Hawaii Revised Statutes ("HRS") § 269-16(d).

The Parties in this 2018 test year rate case proceeding are The Gas Company, LLC dba Hawaii Gas, and the Department of Commerce and Consumer Affairs, Division of Consumer Advocacy ("consumer advocate"), an ex officio party, pursuant to HRS § 269-51 and Hawaii Administrative Rules § 6-61-62(a).

The Participants are 350 Hawaii, Hui Aloha Aina O Ka Lai Maile Alii, and Life of the Land.

With respect to Hawaii Gas' completed rate case application filed with the Commission, HRS § 269-16(d) states in part:

(d) The commission shall make every effort to complete its deliberations and issue its decision as expeditiously as possible and before nine months from the date the public utility filed its completed application; provided that in carrying out this mandate, the commission shall require all parties to a proceeding to comply strictly with procedural time schedules that it establishes. If a decision is rendered after the nine-month period, the commission shall report in writing the reasons therefor to the legislature within thirty days after rendering the decision.

Notwithstanding subsection (c), if the commission has not issued its final decision on a public utility's rate application within the nine-month period stated in this section, the commission, within one month after the expiration of the nine-month period, shall render an interim decision allowing the increase in rates, fares and charges, if any, to which the commission, based on the evidentiary record before it, believes the public utility is probably entitled. The commission may postpone its interim rate decision for thirty days if the commission considers the evidentiary hearings incomplete

The nine-month period in this subsection shall begin only after a completed application has been filed with the commission and a copy served on the consumer advocate

HRS § 269-16(d)(emphasis added).

Based on the completed application filing date of August 17, 2017, the nine-month deadline for the Commission to issue its decision and order was May 17, 2018, or at a minimum, its interim decision and order, by June 18, 2018, pursuant to HRS § 269-16(d).¹

Nonetheless:

1. On May 17, 2018, the following pre-evidentiary hearing procedural matters were still pending: (A) Hawaii Gas' responses to the Consumer Advocate's rebuttal information requests, due by May 23, 2018; (B) preliminary motions, due by May 25, 2018; (C) the Parties' settlement agreement, if any, due by May 29, 2018; (D) the Parties' statement of probable entitlement, due by May 29, 2018, if no settlement agreement; (E) simultaneous prehearing statements of position, due by May 29, 2018; and (F) the prehearing conference.²
2. On June 7, 2018, the Commission issued Order No. 35517: (A) granting the Parties' request, filed on May 25, 2018, for a ten-day extension of time, from May 29, 2018 to June 8, 2018, to file their settlement agreement; and (B) extending by ten days, from June 18, 2018 to June 28, 2018, the deadline to issue an interim decision and order.³

¹See Order No. 34927, filed on October 25, 2017, at 1-2, 8-9, and 11 (the filing date of Hawaii Gas' completed application is August 17, 2017); and Order No. 35112, filed on December 18, 2017, at 7-8 and 10 (the ten-month deadline to issue an interim decision and order is June 18, 2018), and Exhibit A thereto, at 2 n.1 (the nine-month deadline to issue a decision and order is May 17, 2018).

²Order No. 35346, filed on March 16, 2018, at 11.

³Order No. 35517, filed on June 7, 2018, at 3-4 and 7.

3. On June 12, 2018, the Parties filed their settlement agreement, twenty-six days after May 17, 2018.
4. On June 13, 2018, the Commission issued Order No. 35520: (A) granting the Parties' request, filed on June 8, 2018, for a four-day extension of time, from June 8, 2018 to June 12, 2018, to file their settlement agreement; and (B) extending by four days, from June 28, 2018 to July 2, 2018, the deadline to issue an interim decision and order.
5. Under these specific circumstances, Hawaii Gas: (A) waived the Commission's issuance of its decision and order by May 17, 2018; and (B) voluntarily extended the deadline for the Commission to issue its interim decision and order, from June 18, 2018 to July 2, 2018.
6. On June 27, 2018, the Commission timely issued Interim Decision and Order No. 35550.

The Commission, at page 79 of Interim Decision and Order No. 35550, stated in part:

Hawaii Gas estimates a completion date of October 2018, for the Honouliuli [Wastewater Treatment Plant] Biogas Project. In response, Hawaii Gas shall file reports describing the status of project completion. The commission does not intend to issue its final decision and order until said project is in-service and used and useful for public utility purposes.

Interim Decision and Order No. 35550, at 79 (footnote and citations therein omitted)(emphasis added).

7. On December 13, 2018, Hawaii Gas filed its final status report, certifying that the Honouliuli Wastewater Treatment Plant Biogas Project is completed, in-service, and is used and useful for public utility purposes during the 2018 test year.
8. Thereafter, on December 21, 2018, the Commission issued Decision and Order No. 35969, a copy of which is enclosed for your information.

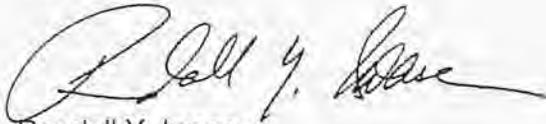
(Note: In the event the Commission timely issues an interim decision and order, there is no deadline for the Commission to issue its final decision and order. See HRS § 269-16.)

In summary: (1) Hawaii Gas waived the issuance of a decision and order by May 17, 2018; (2) on June 27, 2018, the Commission timely issued Interim Decision and Order No. 35550; (3) on December 13, 2018, Hawaii Gas filed its final status report for the Honouliuli Wastewater Treatment Plant Biogas Project; and (4) on December 21, 2018, the Commission issued Decision and Order No. 35969.

The Honorable Ronald D. Kouchi
The Honorable Scott K. Saiki
December 21, 2018
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Thank you for the opportunity to submit this report. Should you have any procedural questions regarding this matter, please contact me or Michael Azama, Commission Counsel, at 586-2020.

Sincerely,

A handwritten signature in black ink, appearing to read "Randall Y. Iwase". The signature is fluid and cursive, with a long horizontal stroke at the end.

Randall Y. Iwase
Chair

RYI:ljk

Enclosure

- c: Tom Kobashigawa, Hawaii Gas (w/o enclosure)
- Jeffrey T. Ono, Esq./David Y. Nakashima, Esq., counsel for Hawaii Gas (w/o enclosure)
- Dean Nishina, Division of Consumer Advocacy (w/o enclosure)
- Sherry Pollack, 350 Hawaii (w/o enclosure)
- Lynette Cruz, Hui Aloha Aina O Ka Lai Maile Alii (w/o enclosure)
- Henry Curtis, Life of the Land (w/o enclosure)

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF HAWAII

In the Matter of the Application of)
)
THE GAS COMPANY, LLC dba)
HAWAII GAS)
)
For Approval of Rate Increases and)
Revised Rate Schedules and Rules.)
_____)

DOCKET NO. 2017-0105

DECISION AND ORDER NO. 35969

FILED
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PUBLIC UTILITIES
COMMISSION

Docket No. 2017-0105

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In the Matter of the Application of)
THE GAS COMPANY, LLC dba)
HAWAII GAS)
For Approval of Rate Increases and)
Revised Rate Schedules and Rules.)

Docket No. 2017-0105
Decision and Order No. **35969**

DECISION AND ORDER

The Parties are THE GAS COMPANY, LLC dba HAWAII GAS ("Hawaii Gas," "HG," or "TGC"), and the DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS, DIVISION OF CONSUMER ADVOCACY ("Consumer Advocate"), an ex officio party, pursuant to Hawaii Revised Statutes ("HRS") § 269-51 and Hawaii Administrative Rules ("HAR") § 6-61-62(a). The Participants are 350 HAWAII, HUI ALOHA AINA O KA LAI MAILE ALII ("HAA KLMA"), and LIFE OF THE LAND ("LOL").

By this Decision and Order, the commission approves an increase of \$8,896,152, or approximately 8.39% over revenues at present rates for Hawaii Gas, based on a total revenue requirement of \$114,926,065 for the 2018 calendar test year ("2018 Test Year," "Test Year 2018," or "Test Year").

The commission issues this Decision and Order in response to, among other pleadings:

1. Hawaii Gas' application, filed on August 1, 2017, as supplemented on August 8, 16, and 17, 2017;

2. The Stipulation of the Parties for Full Settlement, filed on June 12, 2018;

3. A correct version of Exhibit F to the Stipulation, filed by Hawaii Gas on June 18, 2018;

4. Errata to the Stipulated Settlement, filed by Hawaii Gas on June 19, 2018, consisting of an array of corrected exhibits to the Stipulation, including a Revised Exhibit F;

5. The Single Filing of Settlement Documents, filed by Hawaii Gas on June 29, 2018;

6. Hawaii Gas' responses to the commission's post-Interim Decision and Order clarifying information requests, filed on July 5, 2018, including its responses to PUC-IR-101 (2018) and PUC-IR-201 (2018);

7. Hawaii Gas' Second Revised Exhibit F, filed on August 14, 2018; and

8. A correct version of Attachment 1, filed by Hawaii Gas on September 17, 2018, to its response to PUC-IR-101 (2018), previously filed on July 5, 2018, more than two months earlier (labeled as Revised Attachment 1 by HG).

Revised Attachment 1 and Attachment 2 of Hawaii Gas' response to PUC-IR-101 (2018), in turn, depict in blackline format the Parties' stipulated revisions to the gas utility's existing tariff.

Hawaii Gas, in response to PUC-IR-201 (2018), confirms that its Single Filing of Settlement Documents, filed on June 29, 2018, and its response to PUC-IR-101 (2018), with attachments, filed on July 5, 2018, collectively constitute the Stipulation of the Parties for Full Settlement.

Nonetheless: (1) on August 14, 2018, Hawaii Gas filed its Second Revised Exhibit F, in place of the Revised Exhibit F that is attached to the Single Filing of Settlement Documents, filed on June 29, 2018; and (2) on September 17, 2018, Hawaii filed Revised Attachment 1 in place of the Attachment 1 that is attached to its response to PUC-IR-101 (2018).

To minimize the disarray and utter confusion caused by Hawaii Gas' various filings, unless clearly required otherwise by the context, "Stipulation" refers to Hawaii Gas' Single Filing of Settlement Documents, filed on June 29, 2018; its response to PUC-IR-101 (2018), excluding Attachment 1, filed on July 5, 2018; its Second Revised Exhibit F, filed on August 14, 2018; and its Revised Attachment 1, filed on September 17, 2018.

Hawaii Gas' existing base rates took effect on June 1, 2010, based on TGC's 2009 calendar test year rate case.

Approximately eight years later, on July 1, 2018, its interim increase in revenues based on the 2018 Test Year took effect, pursuant to Interim Decision and Order No. 35550, issued on June 27, 2018.

The 8.39% interim increase in revenues over present rates initially authorized by the commission and now permanently authorized by this Decision and Order issued today, represents an approximate 1.048% annual increase in revenues on a non-compounding and non-retroactive bases, during the eight-year period from June 1, 2010 to July 1, 2018 ($8.39\%/8 \text{ years} = 1.048\% \text{ per year}$).

On balance, the increase in revenues of \$8,896,152, or approximately 8.39% over revenues at present rates, provides Hawaii Gas with the opportunity to recover its normalized, reasonable utility expenses and to earn a fair return on its average depreciated rate base balance, consistent with the ratepayers' attendant benefits of continuing to receive gas utility service at just and reasonable rates.

The commission, by this Decision and Order, approves the Parties' Stipulation.

I.

Background

Hawaii Gas is: (1) a State of Hawaii ("State"), limited liability company; and (2) the duly franchised provider of gas utility service throughout the State.¹ In this regard:

A. In 1904, the franchise to manufacture and supply gas was initially granted to Honolulu Gas Company, Limited.²

B. The current version of Hawaii Gas' franchise states in part:

Section 1. Manufacture and supply of gas; laying pipes, etc., in streets. Honolulu Gas Company, Limited, a Hawaii corporation, and its successors and assigns, is hereby authorized and empowered to manufacture and supply gas for use as a fuel, illuminating purposes and otherwise, throughout the State of Hawaii and to erect and maintain at such places within the State of Hawaii such buildings, machinery and appurtenances as may be necessary for the production, manufacture and storage of gas and its various by-products[.]

Act 262, Session Laws of Hawaii 1967, § 1, at 409.

¹See Application, filed on August 1, 2017, as supplemented on August 8, 16, and 17, 2017 (collectively, "Application" or "subject Application"), at 1-2; HG T-1, at 4; and In re Citizens Comm. Co., Docket No. 03-0051, Decision and Order No. 20354, filed on July 25, 2003, at 3-4.

²Application, at 3 n.1; and Docket No. 03-0051, Decision and Order No. 20354, at 4 n.4.

C. Hawaii Gas is the current successor-in-interest to Honolulu Gas Company, Limited.³

Hawaii Gas' ultimate parent entity is Macquarie Infrastructure Corporation ("MIC"), which is publicly traded on the New York Stock Exchange.⁴ The various intermediate entities between Hawaii Gas and its ultimate parent "are for legal and tax purposes [and] have no bearing on the ultimate ownership of HG by MIC."⁵ A copy of MIC's organizational chart is attached as Exhibit HG-401A to the Application.

Hawaii Gas states that MIC and its affiliates provide the following three services to the gas utility:

(1) long range strategic planning and asset management support; (2) functions coordinated at the corporate level including capital markets, treasury, [Securities and Exchange Commission] reporting, shareholder relations, tax and internal audit; and (3) management and procurement of services that benefit from scale purchases including insurance and, going forward, fleet procurement.

HG T-4A, at 2.

Hawaii Gas' existing base rates took effect on June 1, 2018, resulting from the commission's adjudication of

³See Application, at 3-4 n.1; and Docket No. 03-0051, Decision and Order No. 20354, at 4 n.4.

⁴HG T-4A, at 2.

⁵Application, filed on August 1, 2017, as supplemented on August 8, 16, and 17, 2017 (collectively, "Application" or "subject Application"), at 8; and HG T-4A, at 2.

TGC's 2009 calendar test year rate case, In re The Gas Co., LLC,
Docket No. 2008-0081.⁶

Hawaii Gas relies on various studies in support of its pending requests for a general rate increase and other related matters, including its: (1) Cost Allocation Manual (see Confidential Exhibit HG-334 (10/12/17)); (2) Lead-Lag Study (see Workpaper HG-WP-314 (08/01/17)); (3) Cost of Service Study (see Confidential Attachment 1, CA-IR-224 (02/05/18), and Confidential Attachment 1, CA-IR-225 (02/05/18)); and (4) LPG Transfer Study (see Revised TGC-1305, Exhibit JAH-7 and Confidential Exhibit JAH-9 (02/14/18)).

⁶See Docket No. 2008-0081, Decision and Order, filed on April 20, 2010; Order, filed on May 25, 2010; and Order, filed on June 17, 2010.

A.

Distinctions Between Hawaii Gas' Non-Regulated
(i.e., Non-Utility) Gas Operations and its
Regulated (i.e., Utility) Gas Operations

Hawaii Gas states that there is no indigenous source of natural gas in the State, or access to natural gas distribution pipelines. Accordingly, gas must either be synthetically manufactured or imported into the State.⁷

Hawaii Gas, through its Oahu, Hawaii, Kauai, and Maui (including Lanai and Molokai) Gas Divisions, engages in: (1) non-regulated (i.e., non-utility) gas operations; and (2) regulated (i.e., utility) gas operations.⁸ Each island, in turn, is designated as separate districts.⁹

As explained in Section I.A, herein, the distinctions between Hawaii Gas' non-regulated and regulated gas operations focus on its purchase and distribution of liquefied petroleum gas ("LPG" or "propane") to its non-utility and utility customers. Hawaii Gas' neighbor island districts, moreover, are served exclusively with LPG.

Hawaii Gas' non-regulated operations involve the purchase, distribution, and sale of tanked and bottled LPG to

⁷Application, at 1; HG T-1, at 3; HG T-6, at 2; and HG T-8, at 2.

⁸Application, at 3-4; HG T-8, at 2; and HG T-9, at 1-2.

⁹HG T-2, at 1.

residential, commercial, and industrial customers throughout the State.¹⁰ In effect: (1) Hawaii Gas' non-utility customers are served LPG from storage cylinders or tanks located on the customer's or owner's property and dedicated to their use; and (2) LPG is measured and billed upon delivery to the customer, eliminating the need for on-site metering equipment and monthly meter reading.¹¹

Conversely, Hawaii Gas' regulated operations consist of the purchase, production, transmission, and distribution through underground gas pipelines, and sale for residential, commercial, and industrial uses, of synthetic natural gas ("SNG"), liquefied natural gas ("LNG"), propane-air (i.e., C3/Air), and LPG. Hawaii Gas also refers to renewable natural gas ("RNG") as a potential fuel source.¹²

With respect to the consolidation and allocation of Hawaii Gas' LPG operations, Hawaii Gas' non-regulated operations utilize approximately 85% of the LPG, while its regulated operations utilize the remaining balance.¹³ Under this scenario: (1) the regulated operations acquire 100% of its LPG from

¹⁰Application, at 4; and HG T-8, at 2.

¹¹HG T-7, at 2 and 10; and HG T-9, at 6.

¹²Application, at 4; HG T-7, at 2; and HG T-8, at 2-3.

¹³HG T-8, at 3.

the non-regulated operations; and (2) the LPG transportation (both marine and surface), storage, handling, and commodity costs incurred by Hawaii Gas' non-regulated operations are charged proportionately to its regulated operations.¹⁴

With respect to the purchase and storage of LPG:

1. Hawaii Gas generally maintains separate storage facilities for non-utility and utility LPG on Oahu. "However, there are occasions when it is not economical to maintain separate, duplicate storage tanks, and HG elects to take advantage of economies of scale by sharing facilities."¹⁵

2. This economies of scale/sharing of facilities concept also applies to its neighbor island LPG systems.¹⁶

3. Hawaii Gas purchases LPG from: (A) Par Hawaii Refining, LLC's and Island Energy Services, LLC's respective refineries, both located on Oahu (referred to as "locally sourced LPG" by HG); and (B) foreign sources.¹⁷

¹⁴HG T-8, at 3; see also HG T-13, at 26; and HG's LPG Transfer Study, at 2 (the non-regulated entity charges any costs incurred during this process to the regulated operations on a per gallon basis on top of the commodity costs).

¹⁵HG T-7, at 12.

¹⁶HG T-7, at 12.

¹⁷HG T-7, at 8; HG T-8, at 18; and HG's response to CA-IR-13(a) (12/22/17) (filed under partial confidential seal). But see LPG Transfer Study, at 2 (referring to one local refinery, not two).

4. Presently, locally sourced LPG constitutes 15% of Hawaii Gas' total LPG purchases, with the remaining 85% purchased from foreign sources.¹⁸

5. Locally sourced LPG is directly piped into non-utility holders on Oahu. Due to its limited supply, most of the locally sourced LPG is used on Oahu.¹⁹

6. Conversely, LPG purchased from foreign sources is shipped monthly directly to harbor facilities on Hawaii, Kauai, and Maui, where most of the LPG is off-loaded from the foreign ships through harbor pipelines connected to the local base yard storage facility. The remaining LPG is injected into third-party, time-chartered barges as floating storage for later towing and off-loading at: (A) harbor facilities on Hawaii, Kauai, or Maui, if additional supply is needed; or (B) Barge Harbor in Kalaeloa Deep Draft Harbor on Oahu.²⁰

7. Some of the off-loaded LPG is transported to Lanai and Molokai via third-party barges. Due to minimal demand (i.e., gas utility service on Lanai and Molokai is limited to residential customers) and the lack of adequate harbor

¹⁸HG T-8, at 37, 42, and 46-47; and LPG Transfer Study, at 2.

¹⁹LPG Transfer Study, at 2.

²⁰HG T-8, at 8, 11, and 47; HG T-9, at 3-4; HG T-13, at 27; and LPG Transfer Study, at 2.

infrastructure, no foreign-sourced LPG is shipped directly to Lanai and Molokai.²¹

8. Because the berth length is too short at Kalaeloa Deep Draft Harbor, no LPG is directly off-loaded on Oahu from any foreign shipments.²²

9. On an as-need basis between the monthly foreign propane shipments, LPG is also loaded directly from Island Energy Services, LLC's refinery and Hawaii Gas' Oahu base yard onto third-party, time-chartered barges, and is towed and off-loaded at harbor facilities on Hawaii, Kauai, and Maui.²³

10. On occasion, the third-party, time-chartered barges travel between Hawaii, Kauai, and Maui to supplement LPG on one of those islands.²⁴

²¹HG T-8, at 9; HG T-9, at 2 and 4; HG T-13, at 27; and LPG Transfer Study, at 3.

²²HG T-8, at 47; HG T-13, at 27; and LPG Transfer Study, at 2.

²³HG T-8, at 48-49; and HG T-9, at 4; and HG's response to PUC-IR-102(1) (2018) (07/05/18).

²⁴LPG Transfer Study, at 2.

B.

Regulated Gas Operations

For Hawaii Gas' regulated gas operations, each island is designated as separate districts.²⁵

Based on the commission's review of the docket record, its description of Hawaii Gas' Oahu, Hawaii, Kauai, and Maui Gas Divisions' regulated operations is as follows:

1.

Oahu

On Oahu, Hawaii Gas utilizes SNG, LNG, propane-air, and LPG. Hawaii Gas also refers to RNG (i.e., renewable natural gas) as a potential fuel source.²⁶

Synthetic Natural Gas and Liquefied Natural Gas

1. Naphtha is: (A) a liquid hydrocarbon feedstock, consisting of "light ends," generally a mix of four-, five- and six-carbon molecules (i.e., a light hydrocarbon petroleum by-product); (B) a refinery by-product after the crude oil has been processed into higher end products such as diesel fuel, jet fuel, and gasoline (i.e., a by-product of the oil refining

²⁵HG T-2, at 1.

²⁶See Application, at 4 (SNG, LPG, and LNG); HG T-6, at 3 (SNG) and 7-10 (LNG); HG T-7, at 2 (SNG and propane); and HG T-8, at 2-3 (SNG, LNG, propane-air, LPG, and RNG).

process and waste stream).²⁷ Hawaii Gas refers to the resulting by-product as "SNG Feedstock."²⁸

2. Hawaii Gas manufactures SNG at its SNG Plant in Campbell Industrial Park through a catalytic conversion process which converts naphtha into SNG, "a mixture of 79-84% methane, 9-10% hydrogen, 3-7% butane and 3-5% carbon dioxide that has gas characteristics virtually identical to the natural gas used elsewhere in the world."²⁹

According to Hawaii Gas:

Simplistically, the SNG manufacturing process is about "breaking up" larger hydrocarbon molecules made up of "chains" of carbon/hydrogen molecules into a smaller hydrogen molecule consisting of a single carbon atom - [methane]. It is easier and takes less effort to break up a four-, five- or six-carbon molecule than ones containing more carbon/hydrogen chains.

HG T-6, at 3-4.

3. Hawaii Gas describes the manufacturing process for converting naphtha into SNG as follows:

First, any sulfur in the feedstock must be removed to prevent contamination of the nickel catalyst used in a later step. The sulfur is removed by blending the feedstock with hydrogen gas, then heating it to 700°F and sending it through a reactor vessel containing both a cobalt-molybdenum catalyst and zinc-oxide reactant. The resulting

²⁷HG T-6, at 3; HG T-7, at 2; and HG T-8, at 2.

²⁸Application, at 1-2; and HG T-2, at 4.

²⁹HG T-6, at 3; see also HG T-1, at 5; HG T-7, at 2; and HG T-8, at 2.

chemical reaction removes the sulfur from the feedstock by converting it into zinc sulfide.

. . . .

After the sulfur is removed, the purified feedstock is blended with superheated steam and passed through a nickel catalyst to break up the larger hydrocarbon molecules. Next, most of the [carbon dioxide] is removed and an odorant is added for safety reasons. Finally, enrichment is added in the form of propane or butane. The amount of [carbon dioxide] removed and enrichment added is controlled to adjust the "density" and "heating value" levels of the SNG to make its burning characteristics comparable to natural gas.

HG T-6, at 4 (emphasis added); see also id., at 5 (electricity powers the pumps and compressors necessary to provide the pressure that moves the naphtha, hydrogen, and steam through the process).

4. Par Hawaii Refining, LLC, through its refinery operations, supplies: (A) the naphtha Hawaii Gas utilizes in manufacturing SNG;³⁰ and (B) the electricity Hawaii Gas' SNG Plant utilizes in manufacturing SNG, from the refinery's co-generation unit, located adjacent to the SNG Plant.³¹

In the event the refinery's "cogeneration unit encounters a problem, it will automatically switch to one of two Hawaiian Electric Company ('HECO') feeders connected to the refinery."³² That said:

³⁰Application, at 1-2; HG T-1, at 5; and HG T-8, at 18.

³¹Application, at 14; HG T-6, at 4-5; and HG T-8, at 38 and 43.

³²HG T-6, at 5.

[I]f the refinery was not providing electricity HG could not obtain electricity directly from the electrical grid. There is no separate electrical infrastructure that ties the SNG Plant directly to the HECO grid independent of the refinery[.] HG receives its electricity either from the refinery co-gen unit or from HECO through a switchgear located on the refinery's adjacent property. HG evaluated the possibility of obtaining electricity directly from HECO by acquiring and installing new equipment to connect to HECO's transmission lines in Campbell Industrial Park[.] HG projected that this project would cost between \$1.4 to \$4mm.

HG's response to CA-RIR-1(c) (05/23/18) (internal citations omitted) (italics in original).

5. Hawaii Gas utilizes an underground, twenty-two-mile transmission pipeline to transmit the SNG from its Plant in Campbell Industrial Park to Pier 38 in Honolulu Harbor.³³

6. Hawaii Gas' underground transmission pipeline: (A) is the sole source for storing the SNG; and thus (B) becomes the sole source of SNG whenever the SNG Plant is not operating.³⁴

7. "For a planned outage lasting a few hours, HG can rely solely on the SNG stored in the transmission pipeline."³⁵

8. Conversely, for extended outages expected to last longer than six hours, Hawaii Gas will start up its: (A) LNG Backup Enhancement System (referred to as the

³³Application, at 4; HG T-6, at 7; and HG T-7, at 2-3.

³⁴HG T-6, at 6-7; and HG T-7, at 3.

³⁵HG T-6, at 7.

SNG System Backup Enhancement Project in In re The Gas Co., LLC, Docket No. 2013-0184); and/or (B) Propane-Air Backup System. Both backup systems, in turn, are located at Pier 38 in Honolulu Harbor.³⁶

9. With respect to the two Pier 38 backup systems, Hawaii Gas explains:

As a compressed form of natural gas, LNG has a similar composition to SNG and blends seamlessly with SNG when injected. Propane-air can also be blended with and supplement the stored SNG as it exits the transmission pipeline at the Kapalama Regulator Station. Depending on the expected duration of the outage, HG may require its interruptible rate customers to curtail their usage or switch to their alternate fuel (diesel or propane).

. . . .

HG's Backup Enhancement System at Pier 38 . . . consists of a vaporizer and one or two International Organization for Standardization ("ISO") containers of LNG. Each ISO container can hold up to 9,500 gallons of LNG, which is equivalent to 7,850 therms of natural gas.

. . . .

HG circulates LNG through a pressure builder (heat exchanger) that builds the pressure in the ISO container to approximately 60 [pounds per inch gauge ("psig")] such that the pressure is higher than the downstream pressure at HG's Kapalama Regulator Station (which has a maximum allowance of 40 psig). The LNG then flows through the vaporizer, where the liquid natural gas becomes natural gas vapor, and into the low-pressure distribution pipeline at a point downstream of the pipeline kixcel. It takes approximately 16 hours

³⁶Application, at 5; HG T-6, at 7; and HG T-7, at 3.

to move all the LNG from one ISO container into the pipeline.

A kixcel is an adjustable pressure-reducing regulator for which the pressure set point can be adjusted remotely.

.

The Propane-Air Backup System at Pier 38 consists of a vaporizer, three diesel-fired compressors, a mixer, two 30,000-gallon propane storage tanks, a flare stack, and a diesel generator. The system has a design capacity of 120,000 therms/day of propane-air and operates at 90 [pounds per square inch gauge] in conjunction with the Kapalama Regulator Station.

.

Basically, liquid propane (also known as liquefied petroleum gas or "LPG") is vaporized and mixed with air to form a gaseous propane-air mixture ranging from a 60%/40% to 50%/50% propane to air ratio. This resulting mix is similar in character to SNG. The propane-air is then fed into the Kapalama distribution system at the point where the SNG exits from the transmission pipeline into the distribution system, in a 50%/50% propane-air to SNG blend.

.

The Backup Enhancement System and Propane-Air Backup System at Pier 38 extend the time that the transmission pipeline can supply gas to customers in the event of a [SNG] Plant shutdown. Switching interruptible customers to their alternate fuels can also extend this timeframe . . . Thus, by utilizing a combination of these methods, HG can extend the normal transmission pipeline inventory from eight hours to 24 hours.

HG T-6, at 7-10 (emphasis added), including footnote 1 at 8; see also HG T-8, at 3 (Hawaii Gas' SNG utility system is backed up by its LNG Backup Enhancement System and Propane-Air Backup System).

For specific capital expenditures necessary for the Backup Enhancement Project, Hawaii Gas purchased two LNG [ISO] containers, a trailer chassis and a trailer-mounted re-gasifier. Hawaii Gas also made certain improvements at Pier 38 - where the [Propane-Air Backup System] is located - to accommodate the Backup Enhancement Project system, including the installation of approximately 40 feet of 3-inch steel gas piping and modification to the [Propane-Air Backup System] software to ensure the proper mixing of propane-air with LNG.

. . . .

The in-service date for the Backup Enhancement Project was February 28, 2013. The Backup Enhancement Project continues to be used for utility operations, and will be used in Test Year 2018 to serve utility customers[.]

HG T-8, at 73 (emphasis added) (footnote and text therein omitted); and HG's responses to CA-IR-63(d) (12/19/17, 12/22/17, 01/29/18) (clarifying that two ISO containers are included in the "final" SNG System Backup Enhancement Project, with both ISO containers currently 100% in use) and PUC-IR-102(2) (2018) (07/05/18) (confirming the in-service date of January 1, 2015 for the SNG System Backup Enhancement Project, not February 28, 2013).

(Note: Hawaii Gas' SNG System Backup Enhancement Project is further discussed in Section II.B.3, Docket No. 2013-0184, Hawaii Gas' SNG System Backup Enhancement Project, below.)

10. On April 4, 2016, the commission, in In re The Gas Co., LLC, Docket No. 2014-0315, issued Decision and Order No. 33621, approving subject to certain conditions, Hawaii Gas' application to undertake certain capital expenditures related to its 30% SNG Conversion Project, in the amount of \$12,812,098. Ordering Paragraph No. 4 of Decision and Order No. 33621 states:

Hawaii Gas shall not pass through to its customers any costs associated with the [p]roject, beyond those stated in the [a]pplication, without subsequent commission approval.

Docket No. 2014-0315, Decision and Order No. 33621, Ordering Paragraph No. 4, at 27.

The purpose of the subject project is to displace approximately 30% of Hawaii Gas' SNG production at its SNG Plant with imported LNG.

11. With respect to the 30% SNG Conversion System:

A. The LNG regasification and injection equipment consists of (i) LNG pumps to build LNG pressure so it can enter

the transmission pipeline; and (ii) vaporizers to turn the LNG to gas.³⁷

B. An LNG ISO container is hooked up to the SNG Plant and pumped up to 500 psig, then vaporized to turn the LNG to gas. The gas is then injected into the 450 psig transmission pipeline, where odorant is added just upstream of the odorant injection point.³⁸

C. The 30% SNG Conversion System, moreover, is designed to switch vaporizers every two hours to enable the vaporizer to 'de-ice.'³⁹

12. On April 25, 2018, Hawaii Gas filed its 30% SNG Conversion Project closure report in Docket No. 2014-0315: (A) stating that pursuant to the subject project, "HG will displace approximately 30% of its SNG production with LNG[;]" (B) identifying an in-service date of December 9, 2017, for the subject project; and (C) a final project cost of \$13.6 million.⁴⁰

³⁷HG T-6, at 11; see also Docket No. 2014-0315, 30% SNG Conversion Project Closure Report, filed on April 25, 2018, Section II.B, ISO Containers, at 3, and Section II.C, LNG Turnkey System, at 3-8 (filed under partial confidential seal).

³⁸HG T-6, at 10-12.

³⁹HG T-6, at 12.

⁴⁰Docket No. 2014-0315, 30% SNG Conversion Project Closure Report, filed on April 25, 2018, at 1-2, under partial confidential seal.

(Note: Hawaii Gas' 30% SNG Conversion Project is further discussed in Section II.B.4, Docket No. 2014-0315, Hawaii Gas' 30% SNG Conversion Project, below.)

13. Thus, Hawaii Gas' LNG-related capital expenditures arise from its: (A) SNG System Backup Enhancement Project (Docket No. 2013-0184); and (B) 30% SNG Conversion Project (Docket No. 2014-0315).

14. Hawaii Gas, by its underground transmission pipeline, "delivers SNG to the distribution systems through ten regulator stations. Of these, three regulator stations feed SNG to individual customers and seven feed distribution systems that service multiple customers. The function of regulator stations is to reduce the operating gas pressure from transmission to distribution levels."⁴¹

15. Hawaii Gas' SNG distribution system consists of approximately 912 miles of pipeline, and "provides gas supply to areas of Honolulu along the south shore of Oahu from Campbell Industrial Park to Hawaii Kai."⁴²

16. Copies of maps which depict Hawaii Gas' SNG transmission and distribution systems are attached as Exhibits HG-702 and HG-703 to the Application.

⁴¹HG T-7, at 4.

⁴²HG T-7, at 6; see also HG T-8, at 3.

Liquefied Petroleum Gas (i.e., Propane)

17. On Oahu, Hawaii Gas stores LPG: (A) at its storage facility, which consists of multiple storage tanks located at Barge Harbor in Kalaeloa Deep Draft Harbor; and (B) in holder tanks located at various utility LPG distribution systems.⁴³

18. Also on Oahu, Hawaii Gas' LPG utility system "is comprised of 96 stand-alone distribution systems that utilize storage holder tanks and [approximately 157 miles of] underground distribution pipelines within limited geographic areas."⁴⁴

19. A list of Hawaii Gas' Oahu distribution systems is attached as Exhibit HG-704 to the Application.

Renewable Natural Gas

20. Hawaii Gas, in the subject Application, refers to its proposed Honouliuli Wastewater Treatment Plant ("WWTP") Biogas Project that was previously pending commission action in In re The Gas Co., LLC, Docket No. 2016-0340.⁴⁵

21. Subsequently, on September 12, 2017, the commission, in Docket 2016-0340, approved subject to certain conditions, various matters related to Hawaii Gas' Honouliuli WWTP Biogas Project. With respect to capital

⁴³Application, at 5; and HG T-7, at 9.

⁴⁴HG T-7, at 9.

⁴⁵Application, at 38; HG T-1, at 9; HG T-3, at 45; HG T-5, at 2, 6-7, and 11-12; and HG T-8, at 3, 11, and 13.

expenditures, the commission approved Hawaii Gas' request to commit approximately \$5.007 million in funds to: (A) purchase and install certain biogas purification equipment; and (B) design and construct approximately one mile of new pipeline to connect its purification system to Hawaii Gas' existing SNG utility pipeline distribution system.

22. Accordingly, Hawaii Gas will: (A) purchase raw, "waste" biogas that is produced by the City and County of Honolulu's ("City") Honouliuli WWTP; (B) purify and convert the City-supplied raw biogas to nearly 100% methane (i.e., RNG); and (C) blend and compress the RNG with the SNG Hawaii Gas currently produces at its SNG Plant, via a new, one-mile pipeline that will connect the new, biogas purification system to Hawaii Gas' existing utility pipeline distribution system, where the RNG will be injected into said system at Honouliuli/Ewa.⁴⁶

23. Hawaii Gas: (A) estimates a completion date of October 2018, for the Honouliuli WWTP Biogas Project,⁴⁷ which it

⁴⁶Docket No. 2016-0340, Decision and Order No. 34811, filed on September 12, 2017; Application, at 38; HG T-5, at 2, 6-7, and 11-12; and HG T-8, at 3 and 11.

⁴⁷HG RT-5, at 7 (citing to HG's response to CA-IR-108 (04/30/18)); and HG's response to CA-RIR-3(a) and (f) (05/23/18).

eventually revised to December 2018;⁴⁸ and (B) represents that it will file a final cost report by December 31, 2018.⁴⁹

24. On December 13, 2018, Hawaii Gas filed its final status report for the Honouliuli WWTP Biogas Project, certifying that said project is completed, in-service, and used and useful for public utility purposes during the 2018 Test Year.⁵⁰

(Note: Hawaii Gas' Honouliuli WWTP Biogas Project is further discussed in Section II.C, Hawaii Gas' Renewable Natural Gas Project, below.)

2.

Neighbor Islands

Hawaii Gas' neighbor island gas utility systems are all served with LPG.⁵¹

Various utility LPG holder sites are located on Hawaii, Kauai, and Maui, and two utility tank holder sites are located on Molokai. Hawaii Gas, in sum, supplies its neighbor island

⁴⁸See, e.g., HG's WWTP Biogas Project, Additional Status Report No. 1, filed on December 6, 2018.

⁴⁹HG's responses to CA-IR-108 (04/30/18) and PUC-IR-102(3) (2018) (07/05/18).

⁵⁰HG's WWTP Biogas Project, Additional Status Report No. 2, filed on December 13, 2018, at 1.

⁵¹HG T-9, at 3.

customers with LPG, and its LPG utility holder systems consist of one or more tanks which serve neighbor island customers with propane through underground gas lines.⁵²

A list of Hawaii Gas' neighbor island LPG utility distribution systems is attached as Exhibit HG-902 to the Application, as updated by Exhibit HG-902 (Revised) (see HG's response to CA-IR-49 (12/19/17), Attachment 2).

C.

Greenhouse Gas Emissions

1.

Defining Greenhouse Gas Emissions

The phrase "greenhouse gas emissions" is not defined in HRS chapter 269. That said, HRS § 342B-1 and the State Department of Health's ("DOH") HAR § 11-60-1-1 state in part:

§342B-1 Definitions. As used in this chapter, unless the context requires otherwise:

. . . .

"Air pollutant" has the same meaning as in the Clean Air Act, 42 United States Code section 7602(g), and any substance designated as such by rules adopted under chapter 91.

. . . .

"Ambient air" means the general outdoor atmosphere.

⁵²Application, at 5; HG T-2B, at 1-2; and HG T-9, at 5.

"Clean Air Act" means the federal Clean Air Act of 1963 as amended (42 United States Code section 7401 et seq.).

.

"Emission" means the act of releasing or discharging air pollutants into the ambient air from any source.

.

"Source" means any property, real or personal, which emits or may emit any air pollutant.

See HRS § 342B-1.

"Air pollutant" has the same meaning as in chapter 342B, HRS.

.

"Carbon dioxide" means a gas emitted naturally or from human activities such as the burning of fossil fuels and biomass, land-use changes, and industrial processes. It is the principal anthropogenic greenhouse gas that affects the Earth's radiative balance. It is the reference gas against which other greenhouse gases are measured and therefore has a global warming potential of one.

.

"CO₂" means carbon dioxide.

"CO₂ equivalent emissions" means the amount of greenhouse gases emitted as computed by multiplying the mass amount of emissions (tpy) for each of the six greenhouse gases in the pollutant GHGs, by the gases' associated global warming potential values published at 40 CFR Part 98, Subpart A, Table A-1, and summing the resultant values of each gas to compute a TPY CO₂ equivalent.

"CO₂" means carbon dioxide equivalent emissions.

.
"Emission" means the act of releasing or discharging air pollutants into the ambient air from any source or an air pollutant which is released or discharged into the ambient air from any source.

.
"Fossil fuel" means a hydrocarbon deposit, such as petroleum, coal, or natural gas, derived from the accumulated remains of plants and animals of a previous geologic time and used for fuel.

.
"Global warming potential" means the relative scale of how much a given mass of greenhouse gas is estimated to heat up the atmosphere in comparison to carbon dioxide having a global warming potential of one.

"Greenhouse gases" means the air pollutant defined as the aggregate group of six greenhouse gases: carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride.

"GHG or GHGs" means greenhouse gas or greenhouse gases.

.
"Source" means property, real or personal, which emits or may emit any air pollutant.

.
"Tpy" means tons per year.
.

See HAR § 11-60-1-1; see also HAR chapter 11-60.1, subchapter 11, Greenhouse Gas Emissions.

Federal Environmental Protection Agency

Hawaii Gas reports its levels of greenhouse gas emissions to the federal Environmental Protection Agency ("EPA").⁵³

In this regard:

1. For greenhouse gas emissions reported under Subpart C, relating to stationary equipment fuel use at the SNG Plant, Hawaii Gas calculates greenhouse emissions by using the Tier 1 and Tier 2 methodologies and EPA-provided software, which are available through EPA's website.

2. For greenhouse gas emissions reported under Subpart NN, relating to SNG sold to customers, Hawaii Gas calculates greenhouse gas emissions using Equation NN-2, which is available through EPA's website.⁵⁴

Conversely, "HG does not report greenhouse gas emissions based upon therms or gallons sold, nor does HG calculate the referenced 'ratio' as part of its greenhouse gas emissions reporting."⁵⁵

⁵³See HG T-6, at 21-22 and 33-34, and Exhibit HG-605, at 1 (listing greenhouse gas emissions as an EPA reporting requirement); and HG's responses to JP-IR-5 and JP-IR-6 (03/13/18).

⁵⁴HG's responses to JP-IR-5 and JP-IR-6 (03/13/18).

⁵⁵HG's response to JP-IR-5 (03/13/18).

State Department of Health

With respect to the State DOH's administrative rules for greenhouse gas emissions, i.e., HAR chapter 11-60.1, subchapter 11, Greenhouse Gas Emissions:

1. HAR §§ 11-60.1-201 and 11-60.1-203 establish a statewide greenhouse gas emissions limit to be achieved by 2020.

2. Except for municipal waste combustion operations, each owner or operator of a permitted covered source with the potential to emit greenhouse gas emissions (biogenic plus non-biogenic) equal to or above 100,000 tons per year of carbon dioxide equivalent emissions, shall submit a greenhouse gas emission reduction plan for the State director of health's review and approval.⁵⁶

3. The greenhouse gas emission reduction plan, in turn, will be used to evaluate and establish an annual facility-wide greenhouse gas emissions cap for the affected source in support of achieving and maintaining the statewide greenhouse gas limit. The approved facility-wide greenhouse gas emissions cap and the associated provisions will be made a part of the covered source permit and may be revised through the permit process to respond to new rules, updated technology, greenhouse gas

⁵⁶HAR §§ 11-60.1-1, 11-60.1-202, and 11-60.1-204(a).

reduction initiatives, and any other circumstances deemed necessary by the State director of health to facilitate the State's greenhouse gas limit.⁵⁷

4. HAR § 11-06.1-1 defines "covered source," "covered source permit," "major source," "noncovered source," "source," and "stationary source," in part as follows:

"Covered source" means:

- (1) Any major source;
- (2) Any source subject to a standard or other requirement under Section 111 of the [federal Clean Air] Act;
- (3) Any source subject to an emissions standard or other requirement for hazardous air pollutants pursuant to Section 112 of the Act, with the exception of those sources solely subject to regulations or requirements pursuant to Section 112(r) of the Act; and
- (4) Any source subject to the rules for prevention of significant deterioration of air quality as established in subchapter 7.

"Covered source permit" means a permit or group of permits covering a covered source that is issued, renewed, or amended pursuant to this chapter. A covered source permit generally is synonymous with a "Title V," "operating," or "part 70" permit as referred to in federal regulations or standards.

⁵⁷HAR §§ 11-60.1-1, 11-60.1-202, and 11-60.1-204(a); see also HAR chapter 11-60.1, subchapter 5, Covered Sources; and In re Hawaiian Elec. Co., Inc., Docket No. 2018-0090, Order No. 35549, filed on June 25, 2018, at 3-6 (commission's discussion of DOH's administrative rules for greenhouse gas emissions).

.
"Major source" means:

- (1) For hazardous air pollutants, a source or a group of stationary sources that is located on one or more contiguous or adjacent properties, and is under common control of the same person (or persons under common control) and that emits or has the potential to emit considering controls and fugitive emissions, any hazardous air pollutant, except radionuclides, in the aggregate of ten tons per year or more or twenty-five tons per year or more of any combination; or
- (2) For any other pollutant, a source, or a group of stationary sources that is located on one or more contiguous or adjacent properties, and is under common control of the same person (or persons under common control) belonging to a single major industrial grouping (i.e., all having the same two-digit Standard Industrial Classification Code) and that emits or has the potential to emit, considering controls, one hundred tons per year or more of any air pollutant subject to regulation. Fugitive emissions from the stationary source shall be considered in determining whether the stationary source is major, if it belongs to one of the following categories of stationary sources:

.

"Noncovered source" means a stationary source constructed, modified, or relocated after March 20, 1972, that is not a covered source.

.

"Source" means property, real or personal, which emits or may emit any air pollutant.

.
"Stationary source" means any piece of equipment or any activity at a building, structure, facility, or installation that emits or may emit any air pollutant.

HAR § 11-60.1-1; see also HRS § 342B-1 (definition of covered source).

Hawaii Gas' SNG Plant is classified as a non-covered source by the State DOH. As such, Hawaii Gas is not required to submit a greenhouse gas emission reduction plan for the State director of health's review and approval.⁵⁸ Rather, the filing of a greenhouse gas emission reduction plan is limited to each owner or operator of a permitted covered source with the potential to emit greenhouse gas emissions (biogenic plus non-biogenic) equal to or above 100,000 tons per year of carbon dioxide equivalent emissions; provided that municipal waste combustion operations are exempt.⁵⁹

⁵⁸See HG T-6, at 21-22 and 33-34, and Exhibit HG-605, at 1 (the list of reports Hawaii Gas files with the DOH does not include a greenhouse gas emission reduction plan); see also HG's responses to the Joint Participants' information requests, filed on March 13, 2018 (HG does not reference the filing of a greenhouse gas emission reduction plan to the State DOH).

⁵⁹See HAR §§ 11-60.1-1, 11-60.1-202, and 11-60.1-204(a).

D.

Issues

As set forth in Order No. 35267, filed on February 6, 2018 (see also the Notice of Evidentiary Hearing, dated May 8, 2018), the issues are:

1. Whether HG's proposed rate increase is reasonable, including, but not limited to:
 - a. Are the revenue estimates for the 2018 Test Year at present rates and proposed rates reasonable?
 - b. Are HG's proposed operating expenses for the 2018 Test Year reasonable?
 - c. Is HG's request that its net cost of \$2,643,781 for the "Bio-Syn Pilot Project" [i.e., Docket No. 2010-0334] be amortized over three years with a carrying charge equal to HG's cost of debt as an expense item in this rate case reasonable?
 - d. Is HG's proposed rate base for the 2018 Test Year reasonable, and are the properties included in rate base used and useful for public utility purposes?
 - e. Is HG's request to include in its rate base the capital improvement projects described in Docket Nos. 2012-0389, 2013-0061, 2013-0076, and 2013-0184 reasonable, and are the subject properties used and useful for public utility purposes?
 - f. Is HG's request to include in its rate base the updated estimate of \$13.9 million for the 30% SNG Conversion Project (i.e., Docket No. 2014-0315) reasonable, and is the subject

property used and useful for public utility purposes?

Note: Based on updated information, the final capital cost of Hawaii Gas' 30% SNG Conversion Project was \$13.6 million.⁶⁰

- g. Is HG's requested rate of return on rate base of 7.51% fair?
- h. With respect to Hawaii Gas' purchase and use of imported LNG as part of its gas utility operations, HRS § 269-6(b)'s requirement that:

In making determinations of the reasonableness of the costs of utility system capital improvements and operations, the commission shall explicitly consider, quantitatively or qualitatively, the effect of the State's reliance on fossil fuels . . . and greenhouse gas emissions. The commission may determine that short-term costs or direct costs that are higher than alternatives relying more heavily on fossil fuels are reasonable, considering the impacts resulting from the use of fossil fuels.

In effect, whether the commission should disallow as unreasonable Hawaii Gas' LNG costs due to the effects of Hawaii Gas' use of imported LNG on the State's reliance on fossil fuels and greenhouse gas emissions.

⁶⁰See Docket No. 2014-0315, 30% SNG Conversion Project Closure Report, filed on April 25, 2018, at 1-2, under partial confidential seal.

2. The amount of interim rate increase, if any, to which HG is probably entitled under Section 269-16(d) of [HRS];
3. Whether HG's proposed tariffs, rates, charges, and rules are just and reasonable, including, but not limited to:
 - a. Is HG's request to include in its fuel adjustment clause its electricity costs in processing [SNG] and its transportation costs for [LPG] reasonable and consistent with HRS § 269-16(g)?
 - b. Is HG's alternative request for a separate automatic rate adjustment clause that is designed to recover such variable costs reasonable and consistent with HRS § 269-16(g)?

Concomitantly, issues outside the scope of this rate case include, but are not necessarily limited to:

- The participants' asserted interest in a clean and healthful environment beyond the State's borders, given the Hawaii Constitution's limited application and scope to a clean and healthful environment within the State's borders.
- Evidence of a causal connection between greenhouse gas emissions and climate change.

Instead, this commission, pursuant to HRS § 91-10(4) (taking notice of judicially recognizable facts) and HAR § 6-61-48 (official notice of matters as may be judicially noticed by the courts of the State), takes official notice of:

- A. Act 32, part I, Session Laws of Hawaii 2017, by which the Legislature:
 - (i) recognizes that "[c]ountless scientific studies have concluded that greenhouse gas emissions are

a leading contributing factor to global warming[;]" and (ii) finds that climate change is "real."

- B. HRS chapter 342B, part VI, Greenhouse Gas Emissions, including HRS § 342B-71, which states:

Statewide greenhouse emissions limit, adoption.

A statewide greenhouse gas emissions limit to be achieved by 2020 is hereby established that is equal to or below the level of the statewide greenhouse gas emissions in 1990, as determined by section 3 of Act 234, Session Laws of Hawaii 2007; provided that for the purposes of this Act greenhouse gas emissions from airplanes shall not be included.

HRS § 342B-71.

- Whether HG's importation, purchase, and use of LNG should be banned or prohibited by federal or State law or by the commission.
- Whether fracking should be banned or prohibited by federal or State law or by the commission.
- Whether all new coal, oil, and gas projects, including "climate intense" projects, should be banned by federal or State law or by the commission.

E.

Hawaii Gas' Application

On August 1, 2017, and as supplemented on August 8, 16, and 17, 2017, Hawaii Gas filed its Application. As reflected in its supporting results of operation schedules, Hawaii Gas requests an increase in total revenues of \$14,962,297, or approximately 14.58% over revenues at present rates, based on a 2018 Test Year.⁶¹

As part of its Application, Hawaii Gas also requests the commission's approval to:

1. Include in its fuel adjustment clause ("FAC") the electricity costs in processing SNG (i.e., its SNG Plant electricity costs); and

2. Include in the LPG Transfer Fee component of its FAC, the transportation costs for LPG (i.e., the third-party costs of barging LPG to Oahu, Hawaii, Kauai, and Maui, and the third-party costs associated with purchasing and importing LPG from foreign sources).

In the alternative, Hawaii Gas requests that the commission approve a separate automatic rate adjustment clause that is designed to recover such variable costs.⁶²

⁶¹Application, at 6 and 40; and HG Exhibit-350.

⁶²See Application, Section VII, Fuel Adjustment Clause, at 11-22, and 40; HG T-8, at 35-39, 41-46, and 49; and HG T-13, at 28.

3. Revise Tariff Rules Nos. 7, 9, 13, and 14.⁶³

For purposes of completeness, the filing date of Hawaii Gas' Application is August 17, 2017.⁶⁴

Hawaii Gas, in support of its Application, asserts:

1. Since its 2009 test year rate case: (A) it has made significant capital investments to diversify its fuel supply to reduce its dependence on oil-based feedstock (i.e., SNG Feedstock) and local refinery infrastructure, and to support system reliability and safety; and (B) its operating and maintenance expenses have increased.⁶⁵ Thus, "its requested rate relief is necessary for HG to earn a fair return on rate base in support of its obligation to provide safe and reliable utility gas service to its customers."⁶⁶

2. Hawaii Gas makes its FAC-related primary and alternative requests "so that its FAC can fulfill its purpose as a recoupment device designed to permit [the] recovery of fluctuations in fuel costs."⁶⁷

⁶³HG T-10, at 10-18.

⁶⁴Order No. 34927, filed on October 25, 2017, at 1-2, 8-9, and 11.

⁶⁵Application, at 2; and HG T-1, at 7-8.

⁶⁶Application, at 2.

⁶⁷Application, at 11.

A black-lined version of Hawaii Gas' proposed revisions to its existing tariff rules, including its rate schedules, is attached to its response to CA-IR-6, filed on December 22, 2017.

F.

Public Hearings

The commission held statewide public hearings on November 27 (Kailua-Kona, Hawaii), 28 (Hilo, Hawaii), and 30 (Lihue, Kauai), 2017; December 5 (Honolulu, Oahu), 13 (Wailuku, Maui), and 14 (Lanai City, Lanai), 2017; and on January 23 (Kaunakakai, Molokai), 2018. Representatives from Hawaii Gas and the Consumer Advocate attended each public hearing, and a member of the public appeared at the Hilo public hearing.⁶⁸

The commission also received written comments from the public via electronic and postal mail. In general, they: (1) express concerns with or object to Hawaii Gas' proposal to increase its rates;⁶⁹ and (2) object to the interim increase in rates approved by the commission on June 27, 2018.⁷⁰

⁶⁸See public hearing sign-up sheets and corresponding written comments, for the public hearings held on November 27, 28, and 30, 2017; December 5, 13, and 14, 2017; and January 23, 2018.

⁶⁹See, e.g., electronic comments, filed on November 27 and 29, and December 4, 8, 13, and 15, 2017; and correspondence, filed on December 20, 2017.

⁷⁰See, e.g., electronic comment, filed on August 3, 2018; and correspondence, filed on November 16, 2018.

G.

Procedural Background

On January 1, 2018, the federal Tax Cuts and Jobs Act of 2017 ("2017 Tax Act" or "2017 Tax Reform Act") took effect.⁷¹

Three days later, on January 4, 2018, the Consumer Advocate issued its first of several sets of information requests which focus on examining the impacts of the 2017 Tax Act upon Hawaii Gas' proposed Test Year revenue requirement (see, e.g., CA-IR-192 and CA-IR-193).

On February 6, 2018, the commission issued Order No. 35267, granting 350 HAWAII, HAA KLMA, and LOL participant status, limited to sub-Issue No. 1h, and other specified limitations and conditions.

The commission, by Order No. 35267, took official notice of: (1) Act 32, part I, Session Laws of Hawaii 2017; and (2) HRS chapter 342B, part VI, Greenhouse Gas Emissions.⁷²

Pursuant to the preamble to Act 32, part I, Session Laws of Hawaii 2017, the State legislature:

⁷¹In re Public Util. Comm'n, Docket No. 2018-0012, Order No. 35241, at 1 and 4.

⁷²See Order No. 35267, at 38-39.

A. Recognizes that "[c]ountless scientific studies have concluded that greenhouse gas emissions are a leading contributing factor to global warming[;]" and

B. Finds that climate change is "real."⁷³

HRS §§ 342B-71 and 342B-72 of HRS chapter 342B, part VI, in turn, state:

§342B-71 Statewide greenhouse gas emissions limit, adoption. A statewide greenhouse gas emissions limit to be achieved by 2020 is hereby established that is equal to or below the level of the statewide greenhouse gas emissions in 1990, as determined by section 3 of Act 234, Session Laws of Hawaii 2007; provided that for the purposes of this Act greenhouse gas emissions from airplanes shall not be included.

§342B-72 Greenhouse gas emissions limits; rules. (a) Before December 31, 2011, the director shall adopt rules pursuant to chapter 91:

- (1) Establishing greenhouse gas emission limits applicable to sources or categories of sources, to be achieved by January 1, 2020, and establishing emission reduction measures to achieve the maximum practically and technically feasible and cost-effective reductions in greenhouse gas emissions in furtherance of achieving the statewide greenhouse gas emissions limit; and
- (2) Requiring the reporting and verification of statewide greenhouse gas emissions and to monitor and enforce compliance with

⁷³See also Act 15, Session Laws of Hawaii 2018, § 1 (in Act 32, Session Laws of Hawaii 2017, the State legislature recognized that climate change is real and poses a serious threat to the State's economy, sustainability, and natural resources).

this part, to become operative beginning on January 1, 2012.

(b) The director, to the extent feasible to achieve the statewide greenhouse gas emissions limit, shall adopt rules pursuant to chapter 91 and this section based upon the recommendations and findings of the work plan created pursuant to section 6 of Act 234, Session Laws of Hawaii 2007.

HRS §§ 342B-71 and 342B-72; see also HRS § 342B-1 ("Department" means the department of health, and "director" means the director of health).

On February 14, 2018, Hawaii Gas filed a revised version of its proposed Test Year revenue requirement. Based on its revised estimates, Hawaii Gas requests an increase in total revenues of \$13,470,401, or approximately 12.70% over revenues at present rates.⁷⁴

Accordingly, Hawaii Gas reduces its request for an increase in total revenues from 14.58% to 12.70%, i.e., by approximately 1.88% over revenues at present rates. Hawaii Gas explains that said decrease is based in part on updating its results of operation schedules to incorporate: (1) its actual, recorded results of operation for 2017; and (2) the impacts of the changes in the federal tax rate due to the 2017 Tax Act, which includes reducing the federal corporate tax

⁷⁴HG's response to CA-IR-202 (02/14/18), Revised Exhibit HG-350; see also HG's response to CA-IR-234 (02/16/18).

rate from 35% to 21%, and removing the 40% bonus depreciation on eligible 2018 plants.⁷⁵

On March 21, 2018: (1) the Consumer Advocate filed its direct testimonies; and (2) the Participants filed their direct testimonies as "Joint Participants."

Based on its review of the Consumer Advocate's direct testimonies, the commission, on March 27, 2018, issued Order No. 35367, clarifying its intent to examine in the subject proceeding (Docket No. 2017-0105) the impacts of the 2017 Tax Act upon Hawaii Gas' proposed Test Year revenue requirement.

On May 4, 2018, Hawaii Gas filed its rebuttal testimonies, including an updated version of its proposed Test Year revenue requirement. Based on its revised estimates, Hawaii Gas requests an increase in total revenues of \$12,361,373, or approximately 12.05% over revenues at present rates.⁷⁶

Also on May 4, 2018, the Consumer Advocate filed a motion to seal, seeking to prospectively seal as confidential certain information in CA-T-1 of its direct testimonies.

⁷⁵HG's responses to CA-IR-192(a) (01/29/18), CA-IR-202 (02/14/18), and CA-IR-234 (02/16/18); see also HG's response to CA-IR-192 (04/30/18).

⁷⁶HG RT-2, Section II, Overall Financial Summary, at 2-4; and Exhibit HG-RT-301.

The Consumer Advocate attached as exhibits to its motion a superseding version of its direct testimonies.

On May 17, 2018, the commission issued Order No. 35457, granting the Consumer Advocate's motion to seal. Accordingly, the Consumer Advocate's superseding version of its direct testimonies, filed on May 4, 2018, replaces the previous version of the Consumer Advocate's direct testimonies, filed on March 21, 2018.

On May 21, 2018, the commission distributed copies of its Prehearing Conference Agenda, and on June 1, 2018, the commission distributed copies of its Supplemental Prehearing Conference Agenda.

On June 5, 2018, representatives from the Parties and Participants attended the prehearing conference.

Thereafter, on June 7, 2018, the commission issued Order No. 35517, amending the procedural schedule by: (1) granting the Parties' request, filed on May 25, 2018, for a ten-day extension of time, from May 29, 2018 to June 8, 2018, to file their settlement agreement; (2) extending by ten days, from June 18, 2018 to June 28, 2018, the deadline to issue an interim decision and order; (3) cancelling the evidentiary hearing, which was scheduled to commence on June 14, 2018; and (4) replacing the filing of post-evidentiary hearing opening

and reply briefs, with post-Interim Decision and Order opening and reply briefs, limited to sub-Issue No. 1h.

On June 12, 2018, the Parties filed their Stipulation for Full Settlement, memorializing their global settlement of all issues.

Hawaii Gas, as part of the Stipulation for Full Settlement, requests: (1) the commission's approval of an interim increase in revenues over present rates of \$8,957,115 (approximately 8.45%), based on a Test Year revenue requirement of \$114,926,065; and (2) the issuance of an interim decision and order by June 28, 2018, with an effective date of July 1, 2018, for its interim rates.⁷⁷

On June 13, 2018, the commission issued Order No. 35520: (1) granting the Parties' request, filed on June 8, 2018, for a four-day extension of time (characterized as "one business day" by HG), from June 8, 2018 to June 12, 2018, to file their settlement agreement; and (2) extending by four days, from June 28, 2018 to July 2, 2018, the deadline to issue an interim decision and order.

On June 18, 2018, Hawaii Gas filed a correct version of Exhibit F to the Stipulation for Full Settlement.

On June 19, 2018, Hawaii Gas filed its Errata to the Stipulated Settlement, consisting of an array of corrected

⁷⁷See Stipulation for Full Settlement, at 16 and 91; and Revised Exhibit F (06/19/18) (interim effective date of July 1, 2018).

exhibits to the Stipulation for Full Settlement, including a Revised Exhibit F.

Hawaii Gas, by its errata filing, represents:

1. Hawaii Gas "discovered an error in the Neighbor Island FAC calculation, consisting of double counting and the inadvertent exclusion of an unaccounted for gas component."

2. Hawaii Gas' calculation error has "minor flow through impacts to Total Gas Sales Revenues under Present Rates, which in turn impacts Income Taxes under Present Rates, and Revenue Taxes under Present Rates[.]"

3. "In addition, due to the change to Gas Sales Revenues under Present Rates, there was a flow through impact to Hawaii Gas' refund to customers under present rates as a result of the 2017 Tax Reform Act. The refund amount of \$107,447[,] based on a refund of 181 days of tax savings from January 1, 2018 to July 1, 2018, has been updated to \$113,965, as reflected in the attached Revised Exhibit F."

4. Conversely, Hawaii Gas' calculation error and its resulting flow through impacts do not change: (A) any of the Parties' stipulated positions, including their global settlement of all issues; (B) the overall, stipulated Test Year revenue requirement of \$114,926,065; or (C) the stipulated rate design and tariff schedules.

5. Instead, Hawaii Gas' calculation error and its resulting flow through impacts lead to "a favorable outcome for customers, as the proposed rate increase is lower than originally filed in the Stipulated Settlement."⁷⁸

H.

Interim Decision and Order No. 35550 and Subsequent Filings

On June 27, 2018, the commission timely issued Interim Decision and Order No. 35550, addressing Hawaii Gas' request for interim relief, as reflected in Issue No. 2.⁷⁹ Concomitantly, the commission deferred its adjudication of Issues No. 1 and No. 3, including the sub-issues thereto, to its Decision and Order issued today.

With respect to Hawaii Gas' errata filing, the commission noted:

1. The Parties' results of operation schedules are designated as Settlement Exhibit HG-350 in the Stipulation [for Full Settlement]. Conversely, Hawaii Gas' errata filing re-designates Settlement Exhibit HG-350 as Revised Settlement Exhibit HG-350.

2. Revised Settlement Exhibit HG-350, in turn, includes an array of corrections:

⁷⁸See Errata to the Stipulated Settlement, at 1-3.

⁷⁹See Interim Decision and Order No. 35550, at 45-49 (explaining the commission's timely issuance of its interim decision and order).

A. Gas sales revenues at present rates increase from \$104,718,777 to \$104,779,740 (consolidated utility basis), approximately \$60,963.

B. Total revenues at present rates correspondingly increase from \$105,968,950 to \$106,029,913 (consolidated utility basis), approximately \$60,963.

C. The stipulated increase in revenues over present rates decreases from \$8,957,115 to \$8,896,152 (consolidated utility basis), approximately \$60,963, i.e., from 8.45% to 8.39%.

D. The overall, stipulated Test Year revenue requirement of \$114,926,065 (consolidated utility basis) remains unchanged.

E. Taxes other than income taxes at present rates increase from \$10,989,193 to \$10,994,610, approximately \$5,417.

F. Income taxes at present rates increase from \$141,360 to \$155,664, approximately \$14,304.

3. Revised Exhibit F increases the subject refund amount from \$107,447 to \$113,965, approximately \$6,518.

4. Ultimately, the Parties now stipulate to an increase in revenues of \$8,896,152 over present rates (approximately 8.39%), based on a Test Year revenue requirement of \$114,926,065 (consolidated utility basis).

Interim Decision and Order No. 35550, at 44-45 (emphasis in original).

With respect to the "notable difference between Hawaii Gas' requests for interim rate relief vs. final rate relief[,]" the commission stated:

1. For interim rate relief, the Parties stipulate to an interim rate surcharge[.]

2. Conversely, for final rate relief, the Parties stipulate to replacing the interim rate surcharge with the[ir] stipulated rate design[.]

Interim Decision and Order No. 35550, at 50-51.

With respect to certain post-Interim Decision and Order matters, the commission noted:

Hawaii Gas estimates a completion date of October 2018, for the Honouliuli WWTP Biogas Project. In response, Hawaii Gas shall file reports describing the status of project completion. The commission does not intend to issue its final decision and order until said project is in-service and used and useful for public utility purposes.

. . . .

Hawaii Gas shall file anew as a single filing, all its exhibits and supporting schedules that constitute the Stipulation [for Full Settlement], with the changes designated in yellow highlight.

Interim Decision and Order No. 35550, at 79 (footnote and citations therein omitted) (emphasis added).

For purposes of interim relief, the commission:

(1) accepted the applicable agreements memorialized by the Parties in their Stipulation for Full Settlement; (2) found and concluded that Hawaii Gas is probably entitled an interim increase in revenues of \$8,896,152, or approximately 8.39% over revenues at present rates, based on a Test Year revenue requirement of \$114,926,065; and (3) authorized Hawaii Gas to increase its rates

to such levels that will produce \$8,896,152 in additional revenues for the Test Year (approximately 8.39% over revenues at present rates), based on a Test Year revenue requirement of \$114,926,065.

The commission, by its Ordering Paragraphs, then instructed in part:

2. The interim increase in rates will take effect from July 1, 2018, provided that Hawaii Gas shall file its revised tariff sheets with the commission by June 28, 2018, 2:00 p.m., with the applicable issued and effective dates.

The interim increase in revenues will be implemented through an interim percentage surcharge on customer bills. Accordingly, the cover letter to Hawaii Gas' interim revised tariff sheets shall include the following information, with supporting calculations, explanation, and documentation:

A. The specific, interim percentage impact for each customer class on an island-by-island basis.

B. The monthly bill impact for a "typical" residential customer on an island-by-island basis.

3. Upon the issuance of a final decision and order, any amount collected pursuant to this interim rate increase that is in excess of the increase determined by the final decision and order to be just and reasonable shall be refunded to ratepayers, together with interest as provided in HRS § 269-16(d).

4. Hawaii Gas shall file reports describing the status of completing its Honouliuli WWTP Biogas Project. Unless instructed otherwise, Hawaii Gas' status reports shall be due by July 16 and 31, 2018; August 16 and 31, 2018; September 17 and 28, 2018; October 16 and 31, 2018; and if applicable, November 16 and 30, 2018.

5. Hawaii Gas shall file a report confirming its completion of refunding to ratepayers the \$113,965 attributable to the impact of the 2017 Tax Act for the six-month period from January 1, 2018 to June 30, 2018. Unless instructed otherwise, the report shall be due within fifteen calendar days following Hawaii Gas' completion of said refund.

6. By June 29, 2018, Hawaii Gas shall file anew as a single filing, all its exhibits and supporting schedules that constitute the Stipulation [for Full Settlement], with the changes designated in yellow highlight.

.

9. The post-Interim Decision and Order briefs, limited to sub-Issue No. 1h, are due by: (A) July 25, 2018, for the opening briefs; and (B) August 15, 2018, for the reply briefs.

Interim Decision and Order No. 35550, at 80-83.

On June 28, 2018, Hawaii Gas filed its cover letter and interim revised tariff sheets, in response to Ordering Paragraph No. 2 of Interim Decision and Order No. 35550. By its filing, Hawaii Gas explains that its interim revised tariff sheets establish "an interim percentage surcharge that is intended to increase rates to such levels that will produce \$8,896,152 in additional revenues for the 2018 Test Year (approximately 8.39% over revenues at present rates), on a consolidated utility basis."⁸⁰

⁸⁰HG's cover letter, dated June 28, 2018, at 1; see also HG's response to PUC-IR-202(2)(2018)(07/05/18) (the interim surcharge rates are designed to increase existing base rates by the incremental revenue increase amount approved by the commission in Interim Decision and Order No. 35550).

On June 29, 2018, Hawaii Gas filed its Single Filing of Settlement Documents, in response to Ordering Paragraph No. 6 of Interim Decision and Order No. 35550. Hawaii Gas explains that said filing: (1) designates in yellow highlight all the changes resulting from its Errata to the Stipulated Settlement, filed on June 19, 2018; and (2) consists of the Stipulation for Full Settlement text, plus all the exhibits and schedules in support thereto.

Effective July 1, 2018, Hawaii Gas' interim revised tariff sheets took effect.

On July 5, 2018, Hawaii Gas filed its responses to the commission's post-Interim Decision and Order clarifying information requests, including its responses to PUC-IR-101 (2018) and PUC-IR-201(2018).

Attachments 1 and 2 of Hawaii Gas' response to PUC-IR-101 (2018), in turn, depict in blackline format the Parties' stipulated revisions to HG's existing tariff.

Hawaii Gas, in response to PUC-IR-201 (2018), confirms that its Single Filing of Settlement Documents, filed on June 29, 2018, and its response to PUC-IR-101 (2018), with attachments, filed on July 5, 2018, collectively constitute the Stipulation of the Parties for Full Settlement.

On July 25, 2018, Hawaii Gas filed its opening brief, the Participants jointly filed their opening brief, and the Consumer Advocate filed its statement of non-position.

On August 14, 2018, Hawaii Gas filed Second Revised Exhibit F, in place of the Revised Exhibit F that is attached to the Single Filing of Settlement Documents, filed on June 29, 2018.

Similar to the two previous versions of Exhibit F, Second Revised Exhibit F calculates the refund amount attributable to the 2017 Tax Act, for the six-month period from January 1, 2018, the effective date of the 2017 Tax Act, to June 30, 2018, the day before the July 1, 2018, effective date of Hawaii Gas' commission-approved interim rates.

With respect to Second Revised Exhibit F, Hawaii Gas essentially explains:

1. The pre-2017 Tax Act gross-up factor is based on the pre-2017 Tax Act federal income tax rate of 35%. Conversely, the post-2017 Tax Act gross-up factor is based on the 2017 Tax Act federal income tax rate of 21%.

2. Hawaii Gas, in Revised Exhibit F, erroneously applied the pre-2017 Tax Act gross-up factor in calculating the subject refund amount, instead of the correct post-2017 Tax Act gross-up factor.

3. As a result, Revised Exhibit F reflects an incorrect refund amount of \$113,965, while Second Revised

Exhibit F incorporates the correct refund amount of \$101,339 (\$93,769 + \$7,069.86 + \$499.81 = \$101,339 (rounded)).

4. Hawaii Gas intends to refund the \$101,339 during the upcoming September and October 2018, billing cycles.

Ultimately, Hawaii Gas represents that the revised refund amount of \$101,339 does not impact any other settlement exhibits, nor does it change, in principle, any terms of the Parties' settlement agreement, or the commission-approved interim rate relief.⁸¹

On August 15, 2018, Hawaii Gas filed its reply brief and the Participants jointly filed their reply brief.

On September 17, 2018, Hawaii Gas filed a correct version of Attachment 1 to its response to PUC-IR-101 (2018), previously filed on July 5, 2018 (labeled as Revised Attachment 1 by HG).

Hawaii Gas essentially explains:

1. Attachment 1 depicts in blackline format the stipulated revisions to Hawaii Gas' existing tariff rules, including its FAC-related rules, i.e., Tariff Rules 19 and 21.

2. Attachment 1 incorporates: (A) incorrect base rate fuel cost amounts for Tariff Rules 19 and 21; and (B) an incorrect

⁸¹HG's cover letter, dated August 14, 2018, at 1.

Adjustment Factor for Tariff Rule 19B, governing the neighbor islands.

3. Hawaii Gas also "inadvertently omitted the Adjustment Factor of 1.0975 used to gross up the difference in fuel cost for revenue taxes in the calculation of the [FAC] under proposed rates for the Honolulu Gas District in the Confidential Third Revised Exhibit HG-813, filed herein as part of the Single Filing on June 29, 2018."⁸² Nonetheless, "[t]his omission does not have an impact on the calculated FAC or revenue under proposed rates."

4. Revised Attachment 1 incorporates: (A) the correct base rate fuel cost amounts for Tariff Rules 19 and 21; and (B) the correct Adjustment Factor for Tariff Rule 19B.

5. As part of its September 17, 2018 filing, Hawaii Gas, "in the interest of maintaining a clear and correct record," also files a correct Confidential Fourth Revised Exhibit HG-813, in place of Confidential Third Revised Exhibit HG-813.⁸³

Here, to minimize the disarray and utter confusion caused by Hawaii Gas' various filings, unless clearly required otherwise by the context, "Stipulation" refers to Hawaii Gas' Single Filing of Settlement Documents, filed on June 29, 2018;

⁸²HG's letter, dated September 17, 2018, at 1.

⁸³HG's letter, dated September 17, 2018, at 1.

its response to PUC-IR-101 (2018), excluding Attachment 1, filed on July 5, 2018; its Second Revised Exhibit F, filed on August 14, 2018; and its Revised Attachment 1, filed on September 17, 2018.

Subsequently, on November 15, 2018, Hawaii Gas filed its report: (1) certifying its completion of refunding to ratepayers approximately \$102,289, attributable to the 2017 Tax Act, for the six-month period from January 1, 2018 to June 30, 2018; and (2) noting that said amount represents an overpayment of \$950 ($\$102,289 - \$101,339 = \950).

On November 30, 2018, Hawaii Gas filed its last status report for the Honouliuli WWTP Biogas Project, essentially anticipating that said project will be completed, in-service, and used and useful for public utility purposes "shortly," during December 2018.

On December 4, 2018, the commission issued Order No. 35911, instructing Hawaii Gas to file additional status reports for the Honouliuli WWTP Biogas Project.

On December 13, 2018, Hawaii Gas filed its final status report, certifying that the Honouliuli WWTP Biogas Project is completed, in-service, and used and useful for public utility purposes during the 2018 Test Year.

II.

Discussion

HRS § 269-16 states in part:

Regulation of utility rates; ratemaking procedures. (a) All rates, fares, charges, classifications, schedules, rules, and practices made, charged, or observed by any public utility or by two or more public utilities jointly shall be just and reasonable and shall be filed with the public utilities commission. The rates, fares, classifications, charges, and rules of every public utility shall be published by the public utility in such manner as the public utilities commission may require, and copies shall be furnished to any person on request.

To the extent the contested case proceedings referred to in chapter 91 are required in any rate proceeding to ensure fairness and to provide due process to parties that may be affected by rates approved by the commission, the evidentiary hearings shall be conducted expeditiously and shall be conducted as a part of the ratemaking proceeding.

(b) No rate, fare, charge, classification, schedule, rule, or practice, other than one established pursuant to an automatic rate adjustment clause previously approved by the commission, shall be established, abandoned, modified, or departed from by any public utility, except after thirty days' notice to the commission as prescribed in section 269-12(b), and prior approval by the commission for any increases in rates, fares, or charges A contested case hearing shall be held in connection with any increase in rates, and the hearing shall be preceded by a public hearing as prescribed in section 269-12(c), at which the consumers or patrons of the public utility may present testimony to the commission concerning the increase.

The commission, upon notice to the public utility, may:

- (1) Suspend the operation of all or any part of the proposed rate, fare, charge, classification, schedule, rule, or practice or any proposed abandonment or modification thereof or departure therefrom;
- (2) After a hearing, by order:
 - (A) Regulate, fix, and change all such rates, fares, charges, classifications, schedules, rules, and practices so that the same shall be just and reasonable;
 - (B) Prohibit rebates and unreasonable discrimination between localities or between users or consumers under substantially similar conditions;
 - (C) Regulate the manner in which the property of every public utility is operated with reference to the safety and accommodation of the public;
 - (D) Prescribe its form and method of keeping accounts, books, and records, and its accounting system;
 - (E) Regulate the return upon its public utility property;
 - (F) Regulate the incurring of indebtedness relating to its public utility business; and
 - (G) Regulate its financial transactions; and
- (3) Do all things that are necessary and in the exercise of the commission's power and jurisdiction, all of which as so ordered, regulated, fixed, and changed are just and reasonable, and provide a fair return on the property of

the utility actually used and useful for public utility purposes.

. . . .

(d) The commission shall make every effort to complete its deliberations and issue its decision as expeditiously as possible and before nine months from the date the public utility filed its completed application; provided that in carrying out this mandate, the commission shall require all parties to a proceeding to comply strictly with procedural time schedules that it establishes. If a decision is rendered after the nine-month period, the commission shall report in writing the reasons therefor to the legislature within thirty days after rendering the decision.

Notwithstanding subsection (c), if the commission has not issued its final decision on a public utility's rate application within the nine-month period stated in this section, the commission, within one month after the expiration of the nine-month period, shall render an interim decision allowing the increase in rates, fares and charges, if any, to which the commission, based on the evidentiary record before it, believes the public utility is probably entitled. The commission may postpone its interim rate decision for thirty days if the commission considers the evidentiary hearings incomplete. In the event interim rates are made effective, the commission shall require by order the public utility to return, in the form of an adjustment to rates, fares, or charges to be billed in the future, any amounts with interest, at a rate equal to the rate of return on the public utility's rate base found to be reasonable by the commission, received under the interim rates that are in excess of the rates, fares, or charges finally determined to be just and reasonable by the commission. Interest on any excess shall commence as of the date that any rate, fare, or charge goes into effect

that results in the excess and shall continue to accrue on the balance of the excess until returned.

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HRS § 269-16.

A.

Parties' Stipulation

1.

Summary

From the commission's perspective, it is evident that the Parties utilized Hawaii Gas' direct testimonies and exhibits, the Consumer Advocate's direct testimonies and exhibits, Hawaii Gas' rebuttal testimonies and exhibits, and various updates and corrections (i.e., errata) thereto, as points of reference in their settlement discussions (see Stipulation, Exhibit B and Revised Exhibit C).

Accordingly:

1. The Parties first reached agreement on Issue No. 1 - i.e., Hawaii Gas' revenues and expenses at present rates, followed by Hawaii Gas' average depreciated rate base, a fair rate of return, then Hawaii Gas' Test Year revenue requirement.⁸⁴

⁸⁴See, e.g., Stipulation, Section III.B, Summary of Stipulated Settlement, at 16-17.

2. Revised Settlement Exhibits HG-350 and HG-351 of the Stipulation set forth the results of operation schedules and Test Year revenue requirement for Hawaii Gas, as agreed-upon by the Parties. Ultimately, the Parties stipulate to an increase in revenues of \$8,896,152 over present rates (approximately 8.39%), based on a Test Year revenue requirement of \$114,926,065.

3. The Parties then reached agreement on Issue No. 3, including: (A) the methodology for deriving Hawaii Gas' cost-of-service; (B) Hawaii Gas' final rate design; and (C) Hawaii Gas' FAC-related requests and proposed revisions to Tariff Rules Nos. 7, 9, 13, and 14.⁸⁵

2.

Commission's Adjudication

The Parties explain that: (1) the Stipulation represents their negotiated compromise and global settlement of all issues; and (2) their agreements, as reflected in the Stipulation, simplify and expedite the resolution of this proceeding.⁸⁶

⁸⁵See, e.g., Stipulation, Section III.E, Proposed Fuel Adjustment Clause Changes, at 59-62, Section III.H, Cost of Service, at 78-80, Section III.I, Rate Design, at 80-86, and Section III.J, Other Issues, at 87-91.

⁸⁶See Stipulation, Preamble, at 1-2, Section III, Stipulated Matters, at 12-13, and Section V, Relief Requested, at 91-92.

Concomitantly, the Parties acknowledge that:

(1) the terms of the Stipulation are subject to the commission's review and approval; and (2) the commission is not bound by the Stipulation.⁸⁷

In this regard, it is well-settled that an agreement between the parties in a rate case cannot bind the commission, as the commission has an independent obligation to set fair and just rates and arrive at its own conclusion.⁸⁸

With this mandate, the commission, based on its careful and thorough review of this docket and the related docket records, adjudicates Issues No. 1 and No. 3, including the related sub-issues thereto. In so doing, the commission reviews whether the applicable terms of the Stipulation, viewed as a whole, are just and reasonable.

⁸⁷See Stipulation, Preamble, at 1-2, and Section VI, Record, at 92.

⁸⁸In re Hawaiian Elec. Co., Inc., 5 Haw. App. 445, 698 P.2d 304 (1985).

B.

Hawaii Gas Projects
(**Sub-Issues No. 1c, 1e, and 1f**)

Sub-issues No. 1c, 1e, and 1f specifically reference the following Hawaii Gas project dockets: In re The Gas Co., LLC, Dockets Nos. 2010-0334, 2012-0389, 2013-0061, 2013-0076, 2013-0184, and 2014-0315.

The commission adjudicates sub-issues 1c, 1e, and 1f in Section II.B herein by addressing these six projects.

1.

Docket No. 2010-0334, Hawaii Gas'
Bio-Synthesis Gas Pilot Project
(**Sub-Issue No. 1c**)

On January 9, 2012, the commission issued Decision and Order No. 30096, approving Hawaii Gas' requests to: (1) expend \$2,397,467 to design, install, and implement Hawaii Gas' Bio-Synthesis Gas Pilot Project (the "Bio-Syn Pilot Project"), subject to any offsets from federal funds received from the grant program administered by the Hawaii Renewable Energy Development Venture, and to the extent not already accounted for in Hawaii Gas' calculation; and (2) include the costs for the triglyceride feedstock (including associated costs) it acquires and uses in the Bio-Syn Pilot Project, in its FAC, to the extent such costs are not already included in Hawaii Gas' base rates.

On July 20, 2017, Hawaii Gas filed its project closure report, concluding in part that: (1) the pilot project in its current form "is economically unfeasible to operate in the long term[;]" (2) although the pilot project showed that the technology is not yet commercially viable, the pilot project provided valuable information on the ability to convert triglycerides into RNG or an SNG feedstock; and (3) in the event of technological and cost breakthroughs, Hawaii Gas is prepared to use the information gained from the pilot project to move quickly into producing RNG from a triglyceride feedstock.⁸⁹

Hawaii Gas, in the subject Application, requests that its net cost of \$2,643,781 for the Bio-Syn Pilot Project, be amortized over three years with a carrying charge equal to its cost of debt, as an expense item.⁹⁰ By lowering the net cost amount to account for the federal project grant, the total amount requested, as adjusted, is \$2,050,087. After applying the carrying

⁸⁹Docket No. 2010-0334, Hawaii Gas' Project Closure Report, filed on July 20, 2017, at 8; see also HG T-3, at 53; and HG T-5, at 9-10.

⁹⁰Application, Section XIV, Bio-Synthesis Gas Pilot Project, at 23-28; HG T-3, Section VII.3, Bio-Synthesis Gas Pilot Project, at 52-55; and HG T-5, Section V.1, Bio-Synthesis Gas Pilot Project, at 7-11.

charges on the unamortized balance, the amount requested over three years is approximately \$737,000 per year.⁹¹

Now, as part of the Stipulation, the Parties agree to:

1. Cost deferral treatment for the project; and
2. Fifty percent recovery of the project's costs, levelized over three years with a carrying charge equal to Hawaii Gas' cost of debt (i.e., \$736,528 per year).⁹²

Upon the application of the 50% adjustment and updates due to the 2017 Tax Act, the Parties ultimately stipulate to "a total recovery amount of \$313,959 (see **Exhibit C, Schedule S-8**), which is reflected as a portion of the total Ratemaking Adjustments[.]"⁹³

The purpose of the Bio-Syn Pilot Project was to determine the technical feasibility and cost-effectiveness of processing canola oil or virgin animal fats and oils (i.e., generally referred

⁹¹HG T-3, at 53-55; HG T-5, at 11 (citing Exhibit HG-502); and HG's response to CA-IR-84(d) (12/19/17).

⁹²See Stipulation, Section III.D.11.b, Request for Deferral of Bio-Syn Project Costs, at 48-51 (citing Exhibit C, Schedule S-8; and Revised Exhibit C, Schedule S-101, at 1).

⁹³Stipulation, at 51 (boldface in original); see also HG's response to PUC-IR-103 (2018)(07/05/18), Attachment 1 (reducing the approximate total HG initially requested from approximately \$737,000 to \$627,917, to account for the impact of the 2017 Tax Reform Act; 50% of this updated amount, in turn, is \$313,959, the stipulated, total amount of recovery for the Bio-Syn Pilot Project).

to as triglycerides) to make feedstock or fuel as a renewable alternative to petroleum-based feedstock and fuel.⁹⁴

The commission finds reasonable the stipulated treatment and cost recovery for the Bio-Syn Pilot Project, in the "total recovery amount of \$313,959."

The stipulated amount of \$313,959, in turn, is reflected as part of Hawaii Gas' ratemaking adjustments expense at present rates (see Section II.G.13, Ratemaking Adjustments, below).

2.

Docket No. 2013-0061, Pipeline Safety Inspections Project;
Docket No. 2013-0076, University of Hawaii West Oahu
Campus, Distribution System Phase 1 Project; and
Docket No. 2012-0389, Backup Diesel Generator Project
(**Sub-Issue No. 1e**)

In Dockets Nos. 2013-0061, 2013-0076, and 2012-0389, the commission dismissed Hawaii Gas' after-the-fact requests to commit funds for certain capital expenditure projects, based on the gas utility's failure to state a claim upon which relief could be granted. In dismissing Hawaii Gas' requests, the commission declined to review and adjudicate the merits of said requests, noting that Hawaii Gas had already expended the funds and completed the subject capital expenditure projects. Specifically:

⁹⁴See Docket No. 2010-0334, Decision and Order No. 30096, filed on January 9, 2012, at 4-11 and 15-19; and HG T-5, at 5-6, 7, and 9-10.

1. On April 8, 2013, the commission, in Docket No. 2013-0061, dismissed Hawaii Gas' request to commit funds it already expended to upgrade portions of the gas utility's transmission pipeline, as part of the federally-mandated transmission pipeline Integrity Management Program (i.e., the Pipeline Safety Inspections Project).⁹⁵

2. On April 26, 2013, the commission, in Docket No. 2013-0076, dismissed Hawaii Gas' request to commit funds it already expended to complete the University of Hawaii West Oahu Campus, Distribution System Phase 1 Project.⁹⁶

3. On May 15, 2013, the commission, in Docket No. 2012-0389, dismissed Hawaii Gas' request to commit funds it already expended to purchase, install, and commission a Backup Diesel Generator.⁹⁷

Hawaii Gas, in the subject Application, requests to include in its Test Year rate base these three capital improvement projects, asserting that each project is used and useful for public utility purposes (i.e., sub-Issue No. 1e).⁹⁸

⁹⁵Docket No. 2013-0061, Order No. 31156, filed on April 8, 2013.

⁹⁶Docket No. 2013-0076, Order No. 31206, filed on April 26, 2013.

⁹⁷Docket No. 20120-0389, Order No. 31230, filed on May 15, 2013.

⁹⁸See Application, Section XV, Dismissed General Order No. 9 Applications, at 29-35; HG T-3, at 9-10; and HG T-8, Section XI, Dismissed G.O. 9 Applications, at 56-75.

Now, as part of the Stipulation, the Parties agree to include:

1. The final project costs in rate base for the:

A. Pipeline Safety Inspections Project, arising from the federally-mandated transmission pipeline Integrity Management Program (i.e., Docket No. 2013-0061, final project cost: (\$1,184,046 + \$873,583 = \$2,057,629)); and

B. University of Hawaii West Oahu Campus, Distribution System Phase 1 Project (i.e., Docket No. 2013-0076, final project cost: \$711,690);⁹⁹ and

2. Fifty percent of the Backup Diesel Generator's final project cost of \$832,603 in rate base, in the amount of \$416,301 (i.e., Docket No. 2012-0389), with corresponding adjustments to accumulated depreciation and depreciation expense.¹⁰⁰

Moreover, Hawaii Gas erroneously posted the amount of accumulated depreciation for the Backup Diesel Generator as reducing its rate base, instead of increasing its rate base. The Parties stipulate to leaving this error "as is," resulting in

⁹⁹See Stipulation, at 71; HG T-8, at 58, and 68; and HG's response to PUC-IR-102(4) (2018) (07/05/18).

¹⁰⁰Stipulation, Section III.F.1.d, Backup Generator and Other Dismissed G.O. 9 Projects, at 69-71 (citing Exhibit B, Schedule HG-B5; Exhibit C, Schedule S-10; and Workpaper WP-S10); see also HG T-8, at 57 and 60 (final project cost).

a favorable to ratepayer reduction to rate base in the amount of \$174,846.¹⁰¹

The commission finds: (1) that the Pipeline Safety Inspections Project is used and useful for public utility purposes; and (2) reasonable the stipulated cost recovery for said project.

In support thereto, the commission specifically finds and concludes:

1. The first expenditure, in the amount of \$1,184,046, was used to replace 465 feet of 10-inch diameter pipe with 16-inch diameter pipe at Kapolei Shopping Center (the "Kapolei IMP").

2. The second expenditure, in the amount of \$873,583, was used to install a launcher and receiver site for an in-line pipeline inspection gauge in Kalihi (the "Kalihi IMP").

3. On March 31, 2011, the Kapolei IMP project was placed into service, and on January 31, 2014, the Kalihi IMP project was placed into service.

4. The new, larger replacement pipe for the Kapolei IMP, and the new launcher and receiver site for in-line pipeline inspections as part of the Kalihi IMP, are necessary for Hawaii Gas to: (A) remain in compliance with the federal-mandated transmission pipeline Integrity Management Program; and (B) ensure

¹⁰¹Stipulation, at 72 (citing Exhibit B, Schedule HGSR-B6).

the continued safety, integrity, and reliability of Hawaii Gas' transmission pipeline.

5. Federal regulations continue to require the periodic inspections of Hawaii Gas' transmission pipeline. As such, the Kapolei IMP and Kalihi IMP projects are and will continue to be used and useful during the 2018 Test Year.¹⁰²

The commission finds: (1) that the University of Hawaii West Oahu Campus, Distribution System Phase 1 Project is used and useful for public utility purposes; and (2) reasonable the stipulated cost recovery for said project.

In support thereto, the commission specifically finds and concludes:

1. The project funds were used to install a new gas distribution system and related infrastructure to serve the University of Hawaii West Oahu Campus and surrounding mixed residential and commercial areas.

2. On January 1, 2013, the project was placed into service.

3. The new gas distribution system and related infrastructure: (A) enables Hawaii Gas to provide utility SNG service to the University of Hawaii West Oahu campus and

¹⁰²HG T-8, at 58 and 63-68.

surrounding areas; and (B) is and will continue to be used and useful during the 2018 Test Year.¹⁰³

The commission finds: (1) that the Backup Diesel Generator Project is used and useful for public utility purposes; and (2) reasonable the stipulated cost recovery for said project.

In support thereto, the commission specifically finds and concludes:

1. Hawaii Gas receives electricity for its SNG Plant from either Par Hawaii Refining, LLC's co-generation unit or from HECO through a switchgear located on the refinery's adjacent property.¹⁰⁴

2. Hawaii Gas investigated the option of installing a separate feeder independent from the refinery, and determined that installing a separate feeder: (A) was not economically feasible; and (B) will "still expose the SNG Plant to a single point of failure once disconnect[ed from the refinery]."¹⁰⁵

3. The project funds were used to purchase, install, and commission a two-megawatt backup diesel generator at Hawaii Gas' SNG Plant.

¹⁰³HG T-8, at 58 and 68-70.

¹⁰⁴Application, at 14; HG T-6, at 4-5; HG T-8, at 38, 43, and 60; and HG's response to CA-RIR-1(c) (05/23/18).

¹⁰⁵Stipulation, at 71 (citing HG RT-8, at 5).

4. On February 28, 2013, the project was placed into service.

5. The primary purpose of the new two-megawatt backup diesel generator is to provide a secure and stable supply of emergency electricity to the SNG Plant in the event of an electrical outage.¹⁰⁶

6. Hawaii Gas acknowledges that "there have been no electrical outages that necessitated the use of the backup generator since it was purchased."¹⁰⁷

7. That said, Hawaii Gas notes that the nature of a backup generator is that "it is only used in times of an emergency when electricity to HG has been cut-off . . . and HG should not be penalized for prudently planning for a potential electricity outage that would shut down HG's SNG plant completely."¹⁰⁸

8. Given these circumstances, by mitigating potential risk to ratepayers by implementing contingency planning to maintain a reliable supply of SNG to ratepayers, the new, two-megawatt backup diesel generator is and will continue to be used and useful during the 2018 Test Year.¹⁰⁹

¹⁰⁶HG T-8, at 57 and 60-63.

¹⁰⁷HG RT-8, at 3.

¹⁰⁸HG RT-8, at 3.

¹⁰⁹See HG T-8, at 62-63.

Docket No. 2013-0184, Hawaii Gas'
SNG System Backup Enhancement Project
 (Sub-Issue No. 1e)

On August 12, 2013, Hawaii Gas filed an application in Docket No. 2013-0184, to initiate its plan to: (1) import LNG using ISO containers; and (2) store, transport, and re-gasify imported LNG for use in its gas utility and non-utility operations. Hawaii Gas specifically requested that the commission approve: (1) the expenditure of funds for Hawaii Gas' SNG System Backup Enhancement Project (referred to as the "Backup Project" in Docket No. 2013-0184); (2) a fuel supply agreement ("Supply Agreement"); (3) a fuel delivery contract ("Delivery Contract"); and (4) other related matters thereto.

As explained by the commission:

The Backup Project proposed by TGC consists of three major components: (1) LNG equipment, as needed to store, transport, and regasify the required LNG, (2) a Supply Agreement with TGC and a non-Hawaii based LNG supplier, and (3) a Delivery Contract relating to the delivery of both full and empty [ISO] containers from the LNG supplier to TGC on Oahu and vice versa.

.

Specifically, TGC is proposing to purchase: (1) three [LNG] ISO containers and (2) a trailer mounted mobile re-gasifier ("Re-Gasifier") (collectively known as "LNG Equipment"). TGC also notes that two of the ISO containers, as well as the Re-Gasifier, were previously purchased as described in

Docket No. 2013-0075, and were "intended . . . to serve both utility and non-utility customers" by having TGC's non-utility operation supply natural gas to its utility gas district on Oahu.

. . . .

While the previously discussed LNG Equipment makes up a substantial portion of the proposed Backup Project, a more significant portion relates to the acquisition and transportation of the LNG necessary to implement the Backup Project [.]

. . . .

TGC's Application requests commission approval of the Supply Agreement, which calls for TGC to purchase LNG from a particular supplier that is "offering acceptable contract terms and the most competitive currently available price of LNG on a per therm basis." TGC is also requesting approval of the Delivery Contract that TGC has already entered into, which calls for "roundtrip door-to-door pickup and delivery of the ISOs from the LNG supplier to TGC on Oahu."

Docket No. 2013-0184, Decision and Order No. 31964, filed on March 6, 2014, at 5-8 (footnotes, citations, and internal bracketing omitted) (emphasis added).

On March 6, 2014, the commission issued Decision and Order No. 31964, by which it:

1. Dismissed Hawaii Gas' after-the-fact request to commit approximately \$950,725 for the Backup Project, noting that Hawaii Gas had already purchased and was in possession of two ISO containers, the mobile Re-Gasifier, and the chassis,

which constituted a substantial portion of the estimated \$950,725 total cost of the Backup Project; and

2. Approved as reasonable and in the public interest and subject to certain conditions, the Supply Agreement and Delivery Contract. In support of its approval, the commission found that the LNG for the LNG Backup Enhancement System was projected to "reduce TGC's SNG customer's rates, and increase reliability by allowing TGC to better schedule the maintenance outages of its SNG plant (thus leading to a better and more reliably maintained plant) [.]"¹¹⁰

The commission, in sum, declined to review and adjudicate the merits of Hawaii Gas' after-the-fact capital expenditure request, reasoning that said request failed to state a claim upon which relief could be granted.

Hawaii Gas, in the subject Application:

1. Requests to include in its Test Year rate base the SNG Backup Enhancement Project, asserting that said project is used and useful for public utility purposes;¹¹¹ and

2. Explains that its Test Year rate base "includes a ratemaking adjustment[, in the amount of \$56,118,] to remove a portion of the Plant in Service, Depreciation Reserve, and Deferred

¹¹⁰Docket No. 2013-0184, Decision and Order No. 31964, at 22.

¹¹¹Application, at 33-35; and HG T-6, at 8-10.

Income Taxes associated with the SNG Backup Enhancement Project as third party costs of the project were misclassified to the SNG Backup Enhancement Project, and are now being removed for rate making."¹¹²

Hawaii Gas, in its response to CA-IR-63(d), subsequently clarifies that only two ISO containers (not three) are included in the "final" SNG System Backup Enhancement Project, with both ISO containers currently 100% in use.¹¹³

Now, as part of the Stipulation, the Parties agree to:

1. Include the final SNG System Backup Enhancement Project costs in rate base, in the amount of \$798,004;¹¹⁴ and
2. A "ratemaking adjustment to remove a portion of the Plant in Service, Depreciation Reserve, and Deferred Income Taxes associated with the SNG Backup Enhancement Project as third party costs of the project were misclassified to the SNG Backup Enhancement Project, and are now being removed for rate making."¹¹⁵

¹¹²HG T-3, at 10-11 and 47-48; see also id., at 10-11; HG's response to CA-IR-110 (01/29/18), and Attachment 1 thereto; and HG's response to PUC-IR-103 (2018) (07/05/18), and Attachment 1 thereto (citing HG T-3, at 47-48).

¹¹³HG's response to CA-IR-63(d) (12/19/17, 12/22/17, 01/29/18).

¹¹⁴See Stipulation, at 71; HG T-8, at 58-59 and 70-74; and HG's response to PUC-IR-102(5) (2018) (07/05/18).

¹¹⁵HG T-3, at 10-11 and 47-48; see also id., at 10-11; HG's response to CA-IR-110 (01/29/18), and Attachment 1 thereto; and HG's response to PUC-IR-103 (2018) (07/05/18), and Attachment 1 thereto (citing HG T-3, at 47-48).

The commission finds: (1) that the SNG System Backup Enhancement Project is used and useful for public utility purposes; and (2) reasonable the stipulated cost recovery for said project.

In support thereto, the commission specifically finds and concludes:

1. Since 1974, the entire naphtha feedstock for Hawaii Gas has been solely supplied by the Tesoro Hawaii, LLC, refinery, now known as the Par Hawaii Refining, LLC, refinery.¹¹⁶ Stated differently, Hawaii Gas is dependent upon Par Hawaii Refining, LLC's refinery to provide naphtha for its SNG Plant.¹¹⁷

2. On January 8, 2013, Tesoro Hawaii Corporation publicly announced its intent to shut down its Tesoro Hawaii, LLC, refinery operations and convert said operations to an import and storage terminal to receive shipments of finished product from sources outside the State.¹¹⁸

¹¹⁶In re The Gas Co., LLC, Docket No. 2013-0179, Decision and Order No. 31752, filed on December 18, 2013, at 3; and In re The Gas Co., LLC, Docket No. 2013-0101, Decision and Order No. 31281, filed on May 29, 2013, at 3.

¹¹⁷HG T-8, at 71; and Docket No. 2013-0184, Application, filed on August 12, 2013 ("Docket No. 2013-0184 Application"), at 5.

¹¹⁸Docket No. 2013-0179, Decision and Order No. 31752, at 3-4; and Docket No. 2013-0101, Decision and Order No. 31281, at 3-4.

3. In January 2013, Tesoro Hawaii Corporation shut down its Tesoro Hawaii, LLC, refinery operations and converted said operations to a "terminal operation."¹¹⁹

4. On June 17, 2013, Tesoro Hawaii Corporation announced its agreement to sell Tesoro Hawaii, LLC, including the refinery, to Par Petroleum Corp.¹²⁰

5. At the time Hawaii Gas filed its application on August 12, 2013, in Docket No. 2013-0184: (A) the Tesoro Hawaii, LLC, refinery was in "restart mode;" and (B) Tesoro Hawaii, LLC, intended to re-start the refinery in September 2013. Once re-started and in operation, "the transition to new ownership [was] scheduled to occur shortly thereafter."¹²¹

6. On September 25, 2013, Tesoro Hawaii Corporation completed the sale of Tesoro Hawaii, LLC, to Par Petroleum Corp.; on September 27, 2013, Tesoro Hawaii, LLC, changed its name to Hawaii Independent Energy, LLC; and on December 28, 2015,

¹¹⁹HG T-8, at 71; In re The Gas Co., LLC, Docket No. 2016-0341, Decision and Order No. 34793, filed on September 7, 2017, at 3; and Docket No. 2013-0184 Application, at 8.

¹²⁰HG T-8, at 71; Docket No. 2013-0179, Decision and Order No. 31752, at 5; and Docket No. 2013-0184 Application, at 5-6.

¹²¹Docket No. 2013-0184 Application, at 6-7.

Hawaii Independent Energy, LLC, changed its name to Par Hawaii Refining, LLC.¹²²

7. Given the earlier shutdown of Tesoro Hawaii, LLC's refinery operations and the pending sale and transfer of the refinery to a new owner, Hawaii Gas had "significant" and "heightened" concerns regarding the refinery's operational flexibility and the potential impacts on the amount and duration of SNG Plant outages during this period of transition and uncertainty.¹²³ In this regard, in the event of a planned or unplanned SNG Plant outage:

A. Hawaii Gas' SNG transmission pipeline was the sole source of stored SNG.

B. The stored SNG, in turn, could provide service to customers for approximately nine to eleven hours, depending on demand and the amount of SNG stored in the transmission pipeline when the outage occurred.

C. Hawaii Gas' Propane-Air Backup System, which supplements the SNG that is stored in the transmission pipeline with propane-air, increases the gas utility's backup capacity to approximately sixteen to seventeen hours.¹²⁴

¹²²Docket No. 2016-0341, Decision and Order No. 34793, at 3-4; and Docket No. 2013-0179, Decision and Order No. 31752, at 5.

¹²³HG T-8, at 70-71; and Docket No. 2013-0184, Application, at 4-7.

¹²⁴See HG T-8, at 70-71.

8. Hawaii Gas initiated the SNG System Backup Enhancement Project to supplement its existing SNG system backup capacity by providing a lighter-than-air gas that could be mixed with the propane-air and injected into the transmission pipeline, thereby increasing the gas utility's backup capacity to approximately nineteen to twenty-four hours, depending on demand and the amount of SNG stored in the transmission pipeline when the outage occurred.¹²⁵

9. The project funds were used to: (A) purchase two ISO containers, a trailer chassis, and a trailer-mounted re-gasifier; and (B) make certain improvements at Pier 38 to accommodate the LNG Backup Enhancement System.¹²⁶

10. On January 1, 2015, the project was placed into service.¹²⁷

11. The LNG Backup Enhancement System increases the reliability of Hawaii Gas' SNG operations in the event of planned and unplanned SNG Plant outages, to the customers' benefit.¹²⁸

¹²⁵HG T-6, at 9-10; HG T-8, at 72; and Docket No. 2013-0184 Application, at 8-9.

¹²⁶HG T-8, at 73; see also HG T-6, at 8.

¹²⁷HG's response to PUC-IR-102(2)(2018)(07/05/18).

¹²⁸See HG T-8, at 70 (increasing the reliability of utility gas service to SNG customers in the event of planned or unplanned SNG Plant outages), 71 (ensuring reliable gas utility service to customers by addressing potential SNG Plant outages), and 73

12. To date, approximately 172,700 gallons of LNG (i.e., 142,700 therms) have been used at the LNG Backup Enhancement System, "and it will continue to serve as a backup facility due to its strategic location at the end of Hawaii Gas' transmission line."¹²⁹

13. Given these specific circumstances, by mitigating potential risk to ratepayers by implementing measures to increase the reliability of Hawaii Gas' SNG operations in the event of planned and unplanned SNG Plant outages, the LNG Backup Enhancement System is and will continue to be used and useful for public utility purposes during the 2018 Test Year.¹³⁰

Lastly, the commission notes that the stipulated removal of mis-classified SNG Backup Enhancement Project costs is reflected as part of Hawaii Gas' ratemaking adjustments expense at present rates, specifically as a \$56,118 reduction to Hawaii Gas' non-operations and maintenance expenses at present rates (see Section II.G.13, Ratemaking Adjustments, below).

(increasing the reliability of utility SNG operations in the event of planned or unplanned outages).

¹²⁹HG T-8, at 73-74.

¹³⁰See HG T-8, at 73-74.

Docket No. 2014-0315, Hawaii Gas' 30% SNG Conversion Project
(Sub-Issue No. 1f)

On October 16, 2014, Hawaii Gas filed an application in Docket No. 2014-0315, requesting the commission's approval of: (1) certain capital expenditure-related requests in conjunction with Hawaii Gas' 30% SNG Conversion Project, estimated at \$12,812,098; and (2) the related LNG supply and delivery agreements.

As explained by the commission, with respect to the 30% SNG Conversion Project:

In general, Hawaii Gas proposes to inject up to two ISO containers of LNG per day at its SNG Plant. The ISO containers will be connected to the LNG regasification and injection system, which will raise the pressure of the regasified LNG to 500 psig for injection into Hawaii Gas's SNG pipeline system. The gas supply will be delivered to the system over a 24 hour period, depending on system demand. Hawaii Gas will then, through various means, transport the empty ISO containers back to the U.S. Mainland to be refilled, and transported back to Hawaii.

Docket No. 2014-0315, Decision and Order No. 33621, filed on April 4, 2016, at 3-4 (footnote and citation therein omitted).

Furthermore:

Hawaii Gas designed the 30% SNG Conversion Project to use LNG to displace SNG output at the SNG Plant in a way that optimizes cost savings to ratepayers. In order to accomplish this, Hawaii Gas had to determine what percentage of conversion (i.e., replacing SNG output with LNG) would optimize overall cost savings for ratepayers by balancing the anticipated fuel cost savings against the capital investments necessary to implement the project. Hawaii Gas' analysis showed that displacing more than 30% (but less than 100%) of the SNG Plant's output with LNG would materially impact the SNG Plant's operations and efficiency, requiring Hawaii Gas to make costly investments into the SNG Plant's infrastructure and increasing the cost of producing SNG, which would then substantially offset the fuel cost savings, ultimately reducing the overall cost savings to the ratepayers. On the other hand, by limiting the displacement of SNG output to only approximately 30%, the SNG Plant's operations and efficiency will not be materially impacted and appropriately balances the projected fuel cost savings against the required capital investments in a way that maximizes the cost benefits for Hawaii Gas' ratepayers.

Docket No. 2014-0315, Decision and Order No. 33621, at 4-5 (quoting from Hawaii Gas' application, Exhibit 1) (emphasis added).

On April 4, 2016, the commission issued Decision and Order No. 33621: (1) finding that the 30% SNG Conversion Project will increase fuel supply diversity and may provide customer savings; (2) concluding that the project was reasonable and in the public interest; and (3) approving subject to certain conditions, the related capital expenditure requests and LNG supply and delivery agreements.

Hawaii Gas, in the subject Application:

1. Requests to include in its Test Year rate base the updated estimate of \$13.9 million for the 30% SNG Conversion Project;¹³¹ and

2. Estimates that the 30% Conversion Project will be in-service by the end of 2017.¹³²

Subsequently, on April 25, 2018, Hawaii Gas filed its 30% Conversion Project closure report in Docket No. 2014-0315, stating in part:

A. "HG completed construction . . . in December 2017, with an in-service date of December 9, 2017[;]" and

B. "[I]n its application for a general rate increase, HG requested Commission approval for the updated Project cost estimate of \$13.9 million for the Project, which, at final cost, is now \$13.6 million."¹³³

Now, as part of the Stipulation, the Parties agree to include the final 30% SNG Conversion Project costs in rate base,

¹³¹Application, Section XVI, 30% SNG Conversion Project, at 35-38; and HG T-6, Section III, Impact of the 30% Conversion System on the SNG Plant, at 10-20.

¹³²See HG T-3, at 7; HG T-6, Confidential Exhibit HG-603; HG T-8, at 3; and HG's response to CA-IR-63(d) (12/19/17, 12/22/17, 01/29/18).

¹³³Docket No. 2014-0315, 30% SNG Conversion Project Closure Report, filed on April 25, 2018, at 1 (footnote and citation therein omitted).

in the amount of \$13,623,040, which is \$810,942 (i.e., 6.3%) above the \$12,812,098 amount estimated in Docket No. 2014-0315 (\$13,623,040 - \$12,812,098 = \$810,942).¹³⁴

Moreover, Hawaii Gas erroneously posted the amount of accumulated depreciation for the 30% SNG Conversion Project as reducing its rate base, instead of increasing its rate base. The Parties stipulate to leaving this error "as is," resulting in a favorable to ratepayer reduction to rate base in the amount of \$5,530.¹³⁵

The commission finds: (1) that the 30% SNG Conversion Project (interchangeably referred to as the "30% Conversion System" by Hawaii Gas) is used and useful for public utility purposes; and (2) reasonable the stipulated cost recovery for said project.

In support thereto, the commission specifically finds and concludes:

1. At the time Hawaii Gas filed its application on October 16, 2014, in Docket No. 2014-0315, Hawaii Gas relied on

¹³⁴Stipulation, Section III.F.1.c, 30% SNG Conversion Project, at 66-69 (citing HG RT-6, Section II, 30% SNG Conversion Project, at 2-5; and Stipulation, Exhibit B, Schedule HG-B2).

¹³⁵Stipulation, at 72 (citing Exhibit B, Schedule HGSR-B6).

Par Hawaii Refining, LLC's refinery to provide naphtha for its SNG Plant.¹³⁶

2. The purpose of the project is to provide fuel diversity by increasing the number of fuel suppliers to Hawaii Gas and displacing (i.e., replacing) up to 30% of Hawaii Gas' SNG production with LNG, thereby reducing the security, financial, and reliability risks associated with the interruption in or loss of naphtha.¹³⁷

3. With respect to fuel diversity, the commission previously articulated in Docket No. 2016-0341:

Fuel diversity is vital to increasing the security and reliability of Hawaii's fuel supply. Fuel diversity is two-fold: (1) diversity of supply; and (2) diversity of sources. Diversity of supply means that Hawaii Gas can rely on more than one type of fuel commodity for its operations. Fuel commodity options include naphtha feedstock to produce SNG, propane, LNG, and RNG. Currently, Hawaii Gas relies on SNG, with limited propane and LNG back-up sources available during service interruptions. By contrast, diversity of sources means that for each type of fuel commodity, Hawaii [Gas] can rely [on] multiple sources. For example, Hawaii Gas plans to purchase LNG from

¹³⁶HG T-8, at 71; Docket No. 2013-0184, Application, filed on August 12, 2013 ("Docket No. 2013-0184 Application"), at 5; and Docket No. 2014-0315, Decision and Order No. 33621, at 2 and 18.

¹³⁷Docket No. 2014-0315, Decision and Order No. 33621, at 2, 4-5, and 18-19; HG T-1, at 6 and 8; HG T-6, at 11-12 (the basic premise of the 30% SNG Conversion System is displacing SNG with LNG); HG T-8, at 4-6; Docket No. 2014-0315, 30% SNG Conversion Project Closure Report, filed on April 25, 2018, Section III, Condition No. 3 - Adverse Impacts Plan, at 9-10; and HG RT-6, at 2.

two different suppliers through different ports in different regions, in the event that one of the suppliers and/or ports is unavailable. However, as for feedstock, Hawaii Gas' only source is from [Par Hawaii Refining, LLC's] refinery.

Docket No. 2016-0341, Decision and Order No. 34793, at 11 (emphasis omitted) (quoting the application, filed on September 30, 2016, at 10).

4. The project includes:

A. Sixty-eight LNG ISO containers, used to transport LNG from the LNG loading facility to the SNG Plant. The ISO containers are stored on a trailer, which can be hooked up to a tractor.

B. A tractor for moving the LNG trailers from the staging area to the unloading area and back.

C. An LNG system (referred to as the "LNG regasification and injection equipment" by Hawaii Gas), consisting of: (1) LNG pumps to build LNG pressure so it can enter the transmission pipeline; and (2) vaporizers to turn the LNG to gas.¹³⁸

5. The 30% SNG Conversion System is designed such that an LNG ISO container is hooked up to the SNG Plant and pumped up

¹³⁸HG T-6, at 11; see also Docket No. 2014-0315, 30% SNG Conversion Project Closure Report, filed on April 25, 2018, Section II.B, ISO Containers, at 3, and Section II.C, LNG Turnkey System, at 3-8 (filed under partial confidential seal).

to 500 psig, then vaporized to turn the LNG to gas. The gas is then injected into the 450 psig transmission pipeline, where odorant is added just upstream of the odorant injection point.¹³⁹

6. The 30% SNG Conversion System is also designed to switch vaporizers every two hours to enable the vaporizer to 'de-ice.'¹⁴⁰

7. The SNG Plant injects an average of 73,000 therms per day of SNG into the transmission pipeline.¹⁴¹

8. The 30% SNG Conversion System has a capacity of 21,000 therms per day, based on the vaporizer capacity (freezing up) with a short-term (two-hour) capacity of 1,700 therms per hour.¹⁴²

9. Hawaii Gas anticipates injecting an average of 18,000 gallons of vaporized LNG into its transmission pipeline per day (i.e., approximately 16,000 therms per day), which is equivalent to approximately two ISO containers. These amounts represent about 20% of Hawaii Gas' daily load.¹⁴³

¹³⁹HG T-6, at 10-12.

¹⁴⁰HG T-6, at 12.

¹⁴¹HG T-6, at 12.

¹⁴²HG T-6, at 11.

¹⁴³HG T-6, at 12.

10. On December 9, 2017, the project was placed into service, and is and will continue to be used and useful for public utility purposes during the 2018 Test Year.¹⁴⁴

11. With respect to the 6.3% cost variance, Hawaii Gas explains:

The final capital cost for the Project was \$13,623,040, which is \$810,942, or 6.3%, above the estimated capital costs. The primary reasons for the variance are: 1) increased equipment costs; 2) additional engineering design costs not included in the original budget; and 3) the complexity of the project, which led to HG's decision to use a design-build "turnkey" solution for the Project[.]

Although the cost for the design-build of the System was more than originally estimated, with savings from the: 1) lower number of ISO containers and reduced stainless steel costs; 2) elimination of the costs for the demolition and replacement of the maintenance building; 3) elimination of the ISO Storage Site Improvement costs; and 4) reduced overhead costs, the total capital costs for the Project are within 6.3% of the original estimate, and were prudent and necessary for the completion of the Project[.]

Docket No. 2014-0315, 30% SNG Conversion Project Closure Report, filed on April 25, 2018, at 1-2 and 9-10, under partial confidential seal (emphasis added) (footnote and citation therein omitted); see also HG RT-6, at 3.

¹⁴⁴See Docket No. 2014-0315, 30% SNG Conversion Project Closure Report, filed on April 25, 2018, at 1, and Section IV, Conclusion, at 9-10 (filed under partial confidential seal).

C.

Hawaii Gas' Renewable Natural Gas Project
(Docket No. 2016-0340)

The commission adjudicates in Section II.C herein a capital expenditure project that is not specifically referenced in the statement of issues.

The Parties stipulate to the following cost recovery for the Honouliuli WWTP Biogas Project (i.e., Docket No. 2016-0340):

1. Inclusion of \$2,503,662 of the project's capital cost, which represents approximately 50% of the project's estimated capital cost of \$5.007 million;

2. An annualized production expense amount to reflect the annual impact of the production expenses associated with the project; and

3. Two months of depreciation expense (i.e., November and December 2018).¹⁴⁵

The commission finds: (1) that the Honouliuli WWTP Biogas Project is used and useful for public utility purposes; and (2) reasonable the stipulated cost recovery for said project.

In support thereto, the commission specifically finds and concludes:

¹⁴⁵Stipulation, Section III.F.1.b, Honouliuli WWTP Biogas Project, at 64-66 (citing HG T-3, at 45; and CA-T-1, at 23-24).

1. The commission incorporates by reference herein its discussion of the Honouliuli WWTP Biogas Project, as set forth in Section I.B.1, Oahu, above.

2. HRS § 269-45(a) requires each gas utility to file an annual report with the commission that includes the following information: "The percentage of total feedstock used to produce natural gas, biogas, biofuels, or biofeedstocks for use in the State that is comprised of non-petroleum feedstock[.]"

3. HRS § 269-45(b), in turn, defines "non-petroleum feedstock" as follows:

"Feedstock" means a material that is converted, consumed, or blended to produce an end use product.

"Non-petroleum feedstock" includes but is not limited to plant and animal fats and oils, algae and algae products, other organic material, organic waste, municipal solid waste, waste water or sewage.

HRS § 269-45(b); cf. HRS chapter 269, part V, Renewable Portfolio Standards (the definition of renewable electrical energy pursuant to the State's Renewable Portfolio Standards law includes "sewage-based digester gas," i.e., "biogas").

4. As set in the preamble to the enacting legislation, the underlying purposes of HRS § 269-45 include:

The legislature finds that there are numerous renewable energy resources in the State that have the potential to contribute to the local production of energy that may be utilized by a gas

utility to produce natural gas, biogas, biofuels, or biofeedstocks[.]

As it is in the best interest of the State to consider all local renewable resources which may contribute toward the reduction of the State's dependency on imported petroleum, the purpose of this Act is to establish an annual reporting requirement for a gas utility to measure and evaluate its progress in integrating renewable resources as part of its production of synthetic natural gas.

Act 30, 2010 Session Laws of Hawaii, Section 1, at 39.

5. The purpose of the project and related fuel supply contract is to purchase and purify raw biogas from the City for conversion into nearly 100% methane, for injection into Hawaii Gas' existing Oahu-based SNG utility pipeline distribution system. Moreover, the pure raw biogas and resulting RNG from the Wastewater Treatment Plant will only be used for Hawaii Gas' Oahu utility distribution system, and not for its: (A) gas utility service on the neighbor islands; or (B) non-regulated gas service.¹⁴⁶

6. On December 13, 2018, Hawaii Gas filed its final status report for the project, certifying that said project is completed, in-service, and used and useful for public utility purposes during the 2018 Test Year.¹⁴⁷

¹⁴⁶Docket No. 2016-0340, Decision and Order No. 34811, at 15-16.

¹⁴⁷HG's WWTP Biogas Project, Additional Status Report No. 2, filed on December 13, 2018, at 1.

7. The inclusion of \$2,503,662 of the project's capital cost in rate base is consistent with the average depreciated rate base methodology (\$0 balance at the end of 2017, plus the \$5,007,323 balance at the end of the 2018 test year, divided by 2 = \$2,503,662).

8. With respect to annualization:

As a general rule, annualization of a capital project completed and placed in service during the test year is not allowed where, as here, the averaging principle is utilized. The averaging concept requires the use of average rate base. Annualization assumes that the capital project, completed and placed in service during the test year, has been in service at the start (rather than at the end) of the test year. Annualization is opposed because of the mismatch it causes in revenues, expenses, and investments over the test year. However, under special circumstances deviations from the general rule are sometimes allowed. The burden of persuasion to deviate from the general rule rests with the utility[.]

.

Whether annualization is allowed depends on the facts of each case[.]

In re Hawaiian Elec. Co., Inc., Docket No. 7766, Interim Decision and Order No. 14195, filed on August 30, 1995, at 4-6 (HECO's 1995 test year rate case).

9. Here, the Parties' agreement to reflect the annual impact of the production expenses associated with the project (i.e., an annualized production expense amount) deviates from the general rule.

10. That said, based on the specific circumstances, said agreement results from "give and take" compromise, including the Parties' corresponding agreement to limit the project's depreciation expense to November and December 2018, a two-month period.

D.

Hawaii Revised Statutes § 269-6(b)
(Including Sub-Issue No. 1h)

The commission, at the outset, incorporates by reference herein the following sections, above: (1) Section I.B.1, Oahu; (2) Section II.B, Hawaii Gas Projects; (3) Section II.C, Hawaii Gas' Renewable Natural Gas Project; and (4) Section II.G.4, Fuel.

HRS § 269-6 states in part:

General powers and duties. (a) The public utilities commission shall have the general supervision hereinafter set forth over all public utilities and shall perform the duties and exercise the powers imposed or conferred upon it by this chapter. Included among the general powers of the commission is the authority to adopt rules pursuant to chapter 91 necessary for the purposes of this chapter.

(b) The public utilities commission shall consider the need to reduce the State's reliance on fossil fuels through energy efficiency and increased renewable energy generation in exercising its authority and duties under this chapter. In making determinations of the reasonableness of the costs of utility system capital improvements and operations, the commission shall explicitly consider, quantitatively or qualitatively, the effect of the State's reliance on fossil fuels

on price volatility, export of funds for fuel imports, fuel supply reliability risk, and greenhouse gas emissions. The commission may determine that short-term costs or direct costs that are higher than alternatives relying more heavily on fossil fuels are reasonable, considering the impacts resulting from the use of fossil fuels.

HRS § 269-6 (emphasis added).

From a chronological, procedural perspective:

1. On February 6, 2018, the commission issued Order No. 35267, by which it:

A. Extensively discussed the Hawaii Supreme Court's written opinion, issued on December 14, 2017, in In re Maui Elec. Co., Inc., 141 Hawai'i 249, 408 P.3d 1 (2017) ("In re MECO");

B. Identified sub-Issue No. 1h; and

C. Granted 350 Hawaii, HAA KLMA), and LOL participant status in lieu of intervention, limited to sub-Issue No. 1h.

2. On March 21, 2018, the Participants filed their respective direct testimonies.

3. On July 25, 2018, Hawaii Gas filed its opening brief and the Participants jointly filed their opening brief.

4. On August 15, 2018, Hawaii Gas filed its reply brief and the Participants jointly filed their reply brief.

The commission describes the respective positions as reflected in these pertinent pleadings, then explicitly considers and applies HRS § 269-6(b).

Participants' Direct Testimonies

The Participants' direct testimonies consist of the testimonies filed by representatives for HAA KLMA (JP-T-1), 350 Hawaii (JP-T-2), and LOL (JP-T-3), respectively.

HAA KLMA contends that Hawaii Gas' "wrong-headed proposal . . . deepens our dependence on imported fossil fuels, increases our energy insecurity, increases our already rising greenhouse gas contribution to this global crisis, and seriously impacts the sustainability of communities relying on the `aina and kai for subsistence."¹⁴⁸

350 Hawaii asserts:

1. The State should lead in the efforts to reduce greenhouse gas emissions now by reducing the State's "dependence on dirty fossil fuel energy sources and expanding low-climate impact renewable energy to limit greenhouse gas pollution should be our top priority."¹⁴⁹

2. "A life-cycle perspective accounts for all emissions connected to the good or service. This consumption-based approach accounts for emissions at the point of consumption, attributing all the emissions that occurred in the course of

¹⁴⁸JP-T-1, at 7.

¹⁴⁹JP-T-2, at 13.

production and distribution to the final consumers of goods and services."¹⁵⁰

350 Hawaii also takes issue with the "fossil fuel industry's deliberate misinformation campaign" and "propaganda" of labeling natural gas as a "clean burning fuel" and "clean burning bridge fuel," despite the contrary evidence.¹⁵¹ 350 Hawaii, in this regard, asserts:

The truth is natural gas is a potent greenhouse gas that some scientists say could push the climate over a tipping point in the next 18-25 years, causing runaway global warming. The drilling and extraction of natural gas from wells and its transportation in pipelines results in the leakage of methane, the primary component of natural gas that is 34 times stronger than CO2 at trapping heat over a 100-year period and 86 times stronger over 20 years.

JP-T-2, at 14 (footnote, text, and citation therein omitted).

LOL:

1. Describes the differences between the "older," "well-established" Production-Based Greenhouse Gas Emissions Accounting ("GHGE") Accounting System ("PAS"), and the "newer," "alternative" Customer-Based GHGE Accounting System ("CAS"), as follows:

¹⁵⁰JP-T-2, at 15 (footnote and citation therein omitted).

¹⁵¹JPT-T-2, at 14.

A. The PAS "states that if you produce a greenhouse gas, you are credited with the emission[,]" i.e., emissions are exclusively assigned to the countries that release them, thereby evading the cost-causer principle.

B. Conversely, the CAS takes international trade fully into account by separating embedded emissions into smaller pieces and attaches them to numerous global accounts.¹⁵²

2. Asserts that the PAS' weaknesses include hiding (i.e., masking) the impact of one's carbon footprint, confusing the public, promoting climate injustice, allowing demand-driven carbon leakage (i.e., net emission transfers) from national greenhouse gas inventories, and failing to address the impact of international trade on global emissions.¹⁵³

3. Conversely, the CAS: (A) provides a complementary way of accounting for emissions; (B) is a much cleaner, transparent, easily understood, and more relevant approach that can easily be applied to sub-Issue No. 1h; (C) aligns with the cost-causer principle, environmental justice, the United Nations Sustainable Development Goals, promotes consumer choice, and enables consumers to understand their greenhouse gas impacts; and (D) can accurately measure how the State impacts global

¹⁵²See JP-T-3, at 28-67.

¹⁵³See JP-T-3, at 28-67.

greenhouse gas emissions. In effect, "[t]hose responsible for consuming embedded GHGE should be responsible for their carbon footprint contribution to global climate change."¹⁵⁴

4. Recommends that a starting point for determining an embedded GHGE methodology is the University of Hawaii Economic Research Organization's analysis, An Economic and GHG Analysis of LNG in Hawaii, published in October 2014, which suggests a holistic life cycle analysis by gathering greenhouse gas emission metrics from the various life cycle emission points.¹⁵⁵

With respect to Hawaii Gas, LOL asserts:

Each methodology is an accounting system. The PAS system would determine the greenhouse gas emissions at a power plant per [British Thermal Unit ("BTU")] of power generated (" Φ "). The CAS system would determine the embedded greenhouse gas emissions per BTU of power generated (" Ω "). Thus, Ω would include both Φ and the other components of a life cycle analysis.

. . . .

The Hawaiian Electric Companies acknowledge that climate change is real. Their major life cycle emissions of their fuels are accounted for in Φ . The Gas Company is a climate denier. The Gas Company's Ω is significantly greater than their Φ . Put in English, the Gas Company's fuel has large, hidden emissions which distort the value of their fuel.

¹⁵⁴See JP-T-3, at 28-67.

¹⁵⁵See JP-T-3, at 74-75.

JP-T-3, at 30; see also id., at 71-72 (asserting that MIC, Hawaii Gas' parent entity, is a climate denier).

The Ω approach would enable Hawai'i to rely on an apples-to-apples comparison of the full emissions of each renewable energy and fossil fuel source. Life-Cycle Analysis (LCA) can determine the major GHGE inputs for each fuel. Input-Output Models (IOMs) designed to measure the embedded cash flow can easily be applied to embedded GHGE.

JP-T-3, at 52-53.

The Gas Company does not believe in climate change and doesn't care that their fuel has the greatest amount of embedded greenhouse gases of any fuel sold in Hawai'i.

. . . .

My discussions with Hawaiian Electric executives indicate that there are extraction methods used in North America where Hawai'i Gas gets some of their fuel, and there are other extraction methods elsewhere that provide fuel for Hawaiian Electric that do not use the same extraction methods. If one cares as much for the survival of the planet as one does for the short-term financial costs, one has to consider PAS and CAS. The PAS system indicates that Hawai'i consumption of gas is preferable to oil. The CAS system indicates that Hawai'i consumption of oil is better than gas. If Hawai'i uses the PAS rather than the CAS system, Hawai'i emissions will be lower, and global emissions will be higher. Using PAS we can brag about our low emissions while frying the planet.

JP-T-3, at 73.

With respect to sub-Issue No. 1h, LOL, on the Joint Participants' behalf, states:

The Joint Participants assert that the commission should disallow as unreasonable

Hawaii Gas' LNG costs. The Joint Participants want the true costs and lifecycle impact of greenhouse gas emissions factored into fuel decisions made by the commission. Climate Change threatens Hawai'i residents, and our rights promulgated by the Hawai'i State Constitution. At the very least, the commission must adopt a policy on greenhouse gas emissions, and that it be consistent with Hawaii's commitment to the Paris Climate Agreement. We believe that applications such as this Gas Company filing must require [and] provide both the financial cost and the embedded GHGE associated with their operations, in an easily to understand way, such as Ω /kWh and Ω /BTU.

JP-T-3, at 65; see also id., at 59-60 (the Joint Participants assert that the commission should disallow as unreasonable Hawaii Gas' LNG costs) and 75 (asserting that the commission could discount recoverable Hawaii Gas tariffs and rates based on its failure to advance policies that are reasonable and in the public interest).

2.

Hawaii Gas' Opening Brief

Hawaii Gas asserts that by focusing on the evidence in the record for each relevant LNG project and expenditure, Hawaii Gas' LNG costs should not be disallowed as unreasonable due to the effects of HG's use of imported LNG on: (1) the State's reliance on fossil fuels; and (2) greenhouse gas emissions.¹⁵⁶

¹⁵⁶Hawaii Gas' Opening Brief on Sub-Issue No. 1h, filed on July 25, 2018 ("HG's OB"), at 1, 11, and 16.

In support of its position, Hawaii Gas contends:

1. The commission, in Dockets No. 2014-0315 and No. 2013-0184, already determined that Hawaii Gas' expenditures for LNG are prudent and in the public interest, and the Participants have failed to introduce any evidence in Hawaii Gas' 2018 Test Year rate case proceeding to warrant a reversal of the commission's previous action.¹⁵⁷

2. Hawaii Gas has incurred costs in connection with its: (A) 30% SNG Conversion Project (Docket No. 2014-0315); and (B) SNG Backup Enhancement Project and related fuel Supply Agreement and Delivery Contract (Docket No. 2013-0184). The commission, in turn, approved both projects as prudent and in the public interest.¹⁵⁸

3. In Docket No. 2014-0315: (A) LOL was a participant; and (B) the commission approved, subject to certain conditions, the 30% SNG Conversion Project.

4. Moreover, with respect to HRS § 269-6(b) and LOL, the commission, in Docket No. 2014-0315, stated:¹⁵⁹

LOL's [Statement of Position ("SOP")] does not clearly state whether or not LOL believes the Project is in the public interest. Instead, LOL's SOP includes a general discussion of climate change and the greenhouse gas impacts associated

¹⁵⁷HG's OB, at 1-2 and 11.

¹⁵⁸See HG's OB, at 5-9 and 12.

¹⁵⁹See HG's OB, at 6-7 and 12.

with natural gas production, particularly the practice of horizontal drilling and hydraulic fracturing (together "fracking").

. . . .

LOL's concerns about fracking are inapposite to this proceeding. LOL states that the Project is not in the public interest, but fails to specifically explain or discuss why. Generalized statements concerning issues outside the scope of this docket fail to assist the commission in addressing the specific issues set forth in this and previous orders.

. . . .

In addition, it is not clear whether the Project would increase TGC's reliance on fuels that are the product of fracking. As LOL's exhibits state, fracking is a technique that is used in the production of both oil and natural gas. See LOL SOP at 10-11. The feedstock for SNG is naphtha. Naphtha is a product of oil refining. LOL offered no information regarding the source(s) of oil that generates the naphtha that Hawaii Gas uses to make SNG, and whether that oil is the product of fracking. There is no evidence in the record to suggest that the Project would increase, decrease, or in any way affect TGC's reliance on fuels or feedstocks that are the product of fracking.

Docket No. 2014-0315, Decision and Order No. 33621, at 14 (footnotes and citations therein omitted) and 26 n.48 (incorporates the text to footnote 48).

5. The doctrine of issue preclusion provides that a person is precluded from relitigating any issue that was actually litigated and finally decided in the earlier action

(citing Exotics Hawaii-Kona, Inc. v. E.I. Dupont De Nemours & Co., 104 Hawai'i 358, 365, 90 P.3d 250, 257 (2004)).¹⁶⁰

6. Under the doctrine of issue preclusion: (A) the commission's ruling in Docket No. 2014-0315 is binding against LOL; and (B) the commission, in this rate case proceeding, should affirm its decision that the 30% SNG Conversion Project is in the public interest and the costs incurred by Hawaii Gas are reasonable.¹⁶¹

7. In Docket No. 2013-0184, the commission: (A) described the Supply Agreement and Delivery Contract as being the "more significant portion" of the SNG Backup Enhancement Project; and (B) approved, subject to certain conditions, the Supply Agreement and Delivery Contract, as being reasonable, prudent, and in the public interest.¹⁶²

8. Broad policy discussions and generalized statements about LNG and climate change are not relevant to the commission's adjudication of sub-Issue No. 1h.¹⁶³

¹⁶⁰HG's OB, at 13.

¹⁶¹HG's OB, at 13.

¹⁶²HG's OB, at 9.

¹⁶³See HG's OB, at 4-5.

9. Hawaii Gas, in its response to JP-IR-49, filed on March 13, 2018, "showed that its LNG-related projects or expenditures were prudent and in the public interest."¹⁶⁴

10. The Participants, in their direct testimonies: (A) only provide generalized statements regarding broad policy issues; and (B) except for a couple of conclusory statements in LOL's testimony, do not specifically discuss the 30% SNG Conversion Project or the SNG Backup Enhancement Project.¹⁶⁵

11. There is no evidence in this docket record to suggest that the 30% SNG Conversion Project will increase: (A) the State's reliance on fossil fuels; and (B) greenhouse gas emissions. Instead, as Hawaii Gas notes in its response to JP-IR-49, said project will decrease the greenhouse gas emissions associated with the SNG Plant's stationary equipment fuel use.¹⁶⁶

12. There is no evidence in this docket record to suggest that the SNG Backup Enhancement Project will increase the State's reliance on fossil fuels and greenhouse gas emissions. Instead, as Hawaii Gas notes in its response to JP-IR-49, "[f]or every therm of vaporized LNG injected into the pipeline to back up the SNG Plant, the total amount of greenhouse gas emissions would

¹⁶⁴HG's OB, at 10; see also id., at 14.

¹⁶⁵HG's OB, at 10-11.

¹⁶⁶HG's OB, at 14 (quoting HG's response to JP-IR-49 (03/13/18)).

decrease due to the reduction in stationary equipment fuel necessary to create the displaced SNG."¹⁶⁷

3.

Participants' Joint Opening Brief

The Participants note that they "filed the only climate change facts, testimony, and exhibits; the evidence presented are based on overwhelming scientific evidence and represent the conclusions from leading climate authorities. None of these facts, testimony, and exhibits submitted by the Joint Participants[] were questioned, disputed, or challenged, in any way, shape, or form, by HG."¹⁶⁸

The Participants assert that the commission must:

1. Issue its decision in conformity with its ratemaking authority under HRS §§ 269-6 and 269-16, the State Constitution, and Hawaii Supreme Court decisions.¹⁶⁹ As such, the commission must: (A) assess greenhouse gas levels and the effects that will result from its approval of Hawaii Gas'

¹⁶⁷HG's OB, at 15 (quoting HG's response to JP-IR-49 (03/13/18)).

¹⁶⁸Opening Brief Re Climate Change Regulation for Hawaii Gas, filed on July 25, 2018 ("Participants' OB"), at 9 n.30.

¹⁶⁹Participants' OB, at 3.

Application; and (B) explicitly consider "hidden and long-term costs," i.e., externalities.¹⁷⁰

2. Adopt the Customer-Based GHGE Accounting System in this rate case proceeding.¹⁷¹ Said system: (A) accounts for greenhouse gases where they are consumed; and (B) is akin to the life cycle analysis.¹⁷²

3. Must require disclosure of embedded greenhouse gas emissions by fuel source.¹⁷³

Moreover, the commission, should:

1. Disallow Hawaii Gas' LNG costs, as the gas utility intentionally filed an incomplete application which omits any discussion of greenhouse gas emissions, when it was obviously aware of In re MECO, and blatantly failed to rectify the omission in subsequent filings.¹⁷⁴ In effect, Hawaii Gas' proposed rate increase is not just, reasonable, prudent, or in the public interest.¹⁷⁵

¹⁷⁰Participants' OB, at 4.

¹⁷¹Participants' OB, at 29.

¹⁷²Participants' OB, at 26.

¹⁷³Participants' OB, at 30.

¹⁷⁴Participants' OB, at 28.

¹⁷⁵See Participants' OB, at 28.

2. Consider adopting the Customer-Based GHGE Accounting System across a broader array of public utilities in the future.¹⁷⁶

3. Impose lower rates of recovery for fuel sources with higher embedded greenhouse gas emissions as it is just and reasonable and in the public interest to do so.¹⁷⁷

4. Adopt renewable portfolio standards, performance incentive mechanisms, and/or performance-based ratemaking so that Hawaii Gas has its "skin in the game," thereby motivating the gas utility to reduce life cycle greenhouse gas emissions.¹⁷⁸

5. When there is doubt, adopt the precautionary principle whereby margins of error are decided in favor of the public interest over the private interest (quoting In re Water Use Permit Application Filed by Kukui (Molokai), Inc., 116 Hawai'i 481, 499, 174 P.3d 320, 338 (2007), and citing In re Water Use Permit Applications, 94 Hawai'i 97, 154-55, 9 P.3d 409, 466-67 (2000)).¹⁷⁹

¹⁷⁶Participants' OB, at 29.

¹⁷⁷Participants' OB, at 30.

¹⁷⁸Participants' OB, at 30.

¹⁷⁹Participants' OB, Section I.C, Precautionary Principle, at 8; see also id., Section I.D, Caveat Emptor, at 9 (applying the Precautionary Principle).

The Participants cite to the following State constitutional provisions in support of their positions and recommendations: Article I, Section 2, Rights of Individuals; Article IX, Section 8, Preservation of a Healthful Environment; Article IX, Section 9, Cultural Resources; Article XI, Section 1, Conservation and Development of Resources; Article XI, Section 3, Agricultural Lands; Article XI, Section 6, Marine Resources; Article XI, Section 7, Water Resources; Article XII, Section 4, Public Trust; and Article XII, Section 7, Traditional and Customary Rights.¹⁸⁰

After citing to these State constitutional provisions, the Participants specifically discuss:

1. Article XI, Section 1, which states in part: "All public natural resources are held in trust by the State for the benefit of the people."¹⁸¹

2. Article XI, Section 6, which states in part: "The State shall have the power to manage and control the marine, seabed and other resources located within the boundaries of the State, including the archipelagic waters of the State, and reserves

¹⁸⁰See Participants' OB, at 3 n.7, 7 n.16, 15 n.51 and 52, 16 n.53, 18 n.60, 21 n.73, 74, and 76, and 25.

¹⁸¹See Participants' OB, Section I.B, Public Trust Doctrine, at 7, Section II.B, Water Impacts and Violations of the Public Trust Doctrine, at 13-16, and Section II.C, Land Impacts and Violations of the State Constitution, at 16-18.

to itself all such rights outside state boundaries not specifically limited by federal or international law."

3. Article XI, Section 7, which states in part: "The State has an obligation to protect, control and regulate the use of Hawaii's water resources for the benefit of its people."¹⁸²

After discussing Article XI, Sections 1, 6, and 7, the Participants assert:

1. The Hawaii Supreme Court has ruled in numerous decisions that State agencies have an obligation to protect public trust resources.¹⁸³

2. With respect to Hawaii Gas' impact on water resources:

The State Constitution promotes protecting water resources. . . . The State has an obligation to protect, control and regulate the use of Hawaii's water resources for the benefit of its people. HG has been irresponsible by ignoring the climate change impacts to water-related public trust resources.

Participants' OB, at 15-16 (footnotes and citations therein omitted).

3. The Hawaii Supreme Court, in Mauna Kea Anaina Hou v. Bd. of Land and Nat. Res., 136 Hawai'i 376, 363 P.3d 224 (2015),

¹⁸²See Participants' OB, Section II.B, Water Impacts and Violations of the Public Trust Doctrine, at 13-16.

¹⁸³See Participants' OB, at 14-16.

asserted that the State has a public trust obligation to protect public land.¹⁸⁴

4. With respect to Hawaii Gas' impact on land, "HG has refused to accept responsibility for climate impacts to land-based public trust resources."¹⁸⁵

Moreover, the Participants:

1. Cite to Article I, Section 2, and Article IX, Sections 8 and 9, and assert:

A. The State "must take positive measures to protect the right to health, particularly for vulnerable and marginalized groups."¹⁸⁶

B. With respect to Hawaii Gas' impact on public health, "HG has foolishly refused to acknowledge climate change impacts to health-related public trust resources."¹⁸⁷

2. Cite to Article XII, Sections 4 and 7, and assert:

A. Native Hawaiians are a protected class under the State Constitution.¹⁸⁸

¹⁸⁴Participants' OB, at 18.

¹⁸⁵Participants' OB, at 18.

¹⁸⁶Participants' OB, at 22.

¹⁸⁷Participants' OB, at 22.

¹⁸⁸See Participants' OB, Section II.E, Climate Change Impacts to Protected Class: Kanaka Maoli, at 23-25.

B. "HG has recklessly ignored climate change impacts involving Kanaka Maoli."¹⁸⁹

Ultimately, in the Participants' view, Hawaii Gas' action of exposing all Hawaii residents and ratepayers to higher, future hidden costs due to its "reckless expansion" of greenhouse gas emissions clearly violates the public trust and State Constitution.¹⁹⁰

4.

Hawaii Gas' Reply Brief

Hawaii Gas, in response to the Participants, asserts:

1. The Participants, in their opening brief, focus and expound on broad policy issues that are outside the scope of and inapposite to sub-Issue No. 1h, and not on the specific projects or costs at issue in sub-Issue No. 1h.¹⁹¹

2. The Participants' opening brief is filled with allegations and statements unsupported by law or facts, and false, misleading, or erroneous statements.¹⁹²

¹⁸⁹Participants' OB, at 25.

¹⁹⁰Participants' OB, at 28.

¹⁹¹See Hawaii Gas' Reply Brief on Sub-Issue No. 1h, filed on August 15, 2018 ("HG's RB"), at 1-4.

¹⁹²See HG's RB, at 4-6.

3. Contrary to such allegations and statements:

A. Hawaii Gas is not seeking to expand its use of LNG through this rate case proceeding. In other words, "HG is not requesting an increase in the use of LNG beyond that already approved in Docket Nos. 2014-0315 and 2013-0184."¹⁹³

B. Hawaii Gas "objects to any allegation or suggestion by the Participants that HG is irreparably harming the climate and Hawaii."¹⁹⁴

C. Hawaii Gas is not recklessly expanding greenhouse gas emissions. Instead:

i. "[A]s indicated in Docket No. 2014-0315, HG is 'committed to reducing greenhouse gas emissions, climate change and global warming in a manner that is consistent with the state's renewable energy goals and Hawaii Gas' mandate to provide safe, reliable, gas service to its ratepayers.'"¹⁹⁵

ii. "[T]he 30% SNG Conversion Project and Backup Enhancement Project will actually decrease greenhouse gas emissions relating to HG's utility operations."¹⁹⁶

¹⁹³HG's RB, at 5 (citing HG T-3, at 46; and HG RT-6, at 4).

¹⁹⁴HG's RB, at 6.

¹⁹⁵HG's RB, at 6-7 (boldfacing deleted) (citing Docket No. 2014-0315, HG's response to LOL-IR-6 (02/24/15)).

¹⁹⁶HG's RB, at 7 (boldfacing deleted) (citing HG's response to JP-IR-49 (03/13/18)).

4. HRS § 269-6(b) serves as the statutory basis for sub-Issue No. 1h. Pursuant to HRS § 269-6(b), the commission must consider the effect of the State's reliance on fossil fuels on price volatility, export of funds for fuel imports, and fuel supply reliability risk, and not only its effect on greenhouse gas emissions. The commission should equally weigh all of these factors.¹⁹⁷

5. In Docket No. 2014-0315, "in approving HG's 30% Conversion Project, the Commission considered the requisite factors under HRS § 269-6(b), including price volatility and fuel supply reliability risk, and determined that the project and its costs are reasonable and in the public interest. Similarly, in Docket No. 2013-0184, the Commission approved the Supply Agreement and Delivery Contract after it evaluated their effect on HG's fuel supply reliability risk."¹⁹⁸

6. Any further adjustment or disallowance of Hawaii Gas' LNG-related costs based on the Participant's generalized, misplaced statements about climate change will be unfair, unjust, and constitute a regulatory taking and reversible error.¹⁹⁹

¹⁹⁷HG's RB, at 7-8.

¹⁹⁸HG's AB, at 8 (footnote, citation, and text therein omitted).

¹⁹⁹HG's AB, at 9.

Participants' Joint Reply Brief

The Participants, in response to Hawaii Gas, assert:

1. The Participants' "argument boils down to holding HG fully accountable for the life cycle greenhouse gas emissions they are responsible for. This core argument by the Joint Participants was totally and completely missed by [Hawaii Gas]." ²⁰⁰

2. Hawaii Gas "submitted no testimony or exhibits on climate change in this proceeding, provided no guidance on which [a] greenhouse gas emission accounting system should be relied upon by the commission, refused to cross-examine any climate change witnesses, and remains in denial that climate change is real." ²⁰¹

3. Contrary to Hawaii Gas' contention, the doctrine of issue preclusion does not apply in this rate case proceeding. ²⁰²

4. Hawaii Gas provided no data on life cycle emissions to substantiate its claim that the 30% SNG Conversion Project will decrease the greenhouse gas emissions associated with the SNG Plant's stationary equipment fuel use. ²⁰³

²⁰⁰Reply Brief Re Climate Change Regulation for Hawaii Gas, filed on August 15, 2018 ("Participants' RB"), at 2.

²⁰¹Participants' RB, at 3.

²⁰²See Participants' RB, Issue Preclusion/Collateral Estoppel, at 3-5.

²⁰³See Participants' RB, Assessing True Costs of Hawaii Gas' Use of Imported LNG on Greenhouse Gas Emissions, at 5-6.

5. "The switch from SNG to LNG will continue the use of fossil fuel, and the life cycle greenhouse gas emissions will rise. Hawai`i Gas did not challenge these facts in any testimony or exhibits. Nor did Hawai`i Gas testify that these emissions should be excluded from the accounting system."²⁰⁴

6. Contrary to Hawaii Gas' claim, the Participants' statements were specific and detailed.²⁰⁵

7. The Participants "base their legal arguments on their rights protected by Hawai`i Common Law, the State Constitution, Hawai`i Supreme Court decisions, the Public Trust Doctrine, and the Precautionary Principle. None of these were challenged by [Hawaii Gas]."²⁰⁶

8. "HG investing \$200 million to expand its infrastructure for climate-destroying LNG simply feeds our state's addiction to nonrenewable energy."²⁰⁷

²⁰⁴Participants' RB, at 7.

²⁰⁵See Participants' RB, Generalizations vs. Science-Based Determinations, at 6-7; see also id., Climate Change Fingerprints, at 8-9 (at the very least, generalized statements are better than no statement at all, which is the approach used by HG).

²⁰⁶Participants' RB, at 9.

²⁰⁷Participants' RB, at 12.

Ultimately, Hawaii Gas' use of imported LNG increases:

(1) the State's reliance on fossil fuels; and (2) greenhouse gas emissions.²⁰⁸

6.

In Making Determinations of the Reasonableness of the Costs of Utility System Capital Improvements and Operations, the Commission Shall Explicitly Consider, Quantitatively or Qualitatively, the Effect of the State's Reliance on Fossil Fuels on Price Volatility, Export of Funds for Fuel Imports, and Fuel Supply Reliability Risk, and Greenhouse Gas Emissions

To reiterate, the second sentence of HRS § 269-6(b) states that "[i]n making determinations of the reasonableness of the cost of utility system capital improvements and operations, the commission shall explicitly consider, quantitatively or qualitatively, the effect of the State's reliance on fossil fuels on price volatility, export of funds for fuel imports, fuel supply reliability risk, and greenhouse gas emissions."

Here, upon explicit consideration, weighing, and balancing of the four specified criteria (price volatility, fuel supply reliability risk, export of funds for fuel imports, and greenhouse gas emissions), the commission finds reasonable Hawaii Gas' 2018 Test Year LNG utility system capital improvements and operations costs. Accordingly, the commission declines to disallow Hawaii Gas' 2018 Test Year LNG costs.

²⁰⁸Participants' RB, at 13.

In support thereto, the commission specifically finds and concludes as follows:

i.

Price Volatility and Fuel Supply Reliability Risk

1. The focus of Hawaii Gas' fuel diversification strategy is to ensure a reliable, cost-effective fuel mix that improves its security of supply.²⁰⁹

2. Hence, Hawaii Gas' fuel supply mix consists of SNG manufactured at the SNG Plant, LPG, Propane-Air from the Propane-Air Backup System located at Pier 38, LNG from the LNG Backup Enhancement System located at Pier 38, LNG from the 30% Conversion System, and RNG from the Honouliuli WWTP Biogas Project (see Section I.B.1, Oahu, and Section II.G.4, Fuel, above).

3. Par Hawaii Refining, LLC's refinery is the sole supplier of naphtha for Hawaii Gas' SNG Plant (see Section I.B.1, Oahu, Section II.B.3, Docket No. 2013-0184, Hawaii Gas' SNG System Backup Enhancement Project, and Section II.B.4, Docket No. 2014-0315, Hawaii Gas' 30% SNG Conversion Project, above).

4. The commission, in Docket No. 2013-0184:

A. Found that the LNG Supply Agreement and Delivery Contract for the LNG Backup Enhancement System were projected to:
(i) reduce rates for Hawaii Gas' SNG customers; and (ii) increase

²⁰⁹See HG T-5, at 2-3; HG T-8, at 2-3, 4, and 76; and HG RT-6, at 3-4.

reliability by allowing Hawaii Gas to better schedule the maintenance outages of its SNG Plant; and

B. Approved as reasonable and in the public interest and subject to certain conditions, the Supply Agreement and Delivery Contract for the LNG Backup Enhancement System (see Section II.B.3, Docket No. 2013-0184, Hawaii Gas' SNG System Backup Enhancement Project, above).

5. As the commission specifically noted in Docket No. 2013-0184, the LNG Backup Enhancement System:

A. Arose out of Hawaii Gas' "significant" and "heightened" concerns due to Tesoro Hawaii Corporation's termination of Tesoro Hawaii, LLC's refinery operations and conversion to a terminal operation in January 2013, and the subsequent sale and transfer of the refinery on September 25, 2013, to Par Petroleum Corp. (see Section II.B.3, Docket No. 2013-0184, Hawaii Gas' SNG System Backup Enhancement Project, above).

B. Mitigates potential risk to ratepayers by implementing measures to increase the reliability of Hawaii Gas' SNG operations in the event of planned and unplanned SNG Plant outages, to the customers' benefit (see Section II.B.3, Docket No. 2013-0184, Hawaii Gas' SNG System Backup Enhancement Project, above).

6. The commission, in Docket No. 2014-0315:

A. Found that the LNG supply and delivery agreements for the 30% Conversion System will increase fuel supply diversity and may provide customer savings; and

B. Approved as reasonable and in the public interest and subject to certain conditions, the LNG supply and delivery agreements for the 30% Conversion Project (see Section II.B.4, Hawaii Gas' 30% Conversion Project, above).

7. As the commission specifically noted in Docket No. 2014-0135, the 30% Conversion System provides fuel diversity by increasing the number of fuel suppliers for Hawaii Gas and displacing (i.e., replacing) up to 30% of Hawaii Gas' SNG production with LNG, thereby reducing the security, financial, and reliability risks associated with the interruption in or loss of naphtha (see Section II.B.4, Docket No. 2014-0315, Hawaii Gas' 30% SNG Conversion Project, above).

8. Meanwhile, the end-product RNG derived from the Honouliuli WWTP Biogas Project further diversifies Hawaii Gas' fuel supply (see Section I.B.1, Oahu, and Section II.C, Hawaii Gas' Renewable Natural Gas Project, above).

9. Ultimately, the 30% Conversion System is designed to displace up to 30% of SNG, while the end-product RNG is likewise intended to further displace SNG.²¹⁰

10. Hawaii Gas, in Docket No. 2014-0315, files information on the monthly weighted average cost per therm of the LNG it purchases for the 30% Conversion System, from November 2017.

11. Hawaii Gas notes that its "supply of LNG has been steady and reliable. The price of LNG remains stable with no significant changes in LNG prices being forecast in the near and long term."²¹¹

ii.

Export of Funds for Fuel Imports

12. The end-product RNG is locally-sourced from the City's WWTP, and thus, does not involve the exporting of funds for imported fuel (see Section I.B.1, Oahu, and Section II.C, Hawaii Gas' Renewable Natural Gas Project, above).

²¹⁰HG T-8, at 3.

²¹¹HG RT-6, at 2.

Greenhouse Gas Emissions

13. With respect to its two LNG projects, Hawaii Gas represents:

A. For the 30% Conversion Project (i.e., Docket No. 2014-0315), greenhouse gas emissions associated with the SNG Plant's stationary equipment fuel use will decrease (i.e., reported to the EPA under Subpart C), while greenhouse gas emissions associated with LNG sold to customers (i.e., reported to the EPA under Subpart NN) will be nearly identical to displaced SNG; and

B. For the LNG Backup Enhancement System Project (i.e., Docket No. 2013-0184), a similar displacing SNG with LNG principle will apply.

14. As Hawaii Gas specifically explains:

Currently for the 30% Conversion Project, which displaces quantities of SNG with LNG, greenhouse gas emissions associated with the SNG Plant's stationary equipment fuel use (reported to the EPA under Subpart C) would decrease due to the amount of SNG displaced with LNG. In other words, greenhouse gas emissions associated with SNG production would decrease because less SNG is produced. Greenhouse gas emissions associated with LNG sold to HG customers (reported to the EPA under Subpart NN) would be nearly identical to displaced SNG because LNG is chemically similar to the SNG produced at the SNG Plant. The life of the 30% Conversion Project has not been determined.

Currently for the Backup Enhancement Project, a similar displacement principle would be

applicable. However, because the amount of vaporized LNG injected into the transmission pipeline will vary according to the number and length of SNG Plant shutdowns, the actual amount is difficult to quantify. For every therm of vaporized LNG injected into the pipeline to back up the SNG Plant, the total amount of greenhouse gas emissions would decrease due to the reduction in stationary equipment fuel necessary to create the displaced SNG. The life of the Backup Enhancement Project has not been determined.

HG's response to JP-IR-49 (03/13/18) (emphasis in original).

15. Participants have not produced any credible evidence: (A) which contradicts Hawaii Gas' evidence; or (B) that Hawaii Gas' use of LNG as part of its utility operations will increase greenhouse gas emissions.²¹²

16. Instead, Participants rely on general assertions, without credible evidentiary support, that Hawaii Gas' use of imported LNG will increase greenhouse gas emissions.²¹³

²¹²See, e.g. HG's OB, at 14-15 (there is no evidence in the docket record that Hawaii Gas' two LNG projects will increase greenhouse gas emissions).

²¹³Order No. 35267, at 41 (citing LOL's Motion to Intervene, at 2-3 and 6); and Participants' RB, at 13.

The Commission Shall Consider the Need to Reduce
the State's Reliance on Fossil Fuels Through Energy
Efficiency and Increased Renewable Energy Generation

To reiterate, the first sentence of HRS § 269-6(b) states that the commission "shall consider the need to reduce the State's reliance on fossil fuels through energy efficiency and increased renewable energy generation in exercising its authority and duties under" HRS chapter 269.

The commission's explicit consideration of these two specified factors (energy efficiency and increased renewable energy generation) provides additional support for the commission's ultimate finding that Hawaii Gas' 2018 Test Year LNG utility system capital improvements and operations costs are reasonable.

The commission, in support thereto, specifically finds and concludes:

i.

Energy Efficiency

1. According to Hawaii Gas:

A. Boilers, water heaters, and heat pumps all work in the same general fashion: gas energy is used to heat water to the desired temperature.²¹⁴

B. Over the past decade, boilers and water heaters have experienced significant increases in efficiency, and now operate at 85% to 99% efficiency.²¹⁵

C. Thus, "by simply replacing an old boiler or water heater with a new one, a customer will reduce the amount of energy required to produce the same amount of hot water or heat needed. This saves the customer money and reduces the amount of energy that needs to be produced, which reduces fossil fuel imports and therefore the overall carbon footprint of the State."²¹⁶

D. Hawaii Gas regularly meets with contractors and customers, including commercial customers, to: (i) inform and educate them on the latest developments in energy-efficient gas technologies; and (ii) assist them in the design and installation process. "In many cases, these customers can reduce the amount of

²¹⁴HG T-5, at 3.

²¹⁵HG T-5, at 3.

²¹⁶HG T-5, at 3.

gas energy used by installing new gas equipment such as tankless water heaters, boilers, heat pumps and cooking equipment that operates at higher levels of energy efficiency."²¹⁷

ii.

Increased Renewable Energy Generation

2. Hawaii Gas notes that the most common forms of renewable gas energy related to its operations are:

(A) methane derived from biogas; and (B) hydrogen.²¹⁸

3. With respect to biogas and hydrogen, Hawaii Gas explains:

Renewable methane is derived from biogas, which is most commonly produced by anaerobically digesting wastewater (sewage), farm waste, energy crops, or other organic matter. Biogas is also produced by the natural decomposition of organic matters at landfills. Biogas typically contains approximately 60% methane and 40% carbon dioxide, and can be upgraded to utility quality methane known as [RNG], which is interchangeable with Hawaii Gas' [SNG]. . . .

Renewable hydrogen is most commonly produced by using electricity to decompose water into its constituent parts of hydrogen and oxygen in a process known as electrolysis. The hydrogen can

²¹⁷HG T-5, at 3; see also HG T-1, at 3 (continued focus on energy efficiency programs to reduce greenhouse gas emissions); and HG T-2B, at 4 (informing and educating the public about the benefits of efficiency and ways to reduce consumption) and 7 (marketing and demonstrations for conservation and energy efficiency).

²¹⁸HG T-5, at 1.

then be blended with natural gas, up to certain limits, in a distribution pipeline system or used directly in a fuel cell or combustion engine. Hawaii Gas distributes SNG through its Oahu pipeline, which has historically contained 8% to 13% hydrogen by volume. Since 2000, approximately 50% of the hydrogen used to produce HG's SNG has been sourced from recycled water from the [City's] Honouliuli WWTP. In 2016, hydrogen produced from reclaimed water accounted for approximately 800,000 therms of the total feedstock used to produce SNG.

HG T-5, at 1-2 (emphasis in original); cf. HRS chapter 269, part V, Renewable Portfolio Standards (the definition of renewable electrical energy pursuant to the State's Renewable Portfolio Standards law includes "sewage-based digester gas," i.e., "biogas," and "[h]ydrogen produced from renewable energy sources").

4. Hawaii Gas' efforts to date in exploring and developing cost-effective and technically feasible sources of renewable natural gas (i.e., RNG) include:

A. The Bio-Syn Pilot Project, which utilized triglycerides as an alternative to petroleum-based feedstock and fuel (see Section II.B.1, Docket No. 2010-0334, Hawaii Gas' Bio-Synthesis Gas Pilot Project, above).

B. The Honouliuli WWTP Biogas Project, by which Hawaii Gas will purchase and purify raw biogas from the City, convert the raw biogas into nearly 100% methane (i.e., RNG), and blend and compress the RNG for injection into Hawaii Gas' existing Oahu-based SNG utility pipeline distribution system

(see Section I.B.1, Oahu, and Section II.C, Hawaii Gas' Renewable Natural Gas Project, above).

C. Working with the Hawaii Natural Energy Institute and Hawaii Center for Advanced Transportation Technology to further the development of hydrogen production and distribution.²¹⁹

D. Assessing the use of energy crops and other organic feedstocks to produce a scalable and sustainable biogas production capability in the State.²²⁰

E. Researching and assessing renewable gaseous technologies and projects throughout the world.²²¹

F. Continuing to pursue the technical feasibility of additional RNG projects capable of providing locally-sourced, cost-effective RNG.²²²

5. During the next three to five years, "Hawaii Gas will be seeking partnerships with additional WWTBs, landfills, energy crop providers, and other stakeholders to find cost-effective ways to incorporate as much biogas as it can into the utility system, . . . and explore hydrogen production, purification, and fueling alternatives."²²³

²¹⁹HG T-5, at 5.

²²⁰HG T-5, at 5.

²²¹HG T-5, at 4-5.

²²²See HG T-1, at 2-3 and 9.

Commission's Response to the Legal Arguments Raised

1. HRS § 269-6(b), by its plain language, does not mandate the commission's adoption of the Customer-Based GHGE Accounting System (i.e. CAS) described by the Participants.

2. From a constitutional perspective:

A. Consistent with Hawaii Gas' due process property interest, the increase in revenues approved by commission in this Decision and Order provides the gas utility with the opportunity to earn a fair return on its average depreciated rate base balance. Such a result, in turn, complies with: (i) HRS § 269-16(b)(3) (providing a fair return on the property of the utility used and useful for public utility purposes); and (ii) the guidelines set forth in the United Supreme Court's decisions, Bluefield Waterworks and Improvement Co. v. Pub. Serv. Comm'n, 262 U.S. 679 (1923), and Fed. Power Comm'n v. Hope Natural Gas Co., 320 U.S. 591 (1944), and the Hawaii Supreme Court's decision, In re Hawaii Elec. Light Co., Inc., 60 Haw. 625, 594 P.2d 612 (1979) (see Section II.I, Rate of Return, below, and Section II.M, Commission's Approval, below).

B. The Hawaii Supreme Court, in In re MECO, discussed: (1) the due process clause of article I, section 5 of the

²²³HG T-5, at 13.

Hawaii Constitution; and (2) article XI, section 9 of the Hawaii Constitution.²²⁴

C. Article I, section 5 of the Hawaii Constitution provides in part that "[n]o person shall be deprived of life, liberty or property without due process of law[.]"

D. Article XI, section 9 of the Hawaii Constitution states:

Each person has the right to a clean and healthful environment, as defined by laws relating to environmental quality, including control of pollution and conservation, protection and enhancement of natural resources. Any person may enforce this right against any party, public or private, through appropriate legal proceedings, subject to reasonable limitations and regulation as provided by law.

Haw. Const. art. XI, § 9.

E. The commission, in Order No. 35267, extensively discussed In re MECO, noting in part:

The Hawaii Supreme Court addressed "whether the protections of the due process clause apply to the right to a clean and healthful environment as defined by laws related to environmental quality."

The Hawaii Supreme Court held that: (1) HRS chapter 269 is a law relating to environmental quality that defines the right to a clean and healthful environment under article XI, section 9 of the Hawaii Constitution, by providing that express consideration be given to reducing greenhouse gas emissions in the commission's decision-making (specifically citing to HRS § 269-6(b)); (2) Sierra Club established a legitimate claim of entitlement to a clean and

²²⁴See Order No. 35267, at 22 (discussing In re MECO).

healthful environment under article XI, section 9 of the Hawaii Constitution and HRS chapter 269; and (3) Sierra Club's right to a clean and healthful environment is provided for in article XI, section 9 of the Hawaii Constitution and defined by HRS chapter 269.

The Hawaii Supreme Court concluded that under the circumstances:

1. The protected property interest in a clean and healthful environment asserted by Sierra Club necessitated a hearing by the commission

. . . .

12. The Hawaii Supreme Court, in In re MECO, recognized the commission's "authority to set limitations in conducting the proceedings so long as the procedures sufficiently afford an opportunity to be heard at a meaningful time and in a meaningful manner on the issue of [Maui Electric Company, Limited's amended power purchase agreement's] impact on the asserted property interest."

Order No. 35267, at 12-13 (footnotes, text, and citation therein omitted) at 46-47 (footnote and citation herein omitted).

F. Consistent with the constitutional precepts discussed in In re MECO, the Participants have been afforded an opportunity to be heard at a meaningful time and in a reasonable manner on sub-Issue No. 1h.²²⁵ Such opportunities include:

i. On February 20, 2018, the Participants jointly issued information requests to Hawaii Gas.

²²⁵Order No. 35267, at 47.

ii. On March 5, 2018, LOL filed its notice, which the commission subsequently addressed in Order No. 35346, issued on March 16, 2018.

iii. On March 21, 2018, the Participants jointly filed their direct testimonies and exhibits.

iv. On April 16, 2018 and May 10, 2018, each participant filed its respective responses to Hawaii Gas' information requests.

v. The opportunity to issue rebuttal information requests to Hawaii Gas (see e.g., Order No. 35267, at 57 and 63). (Note: None of the Participants issued rebuttal information requests to Hawaii Gas.)

vi. In lieu of prehearing statements: (1) on May 29, 2018, LOL filed a letter; and (2) on May 31, 2018, the Participants filed a joint response.

vii. On June 5, 2018, each participant attended and participated in the prehearing conference (see Order No. 35473, filed on May 21, 2018; and Order No. 35517, filed on June 7, 2018).

viii. The opportunity to file preliminary motions (see Order No. 35346, at 5-7 and 9). (Note: None of the Participants filed preliminary motions.)

ix. Participating in the evidentiary hearing, scheduled to commence on June 14, 2018 (see e.g., Notice of Evidentiary Hearing, dated May 8, 2018), which the Parties and

Participants voluntarily and knowingly waived (see written waiver executed by the Parties and Participants on June 5, 2018, during the prehearing conference).

x. The filing of post-Interim Decision and Order opening and reply briefs, which the Participants jointly filed on July 25, 2018 and August 15, 2018, respectively.

E.

Impacts of the 2017 Tax Act

To reiterate: (1) the 2017 Tax Act took effect on January 1, 2018, the first day of Hawaii Gas' 2018 calendar test year period; and (2) "the impacts of the changes in the federal tax rate due to the 2017 Tax Act . . . include reducing the federal corporate tax rate from 35% to 21%, and removing the 40% bonus depreciation on eligible 2018 plants."²²⁶

The Parties' ratemaking treatment of the impacts of the 2017 Tax Act upon Hawaii Gas' 2018 Test Year revenue requirement is reflected in their Revised Settlement Exhibit HG-350; Exhibit C, Schedule S-12; and Second Revised Settlement Exhibit F.

²²⁶Order No. 35367, at 3 (footnote and citations therein omitted) and 5.

For ratemaking purposes, the Parties agree to:

1. Treat Hawaii Gas as a stand-alone entity in calculating Hawaii Gas' federal income tax expense.²²⁷
2. Incorporate the impacts of the 2017 Tax Act in calculating Hawaii Gas' income tax expenses at present and proposed rates.²²⁸
3. Calculate the 2017 Tax Act benefit for ratepayers under current rates by "using the normalized data divided by 365, providing a daily impact."²²⁹
4. Utilize "HG's Test Year projection to determine the tax benefit up to the point where interim rates are approved by the Commission."²³⁰

Accordingly:

As a result, the Parties agreed that the total impact of the 2017 Tax Reform Act on HG's revenue requirement is \$2,303,147. See Exhibit C, Schedule S-12. With respect to the refund due to customers as a result of the 2017 Tax Reform Act, the Parties agreed to the amount of \$113,965, as set forth in **Revised Exhibit F.**

²²⁷Stipulation, Section III.D.13.b, Federal Income Taxes, at 53-54 (citing Revised Settlement Exhibit HG-350).

²²⁸Stipulation, Section III.D.13.d, 2017 Tax Cuts & Jobs Act, at 55-56.

²²⁹Stipulation, at 56.

²³⁰Stipulation, at 56.

Stipulation, at 56 (boldface in original); but see Second Revised Exhibit F, filed by Hawaii Gas on August 14, 2018 (Second Revised Exhibit F incorporates the correct refund amount of \$101,339).

5. Specific average depreciated rate base balances for accumulated deferred income taxes ("ADIT") and regulatory liability resulting from the 2017 Tax Act, respectively. Both balances, in turn, reduce Hawaii Gas' overall Test Year average depreciated rate balance:

(1) an updated [year-end] Test Year ADIT balance of \$23,714,287 (see Revised Settlement Exhibit HG-350); (2) regulatory liability resulting from the 2017 Tax Reform Act in the amount of \$18,483,336, with \$13,667,318 representing the actual year-end 2017 ADIT reduction, and \$4,816,018 representing the gross-up to keep ratepayers whole as HG amortizes the credit back to them; and (3) the unprotected portion of the regulatory liability to flow back to ratepayers in the amount of \$3,307,512.

. . . .

[T]he Parties have agreed to a five-year amortization period for HG's unprotected regulatory liability total of \$3,307,512.

Stipulation, at 57 (boldface in original); see also Stipulation, Section III.D.13.e.ii, ADIT Errata, at 58 (identifying the updated year-end Test Year ADIT balance of \$23,714,287) (citing Stipulation, Exhibit B, Schedules HGSR-B8 and HGSR-B9); and CA-T-1, at 71 (protected regulatory liability refers to the deferred taxes associated with plant and depreciation to be returned over the life of the asset so as to purportedly not create

a normalization violation; conversely, the unprotected regulatory liability is the more rapid return amount associated with other tax timing differences such as bad debts, compensation, etc.).

The commission finds reasonable the Parties' ratemaking treatment.

In support thereto, the commission specifically finds and concludes:

1. On January 4, 2018, three days after the 2017 Tax Act took effect, the Consumer Advocate diligently sought to ensure that ratepayers realize the benefits associated with the revisions to the federal Tax Code by issuing its first of several sets of information requests in this regard.

2. On January 29, 2018, Hawaii Gas, in response to CA-IR-193, stated its intent to:

- A. Propose that the specific ratepayer benefits resulting from the 2017 Tax Act, including any "flow-back" to ratepayers, be determined in the subject 2018 test year rate case; and

- B. Immediately establish deferred regulatory accounting practices to record the differences resulting from the 2017 Tax Act and what would have been recorded if the Act had not

been enacted, until such time the commission chose to adjudicate the impacts of the 2017 Tax Act upon Hawaii Gas.²³¹

3. Consistent with the Consumer Advocate's objective and Hawaii Gas' stated intent, the Parties' comprehensive ratemaking treatment is designed to "flow-back" to ratepayers the benefits resulting from the impacts of the 2017 Tax Act upon Hawaii Gas' 2018 Test Year revenue requirement.²³²

4. Concomitantly, until the commission ultimately adjudicates said impacts by way of its Decision and Order issued today, the commission, in Interim Decision and Order No. 35550, authorized Hawaii Gas to proceed with the stipulated proposal to refund to ratepayers \$113,965. Subsequently, by Second Revised Exhibit F, filed on August 14, 2018, Hawaii Gas corrects this refund amount to \$101,339.

5. The corrected refund amount of \$101,339 is based on the six-month period from January 1, 2018, the effective date of the 2017 Tax Act, to June 30, 2018, the day before the July 1, 2018, effective date of Hawaii Gas' commission-approved interim rates.²³³

²³¹See HG's response to CA-IR-193 (01/29/18); and Docket No. 2018-0012, Order No. 35241, at 5-7.

²³²See Stipulation, at 55 (flowing-back to customers the specific benefits resulting from the 2017 Tax Reform Act, citing HG's response to CA-IR-193 (01/29/18)) and 57 (keeping ratepayers "whole").

²³³Second Revised Settlement Exhibit F.

6. The Parties represent that their refund methodology is "similar to" the commission-approved refund methodology HECO utilized in its 2017 test year rate case.²³⁴ See In re Hawaiian Elec. Co., Inc., Docket No. 2016-0328, Order No. 35372, filed on March 29, 2018.

7. Interim D&O No. 35550, Ordering Paragraph No. 5, states:

Hawaii Gas shall file a report confirming its completion of refunding to ratepayers the \$113,965 attributable to the impact of the 2017 Tax Act for the six-month period from January 1, 2018 to June 30, 2018. Unless instructed otherwise, the report shall be due within fifteen calendar days following Hawaii Gas' completion of said refund.

Interim Decision and Order No. 35550, Ordering Paragraph No. 5, at 81-82.

8. On November 15, 2018, Hawaii Gas filed its report: (A) confirming its completion of refunding to ratepayers approximately \$102,289, attributable to the 2017 Tax Act, for the six-month period from January 1, 2018 to June 30, 2018; and (B) noting that said amount represents an overpayment of \$950 (\$102,289 - \$101,339 = \$950).

²³⁴Stipulation, at 56.

F.

Revenues at Present Rates

The Parties stipulate to total revenues of \$106,029,913 at present rates, consisting of:

Gas sales revenues	\$104,779,740
Other revenues	<u>\$1,250,172</u>
Total revenues	\$106,029,913

See Stipulation, Revised Settlement Exhibit HG-350, at 8.

1.

Gas Sales Revenues

Hawaii Gas' "sales and customer forecast estimates project the anticipated utility gas therm sales to HG's customers in Test Year 2018."²³⁵

The Parties' stipulated amount for gas sales revenues at present rates is based on the following estimates: (1) 35,188 Test Year customers; and (2) Test Year gas sales of 36,083,246 therms.²³⁶ Said amounts, in turn, incorporate the estimates in Hawaii Gas' Revised Exhibits HG-201 and HG-240,

²³⁵HG T-2, at 4.

²³⁶See Stipulation, Third Revised Exhibit HG-240.

as updated on February 14, 2018,²³⁷ and as adjusted downward by approximately \$5,585 based on Hawaii Gas' Test Year fuel costs.²³⁸

The commission finds reasonable the stipulated amount of \$104,779,740 in gas sales revenues at present rates.

2.

Other Revenues

Hawaii Gas' other revenues consist of revenues generated from: (1) finance charges, i.e., interest charges to customers for past due bill payments (Account 487); (2) miscellaneous service, including connection and reconnection service fees (Account 488); (3) the sale of residuals from Hawaii Gas' SNG Plant (Account 731); and (4) the utility/non-utility cost allocation of intracompany rent revenue (Account 493).²³⁹

²³⁷Stipulation, at 19-20 (citing HG's second supplemental response to CA-IR-202, Revised Exhibit HG-201 (02/14/18)).

²³⁸Compare HG's second supplemental response to CA-IR-202, Revised Exhibit HG-240 (02/14/18) (HG's estimated gas sales revenues of \$104,785,325) with Stipulation, Third Revised Exhibit HG-240 (stipulated gas sales revenues of \$104,779,740). See also Stipulation, at 19 (due to changes to HG's Test Year fuel costs, HG's Test Year gas sales revenues at present rate has been slightly adjusted downward to \$104,779,740).

²³⁹HG T-2, at 16; Exhibit HG-241; HG T-10, at 9-10; HG T-6, at 57; HG T-3, at 83-84; and Stipulation, Section III.C.3, Other Revenues, at 20-22.

The stipulated sum of \$1,250,172 in other revenues at present rates consists of:

<u>Account No.</u>	<u>Present Rates</u>	
487	\$54,041	
488	\$230,233	\$257,930*
731	\$698,978	
493	<u>\$266,921</u>	
Total	\$1,250,172	

*By this Decision and Order, the commission approves as just and reasonable the stipulated revisions to: (1) Tariff Rule No. 7(J), reconnection service charge; and (2) Tariff Rule No. 14(H), service connection maintenance and facilities on customer's premises. See Section II.L.2, Other Tariff Changes, below. Based on said approval, the Parties forecast an increase in miscellaneous service revenues (i.e., Account No. 488) of \$27,697 ($\$230,233 + \$27,697 = \$257,930$) under proposed rates.

See Stipulation, at 21, n.6; and Section III.C.3.c, Other Revenues, at 22.

The Parties' stipulated amounts for other revenues at present rates are based on Hawaii Gas' estimates for each account, as set forth in the direct testimonies of its Application.²⁴⁰

The commission finds reasonable the stipulated:
(1) sum of \$1,250,172 in other revenues at present rates;
and (2) increase in miscellaneous service revenues of \$27,697 under proposed rates.

²⁴⁰HG T-2, at 16; Exhibit HG-241; HG T-10, at 9-10 (Accounts No. 487 and No. 488); HG T-6, at 57 (Account No. 731); and HG T-3, at 83-84 (Account No. 493).

G.

Expenses at Present Rates

The Parties stipulate to total expenses of \$103,005,671 at present rates, consisting of:

Operations and maintenance ("O&M") expenses

Fuel	\$55,008,654	
Production	\$8,690,269	
Transmission	\$294,870	
Distribution, Local Storage, and Customer Service	\$7,713,687	
Customer Accounts (including uncollectible accounts)	\$1,834,884	\$1,844,610*
Sales and Marketing	\$1,124,390	
Administrative and general	<u>\$10,346,553</u>	
	\$85,013,307	

Non-O&M expenses

Depreciation	\$6,115,077	
Amortization of contributions-in-aid-of construction (\$225,569)		
Rate-making adjustments	\$898,984	
Interest on customer deposits	\$53,598	
Taxes other than income taxes	\$10,994,610	\$11,783,720*
Income taxes	<u>\$155,664</u>	<u>\$2,241,479*</u>
	\$17,992,364	
Total expenses	\$103,005,671	\$105,890,321*

*Reflects amounts under proposed rates for customer accounts, taxes other than income taxes, and income taxes, respectively.

See Stipulation, Revised Settlement Exhibit HG-350, at 8.²⁴¹

²⁴¹But see HG T-3, at 26-27 (O&M comprises all operating expenses, excluding fuel expenses and depreciation and amortization expenses and taxes); HG T-3, at 78-79 and 82 (referring to total O&M expenses, excluding fuel costs); and Exhibits HG-315 and HG-317

The commission first discusses the following expense-related matters referenced in the Stipulation:

- (1) the allocation/apportionment of Hawaii Gas' expenses/costs;
- (2) payroll-related expenses; and (3) Errata Items and O&M Updates.

The commission then discusses Hawaii Gas' O&M expenses (fuel; production; transmission; distribution, local storage, and customer service; customer accounts; sales, and administrative and general), followed by its non-O&M expenses (depreciation; amortization of contributions-in-aid-of-construction; ratemaking adjustments; interest on customer deposits; taxes other than income taxes; and income taxes).

1.

Allocation/Appportionment of Expenses/Costs

Hawaii Gas engages in: (1) regulated (i.e., utility) gas operations; and (2) non-regulated (non-utility) gas operations.²⁴²

Hawaii Gas' policies, practices, and procedures for recording expenses between its utility and non-utility gas business segments and between the regulated Oahu and neighbor island divisions (i.e., allocating or apportioning costs) are set forth in its cost allocation manual (also known as "CAM"), a copy

(total Test Year O&M expenses do not include fuel expenses). Contra Stipulation, at 25 (referring to O&M fuel cost expense).

²⁴²Application, at 3-4; HG T-8, at 2; and HG T-9, at 1-2.

of which is attached as Confidential Exhibit HG-334 (10/12/17) to its Application.

Hawaii Gas' cost allocation manual is organized into five sections, described as follows:

Overview: includes a description of purpose, policy, terminology and procedures governing the CAM document and provides an overview of the [MIC] and Hawaii Gas corporate structure and affiliates for whom the CAM applies.

Labor Costs: provides guidelines on the allocations of shared labor costs and ensures costs are recorded and reported to reflect the activities and business segments directly benefiting from work performed. A description of any pooled cost allocation methodologies in use is provided.

Non-Labor Costs: provides applicable methodologies for the allocation of non-labor costs associated with the provision of shared services, as well as a description of any pooled cost allocation methodologies in use.

Allocation of Centralized Utility Costs: provides the policies and guidelines concerning the allocation of centralized utility administration costs to the Neighbor Island operations. A definition of how the four-factor allocation methodology is calculated and applied is included in this section[, below].

Other: provides the policies and procedures to ensure proper accounting for shared capital assets and related expenses; non-tariffed products and services and, propane transport and handling.

. . . .

For each HG internal cost center, the CAM describes the services provided and the

apportionment methodologies used. For those costs requiring a second step allocation to apportion costs among the regulated utility divisions, the CAM describes the use and calculation of the four-factor allocation methodology used[.]

HG T-3, at 76-77 (emphasis added).

Hawaii Gas' methodologies in allocating expenses between its utility and non-utility business segments are described as follows:

HG directly charges expenses to either the utility and non-utility operations whenever possible. When this is not feasible, HG uses a combination of methods to assign or allocate expenses between its utility and non-utility operations. These are described in further detail in the CAM and summarized in the table below.

<u>Description</u>	<u>How Allocated</u>
Salaries and wages - time worked	Positive time reporting where practical. If allocations are required, they are based on department historical wage distributions, or empirical factors such as the number of customer contacts or service orders experienced over a period of time. In addition, time worked on other MIC affiliates is tracked separately from HG's expenses. Such time worked, if not reimbursable to HG, is not recorded to utility expense accounts.
Salaries and wages - sick, vacation, or non-worktime	Allocated based on historical wage distribution or on empirical factors.

Expenses other than salaries and wages

Direct assignment where possible. Allocation based on empirical factors otherwise.

Plant in Service

Asset property records are assigned to either utility or non-utility, i.e. they are not split. The value of shared assets is recognized by cross charging an intracompany rent comprised of an allowable rate of return x asset value, plus pro-rata depreciation expense. Some facility [utility/non-utility] splits are based on space utilization studies.

Shared facility expenses

Expenses are recorded to the division to which the shared facility is assigned, then a pro-rata share based on space utilization is allocation to the other division(s).

HG T-3, at 80.

Hawaii Gas, moreover, utilizes the following four-factor methodology to allocate certain executive and corporate costs between its utility and non-utility operations and apportion regulated utility costs between Oahu and the neighbor islands: gross plant, number of customers, direct labor, and total O&M expenses (excluding fuel costs), which are equally weighed.²⁴³

²⁴³HG T-3, at 78-79 and 82-84; see also HG T-4A, at 7-9 (MIC's costs are allocated between the utility and non-utility business segments pursuant to the four-factor allocation methodology that is used to apportion certain costs amongst the utility and

Lastly, Hawaii Gas' CAM also describes practices related to: (1) the cost of services provided by MIC and its affiliates to Hawaii Gas; and (2) services provided by Hawaii Gas to non-Hawaii Gas affiliates. Said charges, in turn, "are based on direct charging or specific time reporting."²⁴⁴

The Parties stipulate to utilizing Hawaii Gas' CAM and four-factor allocation methodology in allocating/apportioning Hawaii Gas' shared expenses/costs.²⁴⁵

The commission, in response, notes:

1. The stated objective of the CAM is to lessen the possibility of cross-subsidization between Hawaii Gas' utility and non-utility operations while providing flexibility to accommodate exceptions whenever unique circumstances indicate that variances will be in the best interests of Hawaii Gas' customers and businesses as a whole. Should such circumstances arise,

non-utility operations and amongst the islands) (MIC's costs are part of Hawaii Gas' overall A&G expenses in Account 930, Miscellaneous).

²⁴⁴HG T-3, at 77-78; see also HG T-4A, at 7 (MIC's costs related to Hawaii Gas are determined by either direct charging of costs incurred solely for Hawaii Gas or through time reporting by MIC personnel working on TGC matters).

²⁴⁵Stipulation, Section III.D.7.d.ii, Cost Allocation Manual and Four-Factor Methodology, at 35-36.

the variance and the reason for the variance must be fully documented, supported, and approved by Hawaii Gas' controller.²⁴⁶

2. Ordering Paragraph No. 1(a) of the commission's Decision and Order No. 19386, issued on May 31, 2002, in In re Citizens Comm. Co., dba The Gas Co., Docket No. 00-0309, TGC's 2001 test year rate case, states:

Beginning April 1, 2003, TGC shall submit annual reports to the commission and the Consumer Advocate of its annual internal audits of its compliance with the CAM.

See Docket No. 00-0309, Decision and Order No. 19386, filed on May 31, 2002, Ordering Paragraph No. 1(a), at 17; and Order Approving Motion to Modify Annual Audit Report Filing Deadline, filed on September 16, 2010.

3. Beginning from April 1, 2003, TGC has submitted to the commission and the Consumer Advocate, in Docket No. 00-0309, the results of its internal audit, confirming its compliance with the CAM. On July 2, 2018, Hawaii Gas submitted its most recent results to the commission and the Consumer Advocate.²⁴⁷

²⁴⁶By this Decision and Order, the commission publicly discloses this portion of Confidential Exhibit HG-334 (10/12/17), at 4.

²⁴⁷See Docket No. 00-0309, HG's 2018 Annual Audit of Compliance with 2017 CAM, filed on July 2, 2018.

The commission finds reasonable the Parties' agreement to utilize Hawaii Gas' CAM and four-factor allocation methodology in allocating/apportioning Hawaii Gas' shared expenses/costs.

2.

Payroll-Related Expenses

Hawaii Gas "groups" O&M expenses within each of its departments into four categories:²⁴⁸

1. Labor (i.e., payroll), which includes salaries and wages, and employee pension and benefits.

2. Non-labor, which constitute expenses that are overseen by the manager of each department.

3. Clearing accounts, which are expenses that are collected into a cost pool and allocated to the beneficiary departments within Hawaii Gas. Stated differently, clearing account expenses "are accumulated expenses that are allocated to the accounts of the beneficiary O&M function, as is managed under" Hawaii Gas' CAM. In effect, "[t]he nature of the expenses accounted for in clearing accounts is that they are shared or centralized in some manner, benefit multiple departments of the company and therefore need to be allocated."²⁴⁹

²⁴⁸See HG T-3, at 26-30, Labor Overview, at 56-67, Clearing Accounts and CWIP Credits, at 67-72, and Clearing Accounts, at 84-87.

²⁴⁹HG T-3, at 67.

4. Construction work in progress credits, which constitute a portion of overhead expenses that are allocated to and capitalized with expenditures on construction work in progress ("CWIP") that eventually become plant-in-service. In other words:

CWIP is "construction work in progress," which reflects the current amount of expenditures in capital projects that are in the process of being constructed before being placed in to service. A portion of O&M expenses are capitalized as overhead on top of direct CWIP expenditures. These amounts are represented as a credit to O&M expenses and expressed as a negative figure.

. . . .

CWIP credits to expense represent the amount of overhead expenses capitalized to work in progress. If the credits were not deducted from operating expenses, HG would be getting recovery on this CWIP amount as expenses, which it is not entitled to under current ratemaking guidelines.

HG T-3, at 71-72.

For the labor category, the Parties stipulate to utilizing a 3.65% employee vacancy rate in calculating Hawaii Gas' payroll-related expenses.²⁵⁰ Their agreed-upon 3.65% employee vacancy rate, in turn, is based on the average employee vacancy rate for the six years between 2012 and 2017.²⁵¹

²⁵⁰Stipulation, at 44.

²⁵¹HG RT-3, at 6-7 (citing Confidential/Restricted Attachment 2, CA-IR-171 (04/30/18)).

The Parties' application of their agreed-upon 3.65% employee vacancy rate results in downward adjustments to Hawaii Gas' Test Year expenses for production; distribution, local storage, and customer service; customer accounts; sales and marketing; and administrative and general; payroll taxes; and employee benefits.²⁵²

3.

Errata Items and O&M Updates

On February 14, 2018, Hawaii Gas filed its second supplemental response to CA-IR-202, incorporating certain corrections and updates to its Application.

As a result, the Parties agree to:

1. Incorporate in their Stipulation:
 - A. Hawaii Gas' actual recorded results for 2017;
 - B. Changes due to the 2017 Tax Act; and
 - C. Corrections to insurance expense (see Stipulation, Exhibit C, Schedule HG-1E), fuel forecast subscription (see Stipulation, Exhibit C, Schedule S-2C), outside legal expense

²⁵²Stipulation, at 44-45 (citing HG RT-3, Exhibit HG-RT-301, Schedule A; and Stipulation, Exhibit C, Schedule S-3).

(see Stipulation, Exhibit C, Schedule S-2E), and intracompany rent (see Stipulation, Exhibit C, Schedule S-2F).²⁵³

2. Exclude from their Stipulation certain other corrections and updates, including "increases to medical premium insurance costs and the Pier 38 lease in the Test Year, and the Strategic Supply expense that was inadvertently not included in HG's budgeting process, which are all reflected as disallowed expenses in Exhibit C, Schedules S-2A, 2B, and 2D, respectively."²⁵⁴

The Parties refer to their agreed-upon inclusion and exclusion of the subject corrections and updates collectively as the "Errata Items and O&M Updates."

The Parties' agreed-upon Errata Items and O&M Updates, in turn, apply to the Parties' calculation of Hawaii Gas' O&M expenses for production; distribution, local storage, and customer service; and administrative and general.²⁵⁵

²⁵³Stipulation, Section III.D.7.i, Errata Items and O&M Updates, at 40-43.

²⁵⁴Stipulation, at 43.

²⁵⁵See Stipulation, at 41-43 (citing Exhibit C, Schedules S-2C, S-2E, and S-2F).

4.

Fuel

Fuel expense includes the costs of the naphtha feedstock and fuels used to:

1. Supply gas from the SNG Plant, which primarily consists of naphtha feedstock from SNG production and LNG from the 30% Conversion Project;

2. Supplement SNG Plant supply (i.e., Propane-Air and LNG) at Hawaii Gas' Pier 38 facility;

3. Supply RNG from the Honouliuli WWTP Biogas Project, based on an anticipated start-up date of November 2018; and

4. Supply LPG for utility customers.²⁵⁶

Hawaii Gas' "[t]est year fuel forecast is based primarily on the forecasted Test Year gas sales, which is used to calculate the required fuel quantities of naphtha feedstock (for firm and interruptible load), LNG, RNG and LPG."²⁵⁷

Accordingly, the stipulated amount of \$55,008,654 for fuel expense at present rates is based on: (1) Hawaii Gas' Test Year forecasted gas sales of 36,083,246 therms;

²⁵⁶HG T-3, at 15-16; and HG T-8, at 10-11 and 13-14.

²⁵⁷Stipulation, at 23 (citing HG T-8, at 11).

and (2) the updated LPG Transfer Fee, as reflected in Hawaii Gas' LPG Transfer Study.²⁵⁸

The commission finds reasonable the stipulated amount of \$55,008,654 for fuel expense at present rates.

(Note: The updated LPG Transfer Fee is \$1,694,298, of which: (1) the non-variable portion of \$1,284,284, will continue to be recovered through base rates as part of Hawaii Gas' fuel expense; and (2) the variable portion of \$410,014, will be recovered as a direct pass through to ratepayers as part of Hawaii Gas' "existing" FAC.²⁵⁹ See Section II.L.1, Fuel Adjustment Clause, below.)

²⁵⁸Stipulation, Section III.D.1, Fuel Cost, at 23-25 (citing Second Revised Exhibit HG-801a; and Revised Exhibit C, Schedules S-101 and Schedule S-11).

²⁵⁹HG T-8, at 35-36; and Stipulation, Section III.D.1.a, LPG Transfer Charges, at 24-25 (citing Confidential Second Revised Exhibit HG-1307); and Section III.E.1, LPG Transfer Costs in the FAC, at 59-61 (citing Confidential Second Revised Exhibit HG-1307; and Confidential/Restricted Third Revised Exhibits HG-813 and HG-817).

Production

Hawaii Gas' Oahu Division's production operations consist of two components:

1. Steam production, which covers all processes related to the production of the steam used in the SNG manufacturing process; and

2. Manufactured gas production, which covers all processes involved in the production of SNG.²⁶⁰

Hawaii Gas' production expense, in turn, includes "all of the utility non-labor expenses and credits involved in managing, operating and maintaining the [SNG] Plant, as well as HG's Propane-Air Backup System and Backup Enhancement System at Pier 38, with the exception of the feed and fuel stream expenses."²⁶¹

The stipulated amount of \$8,690,269 for production expense at present rates is based on Hawaii Gas' initial estimate as set forth in its Application, as adjusted downward by the Parties' agreed-upon: (1) 3.65% employee vacancy rate;

²⁶⁰HG T-6, at 53-54.

²⁶¹HG T-6, at 53.

(2) applicable Errata Items and O&M Updates; and (3) two months of production expense for the Honouliuli WWTP Biogas Project.²⁶²

(Note: The other ten months of production expense for the Honouliuli WWTP Biogas Project is reflected as a normalization adjustment of the annualized production expense amount, i.e., the annual impact of the production expense associated with said project. See Section II.G.13, Ratemaking Adjustments, below.)

The stipulated production expense amount, in turn, includes Hawaii Gas' SNG Plant electricity cost of \$1,686,792 at 8,064,458 total kWh, for a rate of \$0.2092/kWh.²⁶³

The commission finds reasonable the stipulated amount of \$8,690,269 for production expense at present rates.

6.

Transmission

Hawaii Gas' transmission expense includes:

1. Operational expenses, including the "non-labor costs to support activities such as transmission pipeline and

²⁶²Stipulation, Section III.D.2, Production Non-Fuel O&M Expenses, at 25-26 (citing Revised Exhibit C, Schedule S-101, at 1 and 5), and Section III.F.1.b, Honouliuli WWTP Biogas Project, at 64-66.

²⁶³Stipulation, at 26 (citing Application, Exhibit HG-609) and 62 (citing Application, at HG-609).

valve inspections, communications (remote pressure readings, remote valve operations, etc.), operations, and rent[;]" and

2. Maintenance expenses, including the "non-labor costs to support activities, such as integrity assessments and remediation of pipeline anomalies, maintenance and repairs related to transmission pipeline, valves, communications equipment, and security monitoring."²⁶⁴

The stipulated amount of \$294,870 for transmission expense at present rates is based on Hawaii Gas' initial estimate as set forth in its Application, as adjusted downward due to Hawaii Gas' correction to its insurance expense amount.²⁶⁵

The commission finds reasonable the stipulated amount of \$294,870 for transmission expense at present rates.

7.

Distribution, Local Storage, and Customer Service

Hawaii Gas' distribution expense includes:

1. Operational expenses, including the non-labor costs to support activities such as distribution pipeline inspections,

²⁶⁴HG T-7, at 13.

²⁶⁵Stipulation, Section III.D.3, Transmission Expense, at 26-27 (citing HG's second supplemental response to CA-IR-202, Revised Attachment 1 and Confidential Attachment 2 (02/14/18); and Stipulation, Revised Exhibit C, Schedule S-101, at 1 and 5).

patrolling, emergency response, meter and regulator-related activities, customer installations, relocations, connects, disconnects, reconnects, security, and rent;²⁶⁶ and

2. Maintenance expenses, including the non-labor costs to support activities such as maintenance and repairs related to distribution facilities.²⁶⁷

Hawaii Gas' local storage expense includes the non-labor costs to support operations and maintenance activities related to the utility LPG storage tanks, holders, and storage-related facilities.²⁶⁸

(Note: Because the "Molokai and Lanai utility systems do not have major local utility storage tanks or a base yard interconnected to either the Molokai or Lanai harbor[,] . . . there are no local storage expenses for Molokai and Lanai."²⁶⁹)

²⁶⁶HG T-7, at 14 (Oahu Division); and HG T-9, at 12 (Neighbor Island Divisions).

²⁶⁷HG T-7, at 14 (Oahu Division); and HG T-9, at 12 (Neighbor Island Divisions).

²⁶⁸HG T-7, at 12 (Oahu Division); and HG T-9, at 10 (Neighbor Island Divisions).

²⁶⁹HG T-9, at 10.

Hawaii Gas' customer service expense includes the non-labor costs for customer assistance, informational advertising, and miscellaneous expenditures.²⁷⁰

The stipulated sum of \$7,713,687 for distribution, local storage, and customer service expense at present rates is based on Hawaii Gas' initial estimate as set forth in its Application, as adjusted downward by: (1) Hawaii Gas' corrections to its insurance expense and intracompany rent amounts, respectively (i.e., two components of the Parties' agreed-upon Errata Items and O&M Updates); and (2) the Parties' agreed-upon 3.65% employee vacancy rate.²⁷¹

The commission finds reasonable the stipulated sum of \$7,713,687 for distribution, local storage, and customer service expense at present rates.

²⁷⁰HG T-7, at 2, 4, and 9 (Oahu Division); and HG T-9, at 13 (Neighbor Island Divisions).

²⁷¹Stipulation, Section III.D.4, Distribution, Local Storage and Customer Service Expense, at 27-28 (citing HG's second supplemental response to CA-IR-202, Revised Attachment 1 and Confidential Attachment 2 (02/14/18); and Stipulation, Revised Exhibit C, Schedule S-101, at 1 and 5).

Customer Accounts
(including uncollectible accounts)

Customer accounts expense includes the non-labor costs for: (1) meter reading; (2) customer billing, accounts, records, deposits, and bill payments; (3) the supervision of meter reading, customer billing, the call center, cashier, and collection activities; and (4) uncollectible accounts.²⁷²

Hawaii Gas' methodology for calculating its uncollectible accounts expense amounts at present and proposed rates, in turn, is as follows:

HG estimated its Test Year 2018 uncollectible expense by taking its average accounts written off net of recoveries as a percent of revenue during the last eight-year period. This ratio is then applied to the forecast of Test Year 2018 revenues at [present] rates and proposed rates to arrive at the uncollectible expense estimate for the test year.

HG T-3, at 32 (citing Workpaper HG WP-306).

The stipulated amount of \$1,834,884 for customer accounts expense at present rates is based on Hawaii Gas' initial estimate as set forth in its Application, as adjusted downward by:

²⁷²HG T-10, at 1, 4, and 5-9 (Oahu Gas Division); and HG T-9, at 12-13 (Neighbor Island Divisions).

(1) Hawaii Gas' correction to its insurance expense amount; and (2) the Parties' agreed-upon 3.65% employee vacancy rate.²⁷³

Meanwhile, the stipulated amount of \$1,844,610 for customer accounts expense at proposed rates is based on an additional \$9,725 in uncollectible accounts expense, calculated by applying Hawaii Gas' above-described methodology (see HG T-3, at 32).

The commission finds reasonable the stipulated amounts of \$1,834,884 and \$1,844,610 for customer accounts expense, at present and proposed rates, respectively.

9.

Sales and Marketing

According to Hawaii Gas:

The primary function of the Sales & Marketing Department is to provide customer support (i.e., process new service orders, negotiate line extensions and distribute required utility information), promote conservation and energy efficiency, increase customer loyalty, and assist customers with their gas-related needs.

HG T-2B, at 5.

²⁷³Stipulation, Section III.D.5, Customer Accounts Expense, at 28-29 (citing HG's second supplemental response to CA-IR-202, Revised Attachment 1 and Confidential Attachment 2 (02/14/18); and Stipulation, Revised Exhibit C, Schedule S-101, at 1 and 5).

Sales and marketing expense includes the non-labor costs: (1) to promote conservation and energy efficiency through various methods, including advertising, marketing, demonstrations, and credits/rebates; (2) in developing sales forecasts; and (3) associated with supervising and supporting the Sales & Marketing Department.²⁷⁴

The stipulated amount of \$1,124,390 for sales and marketing expense at present rates is based on Hawaii Gas' initial estimate as set forth in its Application, as adjusted downward by: (1) Hawaii Gas' correction to its insurance expense amount; and (2) the Parties' agreed-upon 3.65% employee vacancy rate.²⁷⁵

In addition, Hawaii Gas states that: (1) it is not seeking to recover from ratepayers its promotional expenses to increase gas sales; thus (2) its promotional expenses for ratemaking purposes is \$0; and (3) its non-recovery of such expenses is consistent with its prior agreement with the Consumer Advocate in Docket No. 2008-0081, Hawaii Gas' 2009 test year rate case, to disallow promotional expenses to increase gas sales.²⁷⁶

²⁷⁴See HG T-2B, at 5-8.

²⁷⁵Stipulation, Section III.D.6, Sales & Marketing Expenses, at 29-30 (citing HG's second supplemental response to CA-IR-202, Revised Attachment 1 and Confidential Attachment 2 (02/14/18); and Stipulation, Revised Exhibit C, Schedule S-101, at 1 and 5).

²⁷⁶HG T-2B, at 8.

The commission finds reasonable the stipulated amount of \$1,124,390 for sales and marketing expense at present rates.

10.

Administrative and General

Administrative and general expense includes:

(1) salaries and wages for administrative and general employees that are not directly charged to a particular operating function; and (2) the non-labor office, outside services, insurance (including property; terrorism; general, financial, and general liability), pension and benefits, rate case (i.e., regulatory), miscellaneous (including MIC corporate allocated costs and Hawaii Gas' board of directors' fees, and external dues and memberships), and rental expenses.²⁷⁷

The stipulated amount of \$10,346,553 for administrative and general expense at present rates is based on Hawaii Gas' initial estimate as set forth in its Application, as adjusted downward by Hawaii Gas' correction to its insurance expense and outside legal expense amounts, respectively (i.e., two components of the Parties' agreed-upon Errata Items and O&M Updates),

²⁷⁷HG T-3, at 33-40 and 56-67; and Exhibits HG-301 and HG-319 to HG-323, Confidential Exhibit HG-328, and Exhibits HG-329 to HG-331.

the Parties' agreed-upon 3.65% employee vacancy rate, and other areas of compromise.²⁷⁸ Specifically:

1. Fifty percent of directors' and officers' liability insurance expense of \$46,488, in the stipulated amount of \$23,244.²⁷⁹

2. Rate case expense of \$1,400,000, amortized over four years, at \$350,000 per year.²⁸⁰

3. Fifty percent of the adjusted MIC corporate allocated costs of \$955,789, in the stipulated amount of \$477,894.²⁸¹

4. Seventy-five percent of board of directors' fees.²⁸²

5. Intracompany rent expense of \$43,903.²⁸³

²⁷⁸See Stipulation, Section III.D.7, Administrative & General Expenses, at 30-43, and Section III.D.8, Payroll (and related Payroll Tax and Benefits), at 43-45.

²⁷⁹Stipulation, Section III.D.7.f, Directors & Officers Insurance, at 37-38 (citing Exhibit C, Schedule S-7).

²⁸⁰Stipulation, Section III.D.7.c, Regulatory Expenses, at 33-34 (citing Exhibit C, Schedule S-5).

²⁸¹Stipulation, Section III.D.7.b, MIC Costs, at 30-33 (citing HG's response to CA-RIR-6(c) (05/23/18); and Exhibit C, Schedule S-9).

²⁸²Stipulation, Section III.D.7.g, Board of Directors Fees, at 38-39 (citing Exhibit C, Schedule S-7).

²⁸³Stipulation, Section III.D.7.d.i, Intracompany Rent Expense, at 34-35 (citing HG T-3, at 80-84; and Stipulation, Confidential Exhibit C, Revised Schedule S-101, at 1).

6. Exclusion of: (A) increases to medical premium insurance costs and the Pier 38 lease;²⁸⁴ (B) incentive compensation expense;²⁸⁵ and (C) social club and health club fees.²⁸⁶

The stipulated amount also:

1. Includes the allocated utility portion of Hawaii Gas' pension expense, as identified in the Application;²⁸⁷ and

2. Excludes Hawaii Gas' lobbying expenses and charitable contributions.²⁸⁸

The commission finds reasonable the stipulated amount of \$10,346,553 for administrative and general expense at present rates.

²⁸⁴Stipulation, Other Errata Items and O&M Updates, at 43 (citing Exhibit C, Schedules S-2A, 2B, and 2D).

²⁸⁵Stipulation, Section III.D.7.e, Incentive Compensation, at 36-37 (citing Exhibit C, Schedules S-1 and S-4).

²⁸⁶Stipulation, Section III.D.7.h, Health Club Fees, at 40 (citing Exhibit C, Schedule S-6).

²⁸⁷Stipulation, Section III.D.7.a, Pension Expense, at 30 (citing Exhibit HG-330; CA-T-1, at 47; and Stipulation, Confidential Exhibit C, Revised Schedule S-101).

²⁸⁸See HG T-3, at 35 and 46; and Exhibit HG-320.

Depreciation

As Hawaii Gas explains, its methodology for calculating depreciation expense is as follows:

HG uses group depreciation by asset class on its utility gas plant assets. General plant assets, structures and power operated equipment are depreciated individually using straight line methods and the remaining general plant assets are amortized. HG employs depreciation and amortization rates approved in its Test Year 2001 rate case, Docket No. 00-0309. All depreciation and amortization rates are on a straight-line basis.

. . . .

Group depreciation expense is calculated as the acquisition cost of a total asset class multiplied by the appropriate depreciation rate. The calculation is done this way even when one or more individual assets within the class have aged beyond their depreciable life. As long as the net book value of the entire asset class is a positive amount then depreciation will be calculated in this manner. When the net book value of the total asset class reaches zero, then depreciation ceases unless and until a new asset is added.

General plant assets are depreciated or amortized on an individual asset basis, using the straight-line rates approved in HG's Test Year 2001 rate case, Docket No. 00-0309. Depreciation on a new asset begins in the month that the asset is placed into service. A full month's depreciation is taken regardless of which day of the month it is placed into service.

HG T-3, at 41.

The stipulated amount of \$6,115,077 for depreciation expense at present rates is based on Hawaii Gas' initial estimate

as set forth in its Application, as adjusted downward by:
(1) the final cost of the 30% SNG Conversion Project (Docket No. 2014-0315);²⁸⁹ and (2) the Parties' agreement to include fifty percent of the Backup Diesel Generator's final project cost in rate base (Docket No. 2012-0389).²⁹⁰

Based on the Parties' stipulated net plant-in-service balance (see Section II.H.1, Net Plant-in-Service, below), the commission finds reasonable the stipulated amount of \$6,115,077 for depreciation expense at present rates.²⁹¹

12.

Amortization of Contributions-in-Aid-of-Construction

With respect to the amortization of contributions-in-aid-of-construction ("CIAC"), Hawaii Gas explains:

This amount represents the CIAC amounts calculated under Hawaii Gas' Tariff Rule 13 and collected by HG from customers to offset capital investment made for new customer installations, and expenditures for gas line relocations initiated by third party request.

²⁸⁹Docket No. 2014-0315, 30% SNG Conversion Project Closure Report, filed on April 25, 2018, at 1-2, under partial confidential seal.

²⁹⁰Stipulation, Section III.F.1.d, Backup Generator and Other Dismissed G.O. 9 Projects, at 69-71 (citing Exhibit B, Schedule HG-B5; Exhibit C, Schedule S-10; and Workpaper WP-S10); see also HG T-8, at 57 and 60 (final project cost).

²⁹¹See Stipulation, Section III.D.9, Depreciation Expense, at 45 (citing Revised Exhibit C, Schedules S-101, at 1 and 5, and Schedule S-10).

.
CIAC is amortized as a credit to the income statement which offsets the depreciation expense. The amortization rate is the same as the depreciation rate of the plant-in-service assets that the contribution is collected to offset[.]

HG T-3, at 42 (emphasis added).

The commission finds reasonable the stipulated credit of (\$225,569) for the amortization of CIAC at present rates, as said credit is based on Hawaii Gas' actual recorded results for 2017.²⁹²

13.

Ratemaking Adjustments

The stipulated sum of \$898,984 for ratemaking adjustments expense at present rates is comprised of the following accounts:

Amortization of excess pension funding	\$319,153
Amortization of the Bio-Syn Pilot Project costs	\$313,959
Normalization adjustment for the Honouliuli WWTP Biogas Project	\$321,992
Removal of misclassified SNG Backup Enhancement Project costs	<u>(\$56,118)</u>
	\$898,984*
	*rounding

See HG's response to PUC-IR-102 (2018), Attachment 1 (07/05/18).

The stipulated amount for each account, in turn, is derived as follows:

²⁹²Stipulation, Section III.D.10, Amortization of Contributions in Aid of Construction, at 46 (citing Revised Exhibit C, Schedule S-101, at 1 and 5; and Exhibit C, Schedule HGSR-13).

A. Amortization of Excess Pension Funding:²⁹³

A "Test Year Pension Funding amount of \$0.343 million, which has been adjusted to \$0.319 million due to applying the new income tax rates to the 2018 year as well as the availability of updated utility/nonutility labor expense allocation bases."²⁹⁴

B. Amortization of the Bio-Syn Pilot Project Costs:²⁹⁵

The stipulated treatment and cost recovery for the Bio-Syn Pilot Project, in the "total recovery amount of \$313,959," which the commission has found to be reasonable (see Section II.B.1, Docket No. 2010-0334, Hawaii Gas' Bio-Synthesis Gas Pilot Project, above).

C. Normalization Adjustment for the Honouliuli WWTP

Biogas Project: Ten months of production expense for the Honouliuli WWTP Biogas Project is reflected as a normalization adjustment of the annualized production expense amount, which the commission has

²⁹³HG T-3, at 47; and Stipulation, Section III.D.11.a, Pension Asset Amortization, at 46-47 (citing Revised Exhibit C, Schedule S-101, at 1 and 5).

²⁹⁴Stipulation, at 47 (citing Exhibit C, Schedule HGSR-14, filed under partial confidential seal).

²⁹⁵Stipulation, Section III.D.11.b, Request for Deferral of Bio-Syn Project Costs, at 48-50 (citing Exhibit C, Schedule S-8; and Revised Exhibit C, Schedule S-101, at 1).

found to be reasonable (see Section II.C, Hawaii Gas' Renewable Natural Gas Project, above).²⁹⁶

D. Removal of misclassified SNG Backup Enhancement Project costs: A "ratemaking adjustment to remove a portion of the Plant in Service, Depreciation Reserve, and Deferred Income Taxes associated with the SNG Backup Enhancement Project as third party costs of the project were misclassified to the SNG Backup Enhancement Project, and are now being removed for rate making."²⁹⁷

The commission finds reasonable the stipulated sum of \$898,984 for ratemaking adjustments expense at present rates.

14.

Interest on Customer Deposits

The stipulated amount of \$53,598 for interest on customer deposits at present rates is based on Hawaii Gas' customer deposit balances and interest on said balances for 2016, its last

²⁹⁶Stipulation, Section III.D.2, Production Non-Fuel O&M Expenses, at 25-26 (citing Revised Exhibit C, Schedule S-101, at 1 and 5), and Section III.F.1.b, Honouliuli WWTP Biogas Project, at 64-66; and HG's response to PUC-IR-103 (2018), Attachment 1 (07/05/18).

²⁹⁷HG T-3, at 10-11 and 47-48; see also id., at 10-11; HG's response to CA-IR-110 (01/29/18), and Attachment 1 thereto; and HG's response to PUC-IR-103 (2018) (07/05/18), and Attachment 1 thereto (citing HG T-3, at 47-48).

recorded year.²⁹⁸ In utilizing the 2016 interest on customer deposits amount for the 2018 Test Year, Hawaii Gas explains that it "has no plans to change its current deposit policy and does not foresee economic conditions changing its customer deposit requirements significantly between 2016 and 2018."²⁹⁹

The commission finds reasonable the stipulated amount of \$53,598 for interest on customer deposits at present rates.

15.

Taxes Other Than Income Taxes

Taxes other than income taxes relate to payroll, revenue, or sales volume:

Payroll

Social Security and Medicare
Federal unemployment
State unemployment

Revenue

Public Service Company Tax - 5.885%
Public Utility Fee - 0.500%
Franchise Tax - 2.500%

Sales volume

Environmental Response Tax (ERT) - \$0.19 per MBTU/\$0.019 per therm

²⁹⁸Stipulation, Section III.D.12, Interest on Customer Deposits, at 51 (citing Application, Exhibit HG-311; and Stipulation, Revised Exhibit C, Schedule S-101, at 1).

²⁹⁹HG T-3, at 43.

See HG T-3, at 43-44; and HG T-4, at 1-2; see also HG T-4, at 5 (Hawaii Gas does not expect to incur an expense for general excise taxes and county surcharge taxes during the 2018 Test Year).

The stipulated amounts of \$10,994,610 and \$11,783,720 for taxes other than income taxes at present and proposed rates, respectively, are calculated based on Hawaii Gas' Test Year salaries and wages (i.e., payroll taxes), revenues at present and proposed rates (i.e., revenue taxes), and sales volume (i.e., the ERT).³⁰⁰

The commission finds reasonable the stipulated amounts at present and proposed rates, respectively.

16.

Income Taxes

The stipulated amounts of \$155,664 and \$2,241,479 for income taxes at present and proposed rates, respectively, are calculated based on the: (1) composite federal/State income tax rate of 25.7519%, which incorporates the lower federal income tax rate resulting from the 2017 Tax Act; and (2) State capital goods excise tax credit.³⁰¹

³⁰⁰See HG T-4, at 1-5; and Stipulation, at 51-52 (citing Revised Settlement Exhibit HG-351).

³⁰¹See Stipulation, Revised Settlement Exhibit HG-350, at 16; see also Stipulation, Section III.D.13.b, Federal Income Taxes,

The commission finds reasonable the stipulated amounts at present and proposed rates, respectively.

17.

Total Expenses

The commission, in sum, finds reasonable the stipulated total expense amounts of \$103,005,671 and \$105,890,321 at present and proposed rates, respectively.

H.

Average Depreciated Rate Base

Hawaii Gas' Test Year average depreciated rate base balance: (1) consists of its net plant-in-service, less advancements for construction, CIAC, customer deposits, ADIT, and the 2017 Tax Act Regulatory Liability account, plus storage gas, materials and supplies inventory, and working cash;³⁰² and (2) "is calculated as the average of the December 31, 2017 and Test Year 2018 ending rate base balances."³⁰³

at 53-54 (citing Revised Settlement Exhibit HG-350, at 2); and Stipulation, Section III.D.13.c, Hawaii Tax Credits, at 55.

³⁰²Stipulation, Revised Settlement Exhibit HG-350, at 24; and Exhibit B, Schedule S-101, at 1.

³⁰³HG T-3, at 5 (referencing Exhibit HG-350, at 3 and 24), 13, 15, and 17-18.

The Parties stipulate to an average depreciated rate base balance of \$127,491,870 at present rates, consisting of:

Plant-in-service	\$253,640,141
Less intangibles	\$445,158
Less Ratemaking Adjustment	<u>\$1,402,952</u>
Plant-in-service	\$251,792,031

Depreciation reserve	\$81,600,489
Less intangibles	\$253,963
Less Ratemaking Adjustment	<u>\$196,413</u>
Depreciation reserve	\$81,150,113

Net plant-in-service	\$170,641,918
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Deductions

Advances for construction	\$716,732
Contributions-in-aid-of-construction	\$11,143,862
Customer deposits	\$893,301
ADIT	\$22,756,241
ADIT ratemaking adjustment	(\$178,656)
2017 Tax Act Regulatory Liability	<u>\$18,483,336</u>
Subtotal deductions	\$53,814,815

Additions

Storage gas	\$910,396
Materials and supplies	<u>\$7,159,272</u>
Subtotal additions	\$8,069,668

Rate base before working capital	\$124,896,771
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Working capital		
at present rates	\$2,595,099	\$2,459,393*

Average depreciated rate base		
at present rates	\$127,491,870	\$127,356,164*

*Reflects amounts under proposed rates for working capital.

See Revised Settlement Exhibit HG-350, at 24; see also Stipulation, Exhibit B, Schedule S-101, at 1.

The stipulated balances, in turn, incorporate Hawaii Gas' updates to reflect its actual recorded results for 2017.³⁰⁴

1.

Net Plant-in-Service

The stipulated balance of \$170,641,918 for net plant-in-service includes:

1. The final project costs for the:

A. Pipeline Safety Inspections Project, in the amount of \$2,057,629;

B. University of Hawaii West Oahu Campus, Distribution System Phase 1 Project, in the amount of \$711,690;

C. SNG System Backup Enhancement Project, in the amount of \$798,004; and

D. 30% SNG Conversion Project, in the amount of \$13,623,040, which is \$810,942 (i.e., 6.3%) above the \$12,812,098 amount estimated in Docket No. 2014-0315 (\$13,623,040 - \$12,812,098 = \$810,942). Concomitantly, the Parties agree to leave "as is" Hawaii Gas' posting error for this

³⁰⁴Stipulation, at 63-64 (citing HG's second supplemental response to CA-IR-202 (02/14/18); Exhibit B, Schedule CA-B1; and Workpapers WP-CA-B1a and WP-CA-B1b; see also HG RT-3, Section IV, Rate Base - Updated to Reflect 2017 Actuals, at 4-5.

project, resulting in a favorable to ratepayer reduction to rate base of \$5,530.

2. Fifty percent of the Backup Diesel Generator's final project cost of \$832,603 in rate base, in the amount of \$416,301 with corresponding adjustments to accumulated depreciation and depreciation expense.³⁰⁵ Concomitantly, the Parties agree to leave "as is" Hawaii Gas' posting error for this project, resulting in a favorable to ratepayer reduction to rate base of \$174,846.

3. \$2,503,662 of the capital cost of the Honouliuli WWTP Biogas Project, which represents approximately 50% of the project's estimated capital cost of \$5.007 million.

The commission incorporates by reference its previous applicable rulings in Section II.B, Hawaii Gas Projects and Section II.C, Hawaii Gas' Renewable Natural Gas Project, above. Accordingly, the commission reiterates that: (1) the subject projects are used and useful for public utility purposes; and (2) the stipulated cost recovery for each project is reasonable.

³⁰⁵Stipulation, Section III.F.1.d, Backup Generator and Other Dismissed G.O. 9 Projects, at 69-71 (citing Exhibit B, Schedule HG-B5; Exhibit C, Schedule S-10; and Workpaper WP-S10); see also HG T-8, at 57 and 60 (final project cost).

The commission, in sum, finds reasonable the stipulated balance of \$170,641,918 for net plant-in-service.

2.

Advances for Construction

The commission finds reasonable the stipulated balance of \$716,731 for advances for construction, which represents Hawaii Gas' actual recorded results for 2017.³⁰⁶

3.

Contributions-in-Aid-of-Construction

The commission finds reasonable the stipulated balance of \$11,143,862 for CIAC, which represents Hawaii Gas' actual recorded results for 2017.³⁰⁷

³⁰⁶Stipulation, Section III.F.2, Advances for Construction, at 73 (citing Exhibit CA-101, Schedule B; and Exhibit B, Schedule S-101, at 1).

³⁰⁷Stipulation, Section III.F.3, Contributions in Aid of Construction, at 73 (citing Exhibit CA-101, Schedule B; and Exhibit B, Schedule S-101, at 1).

4.

Customer Deposits

The commission finds reasonable the stipulated balance of \$893,301 for customer deposits, which represents Hawaii Gas' customer deposit balance for 2016, its last recorded year.³⁰⁸

5.

Accumulated Deferred Income Taxes, Accumulated
Deferred Income Taxes Ratemaking Adjustment,
and the 2017 Tax Act Regulatory Liability

The stipulated balances of \$22,756,241 for ADIT, (\$178,656) for the ADIT ratemaking adjustment, and \$18,483,336 for the 2017 Tax Act Regulatory Liability: (1) update the ADIT balance to reflect the impacts associated with the 2017 Tax Act;³⁰⁹ and (2) incorporate the correct regulatory liability balance related to the 2017 Tax Act³¹⁰ and corrections to the ADIT balance identified during discovery.³¹¹

³⁰⁸HG T-3, at 14; Exhibit HG-311; and Stipulation, Section III.F.4, Customer Deposits, at 74 (citing Exhibit B, Schedule S-101, at 1).

³⁰⁹See Stipulation, Section III.D.13.e, Accumulated Deferred Income Tax, at 56-58 (citing Revised Settlement Exhibit HG-350).

³¹⁰Stipulation, at 64 (citing HG's supplemental filing (04/30/18); and Exhibit B, Schedule HG-B3); see also HG RT-3, at 5.

³¹¹Stipulation, Section III.D.13.e.ii, ADIT Errata, at 58 (citing Exhibit B, Schedules HGSR-B8 and HGSR-B9).

The commission incorporates by reference its previous ruling in Section II.E, Impacts of the 2017 Tax Act, above. The commission, thus, reiterates that the stipulated ratemaking treatment of the impacts of the 2017 Tax Act upon Hawaii Gas' 2018 Test Year revenue requirement is reasonable. Accordingly, the commission finds reasonable the stipulated balances for ADIT, the ADIT ratemaking adjustment, and the 2017 Tax Act Regulatory Liability.

6.

Storage Gas

The commission finds reasonable the stipulated balance of \$910,396 for storage gas, which represents Hawaii Gas' actual recorded results for 2017.³¹²

7.

Materials and Supplies

The commission finds reasonable the stipulated balance of \$7,159,272 for materials and supplies, which represents Hawaii Gas' actual recorded results for 2017.³¹³

³¹²Stipulation, Section III.F.6, Storage Gas, at 74 (citing Exhibit B, Schedule S-101, at 1).

³¹³Stipulation, Section III.F.7, Materials & Supplies, at 74-75 (citing Exhibit B, Schedule S-101, at 1).

Working Capital
(Working Cash)

Hawaii Gas explains:

Working cash is the net amount of money provided by shareholders of Hawaii Gas to bridge the gap between the time that Hawaii Gas makes expenditures required to provide utility gas service, and the time that Hawaii Gas receives payment from customers for that service. Working cash represents an investment over and above that made for utility plant and other specifically identified rate base items. The inclusion of working cash in rate base recognizes this investment and the timing of cash flows for Hawaii Gas. The amount of working cash is typically determined through a lead-lag study.

. . . .

Accordingly, working cash represents the difference between the amount of cash required to pay expenses necessary for the provision of utility gas service, and cash that is awaiting collection from customers for the provision of utility service.

HG T-3, at 17-19 (emphasis added).

The Parties' stipulated methodology for calculating working cash is set forth in Revised Exhibit HG-314 of the Stipulation, and utilizes the following expense components, net lag days, and lead/lag factors:

<u>Expense Components</u>	<u>Revenue Collection Days</u>	<u>Revenue Payment Days</u>	<u>Net Lag Days</u>	<u>Lag Factor</u>
Fuel purchases	33.7	18.2	15.5	4.24%
O&M labor	33.7	11.9	21.8	5.96%
O&M non-labor	33.7	20.3	13.4	3.66%
Revenue taxes	33.7	79.30	-45.6	-12.50%
Income taxes	33.7	39.5	-5.8	-1.60%

See Stipulation, Revised Exhibit HG-314.

The expense components, net lag days, and lead/lag factors, in turn, are derived from Hawaii Gas' Lead-Lag Study.³¹⁴

Applying the relevant stipulated expense amounts to each expense component, the Parties calculate working cash balances of \$2,595,099 and \$2,459,393 at present and proposed rates, respectively.³¹⁵

The commission finds reasonable the stipulated working cash balances.

9.

Average Depreciated Rate Base Balance

The commission, in sum, finds reasonable the stipulated average depreciated rate base balances of \$127,491,870 and \$127,356,164 at present and proposed rates, respectively.

³¹⁴Application, Workpaper HG-WP-314.

³¹⁵Stipulation, III.F.8, Working Capital (or Working Cash), at 75 (citing Exhibit B, Schedule S-101, at 1; and Revised Exhibit HG-314).

I.

Rate of Return

As noted by the commission in TGC's most recent rate case, Docket No. 2008-0081:

In determining an appropriate rate of return on [the public utility's] rate base, we are guided by our past rate cases and by the guidelines set forth in Bluefield Waterworks and Improvement Co. v. Pub. Serv. Comm'n, 262 U.S. 679 (1923), and Fed. Power Comm'n v. Hope Natural Gas Co., 320 U.S. 591 (1944). These guidelines prescribe that a fair return must:

1. Be commensurate with returns on investment in other enterprises having corresponding risks and uncertainties;
2. Provide a return sufficient to cover the capital costs of the business, including service on the debt and dividends on the stock; and
3. Provide a return sufficient to assure confidence in the financial integrity of the enterprise to maintain its credit and capital-attracting ability.

Docket No. 2008-0081, Decision and Order, filed on April 20, 2010, at 70-71 (quoting In re Young Bros., Ltd., Docket No. 2006-0396, Decision and Order No. 23714, filed on October 12, 2007, at 55; and In re Young Bros., Ltd., Docket No. 96-0483, Decision and Order No. 16008, filed on October 10, 1997, at 16).

Moreover, as discussed by the Hawaii Supreme Court in In re Hawaii Elec. Light Co., Inc., 60 Haw. 625, 594 P.2d 612 (1979):

A fair return is the percentage rate of earnings on the rate base allowed a utility after making provision for operating expenses, depreciation, taxes and other direct operating costs. Out of such allowance the utility must pay interest and other fixed dividends on preferred and common stock. In determining a rate of return, the Commission must protect the interests of a utility's investors so as to induce them to provide the funds needed to purchase plant and equipment, and protect the interests of the utility's consumers so that they pay no more than is reasonable.

To calculate the rate of return, the costs of each component of capital - debt, preferred equity and common equity - are weighted according to the ratio each bears to the total capital structure of the company and the resultant figures are added together to yield a sum which is the rate of return.

The proper return to be accorded common equity is the most difficult and least exact calculation in the whole rate of return procedure since there is no contractual cost as in the case of debt or preferred stock[:]

Equity capital does not always pay dividends; all profits after fixed charges accrue to it and it must withstand all losses. The cost of such capital cannot be read or computed directly from the company's books. Its determination involves a judgment of what return on equity is necessary to enable the utility to attract enough equity capital to satisfy its service obligations.

. . . .

Questions concerning a fair rate of return are particularly vexing as the reasonableness of rates is not determined by a fixed formula but is a fact

question requiring the exercise of sound discretion by the Commission. It is often recognized that the ratemaking function involves the making of "pragmatic" adjustments and there is no single correct rate of return but that there is a "zone of reasonableness" within which the commission may exercise its judgment.

In re Hawaii Elec. Light Co., Inc., 60 Haw. at 632-33 and 636, 594 P.2d at 618-20 (emphasis added) (citations omitted).

The Parties stipulate to a hypothetical capital structure of 45% long-term debt and 55% common equity for ratemaking purposes, an embedded cost of long-term debt of 3.85%, a return on common equity of 9.75%, and an overall rate of return of 7.095%, as follows:

<u>Capital Component</u>	<u>Ratio</u>	<u>Cost Rate</u>	<u>Weighted Cost</u>
Long-term debt	45%	3.85%	1.73%
Common equity	<u>55%</u>	<u>9.75%</u>	<u>5.36%</u>
Total	100%		7.095%

See Stipulation, Section III.G, Rate of Return & Cost of Capital, at 76-78 (citing Settlement Exhibit HG-352).

The commission approves as fair the stipulated rate of return of 7.095%, which is within the range of reasonableness recognized by the Hawaii Supreme Court in In re Hawaii Elec. Light Co., Inc.

In support thereto, the commission specifically finds and concludes:

1. Based on the authorized ratemaking capital structures of the utility operating subsidiaries of the holding companies in Hawaii Gas' proxy group (see Application, Exhibit HG-1101, Schedule 11), the stipulated hypothetical capital structure of 45% long-term debt and 55% common equity is within the 38.66% to 59.06% range of common equity ratios listed therein.³¹⁶

2. Moreover, as Hawaii Gas explains, imputing an equity ratio for Hawaii Gas that is consistent with regulated utilities of like risk separates the impacts of competitive ventures on the regulated utility.³¹⁷

3. The stipulated embedded cost of long-term debt of 3.85% is based on Hawaii Gas' actual cost of debt.³¹⁸

4. The stipulated return on common equity of 9.75%:
(A) is within the 8.50% to 10.47% range of common equity percentages derived from Hawaii Gas' application of the

³¹⁶Stipulation, Section III.G.2, Capital Structure and Cost of Debt, at 76-78 (citing HG T-11, at 59-60; and Exhibit HG-1101, Schedule 11).

³¹⁷HG RT-11, at 47.

³¹⁸Stipulation, Section III.G.2, Capital Structure and Cost of Debt, at 76-78 (citing HG T-11, at 62; Exhibit HG-327; and CA-T-2, at 24).

Multi-Stage Discounted Cash Flow, Discounted Cash Flow, Bond Yield Plus Risk Premium, and Capital Asset Pricing financial models (see HG T-11, Figure 17, at 64); (B) closely approximates the 9.71% average authorized return on common equity for natural gas distribution companies in other jurisdictions during 2017 and 2018;³¹⁹ and (C) is approximately 75 basis points lower than Hawaii Gas' existing, commission-approved return of common equity of 10.5%.³²⁰

5. The Parties reference the following market factors in support of their stipulated return on common equity: (A) rising interest rates during the near-term; (B) the increased yield on long-term government bonds; and (C) the 2017 Tax Act.³²¹

6. The stipulated rate of return of 7.095% is approximately 91 basis points lower than Hawaii Gas' existing, commission-approved rate of return of 8.0%.³²²

7. On balance, the stipulated rate of return is designed to encourage (rather than discourage) the appropriate level of investment in Hawaii Gas' utility operations,

³¹⁹HG RT-11, at 3-4 (referencing Regulatory Research Associates).

³²⁰See Docket No. 2008-0081, Decision and Order, filed on April 20, 2010, Section II.E, Rate of Return, at 70-73.

³²¹Stipulation, at 76 (citing HG RT-11, at 5-17 and 54).

³²²See Docket No. 2008-0081, Decision and Order, filed on April 20, 2010, Section II.E, Rate of Return, at 70-73.

while protecting the ratepayers' interest in paying no more than what is just and reasonable for reliable gas utility service.

J.

Test Year Revenue Requirement

Based on the commission's rulings with respect to Hawaii Gas' 2018 Test Year revenues and expenses at present rates, average depreciated rate base balance, and rate of return, the commission ultimately approves as reasonable an increase in revenues of \$8,896,152, or approximately 8.39% over revenues at present rates for Hawaii Gas, based on a total Test Year revenue requirement of \$114,926,065.

The Parties' calculations of Hawaii Gas' Test Year revenue requirement are set forth in Revised Settlement Exhibit HG-350 of the Stipulation. In sum:

<u>Revenues</u>	<u>Present Rates</u>	<u>Additional Amounts</u>	<u>Proposed Rates</u>	<u>% Change</u>
Gas Sales	\$104,779,740	\$8,868,455	\$113,648,195	8.46%
Other	<u>\$1,250,172</u>	<u>\$27,697</u>	<u>\$1,277,869</u>	<u>2.22%</u>
Total	\$106,029,913	\$8,896,152	\$114,926,065	8.39%

K.

Cost of Service and Final Base Rates Design

With respect to Hawaii Gas' utility operations, each island is designated as separate districts.³²³ Moreover:

HG currently offers residential and various commercial utility gas rate schedules on Oahu, Hawaii, Kauai, and Maui, and only residential rate schedules on Molokai and Lanai. There are 11 different rate schedules offered on Oahu, including standby and interruptible rates. Hawaii and Maui each offer a residential rate and four commercial rate schedules.

HG T-2, at 3; see also HG T-12, at 7 (not every island system has customers utilizing every base rate schedule).

Hawaii Gas' cost of service study ("COSS") "is an Excel spreadsheet provided by TGC in response to CA-IR-224. A key input to the COSS is developed in a zero-intercept main study ('ZIM') which is an Excel spreadsheet provided by TGC in response to CA-IR-225."³²⁴ Hawaii Gas summarizes the results of its COSS in HG T-12 of its direct testimony and Exhibits HG 1201 through HG 1207 attached thereto. In sum:

³²³HG T-2, at 1.

³²⁴CA-T-3, at 7 (footnotes citing to Confidential Attachment 1, CA-IR-224 (02/05/18), Cost of Service Study, and Confidential Attachment 1, CA-IR-225 (02/05/18), Zero-Intercept Main Study).

1. Hawaii Gas has separate gas distribution utility systems for each district (i.e., island) and separate rate schedules for each district.

2. Hawaii Gas' COSS consists of: (A) separate cost of service studies for each district; and (B) the consolidated results for all six districts.

3. Hawaii Gas utilized a three-step methodology for embedded cost of service in developing the cost of service studies for each district: (1) functionalization of costs; (2) classification of the functionalized costs; and (3) allocation of the classified costs to each rate class.³²⁵

4. "The result of this process is a total embedded cost of service for each rate class in each district."³²⁶

Consistent with the Consumer Advocate's position that demand is the sole cost-causative driver of Hawaii Gas' distribution mains investments, the Parties agree to modify Hawaii Gas' COSS by classifying and allocating distribution mains as 100% demand-related and 0% customer-related.³²⁷ Accordingly,

³²⁵See HG T-12, Sections I and II, Cost of Service Study - Overview, Methodology and Preparation, at 4-19; and CA-T-3, Section III, Cost of Service Study, at 7-12.

³²⁶CA-T-3, at 8.

³²⁷Stipulation, Section III.H, Cost of Service, at 78-80 (citing CA-T-3, at 6, 9, and 11).

the Parties stipulate to utilizing Hawaii Gas' modified COSS, a copy of which is attached as Second Revised Exhibit HG-1201 to the Stipulation.³²⁸

Hawaii Gas' existing, non-interim base rates consist of:

1. A single, harmonized customer charge across its six districts, applicable to each customer class. (Examples: The current customer charge for residential service in each of Hawaii Gas' six districts is \$8.50 per month, and the current customer charge for general service in its Oahu, Hawaii, Maui, and Kauai districts is \$12.50 per month.)

2. A single-block, district-specific commodity (i.e., volumetric) charge, applicable to each customer class.

3. An excess capacity charge for standby or interruptible gas service, limited to its Oahu district. (Note: Standby and interruptible gas services are not available in the neighbor island districts).

4. A minimum monthly charge, applicable to a customer that does not receive gas utility service during a billing cycle.³²⁹

The Parties stipulate to implementing the overall increase in Hawaii Gas' revenues at present rates via the following

³²⁸Stipulation, Section III.H, Cost of Service, at 78-80.

³²⁹HG T-13, at 4 and 14; HG's response to CA-IR-6 (12/22/17), Attachment 2, Rate Schedules/Riders, at 1-54; and CA-T-3, at 16.

revisions to Hawaii Gas' existing, non-interim base rates (i.e., the Parties' stipulated rate spread):³³⁰

<u>Rate Schedule</u>	<u>Oahu</u>	<u>Hawaii</u>	<u>Maui</u>	<u>Kauai</u>	<u>Molokai</u>	<u>Lanai</u>
10 General Service	7.4%	-0.4%	13.2%	-0.6%		
20 Residential	14.9%	-4.0%	18.3%	6.8%	6.2%	-5.8%
30 Multi-Family	7.6%	-0.8%	5.3%			
50 Commercial	9.6%	-0.8%	8.2%	-0.8%		
55 Large Industrial	14.9%					
60 Large Firm	9.6%	-0.8%	2.0%			
70 Standby Generator	7.4%					
80 Standby Backup	7.4%					
91 Interruptible Oil	0.0%					
92 Interruptible LPG	0.0%					
Total	9.3%	-1.5%	9.3%	5.1%	6.2%	-5.8%

See Stipulation, at 82; Third Revised Exhibit HG-1301; and the last exhibit (unlabeled) attached to the Stipulation; see also Stipulation, Second Revised Exhibit HG-1302.

The stipulated final rate design, in effect:

1. Increases: (A) the current customer charge for residential service in each of Hawaii Gas' six districts (i.e., Oahu, Hawaii, Maui, Kauai, Molokai, and Lanai) from \$8.50 per month to \$9.60 per month; and (B) the current customer charge for general service in Hawaii Gas' Oahu, Hawaii, Maui, and Kauai districts from \$12.50 per month to \$13.55 per month.³³¹

³³⁰See Stipulation, Section III.I.1, Rate Spread, at 81-82.

³³¹HG's response to PUC-IR-101 (07/05/18), Attachment 2, at 2 (Oahu general service), 3 (Oahu residential service), 23 (Hilo general service), 24 (Hilo residential service), 30 (Kona general service), 31 (Kona residential service), 37 (Maui general service), 38 (Maui residential), 44 (Kauai general service), 45 (Kauai residential service), 51 (Molokai residential), and 52 (Lanai residential); and Stipulation, Section III.I.3,

2. Incorporates a single, harmonized residential service commodity charge of \$3.68348 per therm for Hawaii Gas' neighbor island districts, resulting in an increase in said charge for the Maui and Molokai districts, and a decrease in said charge for the Lanai, Hawaii, and Kauai districts.³³²

(Note: Hawaii Gas' existing, non-interim base rates already include a single, harmonized residential service customer charge across its six districts.)

3. Increases the residential service commodity charge for Hawaii Gas' Oahu district.³³³

4. Increases the general service commodity charge for Hawaii Gas' Oahu and Maui districts, and decreases said charge for Hawaii Gas' Hawaii and Kauai districts.³³⁴

Residential and General Service Customer Charge Increases, at 83-85.

³³²HG's response to PUC-IR-101 (07/05/18), Attachment 2, at 3 (Oahu), 24 (Hilo), 31 (Kona), 38 (Maui), 45 (Kauai), 51 (Molokai), and 52 (Lanai); and Stipulation, Section III.I.2, Neighbor Island Harmonization, at 82-83 (citing CA-T-3, at 20-22; and HG RT-13, at 8-9).

³³³HG's response to PUC-IR-101 (07/05/18), Attachment 2, at 3.

³³⁴HG's response to PUC-IR-101 (07/05/18), Attachment 2, at 2 (Oahu), 23 (Hilo), 30 (Kona), 37 (Maui), and 44 (Kauai).

5. Increases the multiple unit housing service commodity charge for Hawaii Gas' Oahu, Maui, and Kauai districts, and decreases said charge for Hawaii Gas' Hawaii district.³³⁵

6. Increases the commercial and industrial service commodity charge for Hawaii Gas' Oahu, Hilo, and Maui districts, and decreases said charge for Hawaii Gas' Kona and Kauai district.³³⁶

7. Increases the large industrial service commodity charge for Hawaii Gas' Oahu district.³³⁷

8. Increases the large firm gas service commodity charge for Hawaii Gas' Oahu, Hawaii, Maui, and Kauai districts.³³⁸

9. For Hawaii Gas' Schedule 60 series, decreases the therms used in calculating Hawaii Gas' minimum monthly charge for large firm gas service, from 3,000 therms per month to 2,500 therms per month.³³⁹

³³⁵HG's response to PUC-IR-101 (07/05/18), Attachment 2, at 4 (Oahu), 25 (Hilo), 32 (Kona), 39 (Maui), and 46 (Kauai).

³³⁶HG's response to PUC-IR-101 (07/05/18), Attachment 2, at 6 (Oahu), 27 (Hilo), 34 (Kona), 41 (Maui), and 48 (Kauai).

³³⁷HG's response to PUC-IR-101 (07/05/18), Attachment 2, at 8.

³³⁸HG's response to PUC-IR-101 (07/05/18), Attachment 2, at 10 (Oahu), 29 (Hilo), 36 (Kona), 43 (Maui), and 50 (Kauai).

³³⁹HG's response to PUC-IR-101 (07/05/18), Attachment 2, at 10 (Oahu), 29 (Hilo), 36 (Kona), 43 (Maui), and 50 (Kauai); and HG's response to PUC-IR-202(2) (07/05/18).

10. Decreases the alternative energy service commodity charge for Hawaii Gas' Oahu district.³⁴⁰

11. For Hawaii Gas' Schedule 70, increases the standby service/power generation excess capacity and commodity charges for Hawaii Gas' Oahu district.³⁴¹

12. Increases Hawaii Gas' Oahu district's respective commodity charge for the: (A) standby or supplemental service rider; (B) interruptible service/oil alternative fuel; and (C) interruptible service/propane alternative fuel.³⁴²

Hawaii Gas characterizes Revisions Nos. 1, 2, 9 and 11 as the "four primary adjustments" to its existing, non-interim rate design.³⁴³ Consistent thereto:

1. For Revision No. 1: The Parties note that the increase in the customer charge for: (A) residential service in each of Hawaii Gas' six districts from \$8.50 per month to \$9.60 per month is based on the Consumer Advocate's recommendation; and (B) general service in Hawaii Gas' Oahu, Hawaii, Maui, and Kauai districts from \$12.50 per month to

³⁴⁰HG's response to PUC-IR-101 (07/05/18), Attachment 2, at 11.

³⁴¹HG's response to PUC-IR-101 (07/05/18), Attachment 2, at 13.

³⁴²HG's response to PUC-IR-101 (07/05/18), Attachment 2, at 15, 17, and 21.

³⁴³See Stipulation, at 80-81 (citing HG T-13, at 14).

\$13.55 per month is consistent with their stipulated increase in overall revenues over present rates of approximately 8.40%.³⁴⁴

Hawaii Gas also explains that it examined the following factors in support of its proposal to increase the customer charges for residential and general services:

A. Costs for customer dedicated facilities, consisting of the meter, regulator, and service.

B. Customer care costs, including billing.

C. Equity, i.e., the customer class cost derived from the COSS and intra-class equity implications where customers not paying their share of costs are shifting costs to other customers within the same rate class.

D. Balancing the recovery of customer costs and the impact of said recovery upon customer bills.

E. The results of American Gas Association's study, Natural Gas Utility Rate Structure: The Customer Charge Component - 2015 Update.³⁴⁵

2. For Revision No. 2: The Parties identify the following benefits in adopting a single, harmonized residential

³⁴⁴Stipulation, Section III.I.3, Residential and General Service Customer Charge Increases, at 83-84 (citing CA-T-3, and 18; and HG RT-13, at 5-8).

³⁴⁵HG T-13, at 4 and 14, and Section V, Customer Charge Increase for Residential and General Service Customers, at 16-18.

service commodity charge for Hawaii Gas' neighbor island districts:

A. Promote rate stability for residential customers on Lanai and Molokai, which have the smallest number of customers, and when combined with Maui, will still have the smallest number of residential customers within Hawaii Gas' statewide service territory.

B. Simplify Hawaii Gas' communications with customers regarding tariff matters.

C. Share facility costs across more ratepayers.³⁴⁶

Hawaii Gas, moreover, notes that Lanai, Maui, and Molokai have the same commodity costs, with Lanai and Molokai served by staff and facilities from other islands, including Maui.³⁴⁷

3. For Revision No. 9: Hawaii Gas explains that decreasing the therms used in calculating the minimum monthly charge for large firm gas service, from 3,000 therms per month to 2,500 therms per month, is:

³⁴⁶Section III.I.2, Neighbor Island Harmonization, at 82-83 (citing CA-T-3, at 20-22; and HG RT-13, at 8-9).

³⁴⁷HG T-13, at 19.

A. Designed to provide a "small bill reduction" to qualified large volume customers that opt to contract for firm contract service.

B. Intended to incentivize customers that are currently served pursuant to its existing Schedule 50 series, which apply to commercial and industrial gas service/non-contract basis, to switch to firm contract service pursuant to Schedules 60, 160, 360, or 460.³⁴⁸

Hawaii Gas, moreover, represents:

C. "Large volume customers on Schedule 50 (Commercial and Industrial Service Rate) are similarly situated as Schedule 60 customers."³⁴⁹

D. "Customers on Schedule 60 make an initial commitment of three years and then have renewing six-month terms to purchase firm gas service from Hawaii Gas. These customers provide a significant contribution to the recovery of the fixed costs of HG's transmission and distribution infrastructure and are currently paying over their cost of service."³⁵⁰

³⁴⁸HG T-13, at 4-5 and 14, and Section VII, Modification of the Terms for Large Firm Gas Service Rate (Schedule 60), at 20-23; see also Stipulation, Section III.I.4, Schedule 60 - Large Firm Gas Service Rate, at 85-86 (citing HG T-13, at 21-23); and HG's response to PUC-IR-202(2) (07/05/18).

³⁴⁹HG T-13, at 5.

³⁵⁰HG T-13, at 5.

E. "All customers will gain [from] retaining large load customers since these customers provide a significant contribution to the recovery of the fixed pipeline costs."³⁵¹

4. For Revision No. 11: Hawaii Gas states that the purpose of increasing the excess capacity charge for its Oahu District Schedule 70, which applies to standby service/power generation, is to "maintain the balance between the volumetric and capacity rate."³⁵²

Based on the supporting rationale and the commission's review of Hawaii Gas' supporting cost data, including the modified COSS (see Stipulation, Second Revised Exhibit HG-1201), the commission approves as just and reasonable the stipulated final rate design.

The stipulated final rate design, in effect, balances the principles of equity and gradualism by gradually moving towards an equitable rate design whereby each customer class pays an amount that is closer to its fair share of costs, consistent with cost-based ratemaking.³⁵³ Ultimately, such a result is intended to minimize cross-subsidization "between

³⁵¹HG T-13, at 21.

³⁵²HG T-13, at 14.

³⁵³See Stipulation, at 80 (Hawaii Gas proposes a number of adjustments to more equitably recover customer costs, citing HG T-13, at 14) and 81 (balancing the principles of equity and gradualism, citing HG T-13, at 7 and 12-13, and CA-T-3, at 14).

localities or between users or consumers under substantially similar conditions[.]"³⁵⁴

L.

Other Tariff Rules

1.

Fuel Adjustment Clause

HRS § 269-16 and HAR § 6-60-6 apply to a public utility's rate adjustment clauses.

HRS § 269-16 states in part:

**Regulation of utility rates;
ratemaking procedures.**

(b) No rate, fare, charge, classification, schedule, rule, or practice, other than one established pursuant to an automatic rate adjustment clause previously approved by the commission, shall be established, abandoned, modified, or departed from by any public utility, except after thirty days' notice to the commission as prescribed in section 269-12(b), and prior approval by the commission for any increases in rates, fares, or charges[.]

.

(g) Any automatic fuel rate adjustment clause requested by a public utility in an application filed with the commission shall be designed, as determined in the commission's discretion, to:

³⁵⁴See HRS § 269-16(b)(2)(B).

- (1) Fairly share the risk of fuel cost changes between the public utility and its customers;
- (2) Provide the public utility with sufficient incentive to reasonably manage or lower its fuel costs and encourage greater use of renewable energy;
- (3) Allow the public utility to mitigate the risk of sudden or frequent fuel cost changes that cannot otherwise reasonably be mitigated through other commercially available means, such as through fuel hedging contracts;
- (4) Preserve, to the extent reasonably possible, the public utility's financial integrity; and
- (5) Minimize, to the extent reasonably possible, the public utility's need to apply for frequent applications general rate increases to account for the changes to its fuel costs.

HRS § 269-16(b) and (g) (emphasis added).

HAR § 6-60-6 states in part:

Automatic adjustment clauses. The utility's rate schedules may include automatic rate adjustment clauses, only for those clauses previously approved by the commission. Upon [the] effective date of this Chapter, any fuel adjustment clause submitted for commission approval shall comply with the following standards:

- (1) "Fuel adjustment clause" means a provision of a rate schedule which provides for increases or decreases or both, without prior hearing, in rates reflecting increases or decreases or both in costs incurred by an electric or gas utility for fuel and purchased energy due to changes in the unit cost of fuel and purchased energy.

- (2) No changes in fuel and purchased energy costs may be included in the fuel adjustment clause unless the contracts or prices for the purchase of such fuel or energy have been previously approved or filed with the commission.
- (3) The fuel adjustment clause shall cover only increases or decreases in the unit cost of fuel and purchased energy adjusted for the resulting changes in revenue taxes, from those found reasonable in the last rate case proceeding for the utility; where such unit cost where included in the base rate for each schedule.
- (4) The adjustment shall be effective on the date of change and when a cost change occurs during a customer's billing period, the fuel adjustment shall be prorated for the number of days each cost was in effect.
- (5)
 - (A)
 - (B) Changes in the composite cost to the utility for fuel delivered to its service tanks, as measured by increases or decreases in the unit cost of fuel or purchased energy, adjusted for the resulting changes in revenue taxes[.]

HAR § 6-60-6 (emphasis added).

Hawaii Gas' existing FAC is set forth in its Tariff Rules 19, Firm Service Fuel Clause, and Rule 21, SNG Interruptible Service Fuel Clause, respectively. Tariff Rule 19 applies to all to all of Hawaii Gas' divisions,

while Tariff Rule 21's application is limited to Hawaii Gas' Oahu Gas Division.³⁵⁵

Pursuant to Hawaii Gas' FAC:

1. Whenever the actual cost of gas fuel increases or decreases by 0.10 cents per therm from the established fuel cost in Hawaii Gas' existing, non-interim base rates, Hawaii Gas is authorized to apply a FAC Adjustment Factor to its therm sales in the following month.

2. In addition to fuel costs, the FAC Adjustment Factor: (A) grosses up fuel costs to include applicable government taxes and fees; and (B) for the neighbor islands, also includes an additional adjustment to account for lost and unaccounted for gas.³⁵⁶

Although not clearly and completely stated in the text of the Stipulation, the Parties essentially stipulate to three sets of revisions to Hawaii Gas' existing FAC. (Note: On September 17, 2018, Hawaii Gas filed: (1) a correct version of the stipulated revisions to Tariff Rules 19 and 21, as Revised Attachment 1 to PUC-IR-101 (2018); and (2) Confidential Fourth

³⁵⁵HG T-8, Section VII, Current Fuel Adjustment Clause, at 39-41; and HG's response to CA-IR-6 (12/22/17), Attachment 1, Tariff Rules No. 19 and No. 21, at 53 and 55.

³⁵⁶HG T-8, at 39-40; and HG's response to CA-IR-6 (12/22/17), Attachment 1, CA-IR-6, Tariff Rules No. 19 and No. 21, at 53 and 55.

Revised Exhibit HG-813, in place of Confidential Third Revised Exhibit HG-813.)

First, the Parties agree to:

1. Update the FAC Adjustment Factor by incorporating the Test Year lost and unaccounted for gas projection for the neighbor islands;³⁵⁷

2. Continue utilizing a forward-looking estimate with a true-up for Hawaii Gas' Oahu Gas Division;³⁵⁸ and

3. Roll the projected cost of gas into its base rates to zero out the FAC rates for the 2018 Test Year.³⁵⁹

Second, the Parties agree to an Updated LPG Transfer Fee, in the total sum of \$1,694,298, of which: (A) the non-variable portion of \$1,284,284 will continue to be recovered through base rates as fuel expense; and (B) the variable portion of \$410,014, will be recovered as a direct pass through to ratepayers as part of the existing FAC.³⁶⁰

³⁵⁷HG T-8, at 35-36.

³⁵⁸HG T-8, at 35-36.

³⁵⁹HG T-8, at 35-36.

³⁶⁰HG T-8, at 35-36; and Stipulation, Section III.D.1.a, LPG Transfer Charges, at 24-25 (citing Confidential Second Revised Exhibit HG-1307); and Section III.E.1, LPG Transfer Costs in the FAC, at 59-61 (citing Confidential Second Revised Exhibit HG-1307; and Confidential/Restricted Third Revised Exhibits HG-813 and HG-817).

(Note: Allowing Hawaii Gas to recover the variable cost portion through the existing FAC represents the Consumer Advocate's concurrence with Hawaii Gas' request to include in the LPG Transfer Fee component of its FAC, the transportation costs for LPG - i.e., Issue No. 3.)³⁶¹

Third, the Parties, consistent with Hawaii Gas' request:

1. Agree to include in the gas utility's FAC the electricity costs in processing SNG (i.e., Issue No. 3);³⁶² and

2. Based on their stipulated SNG Plant electricity cost of \$1,686,792, which constitutes a component of Hawaii Gas' O&M production expense, further agree that:

A. "[A]ny increase or decrease from the base rate of \$0.2092/kWh, as applied to the base amount of 8,064,458 total kWh, would flow as a direct pass through to Honolulu Gas District (Oahu) customers as part of HG's FAC[;]"³⁶³

B. "[A]ny changes in the electricity rate from the base electricity rate of \$0.2092 per kWh, up or down, will be multiplied by the base kWh usage of 6,302,475 and divided by the

³⁶¹See, e.g., Stipulation, at 59 (describing the variable LPG cost components).

³⁶²Stipulation, Section III.E.2, Changes in SNG Plant Electricity Costs in the FAC, at 61-62 (citing Confidential/Restricted Third Revised Exhibit HG-813; and Third Revised Exhibit HG-818).

³⁶³Stipulation, at 62 (citing Confidential/Restricted Third Revised Exhibit HG-813).

forecasted therm sales to arrive at the electricity rate adjustment to fuel cost after being grossed up for revenue taxes[;]"³⁶⁴ and

C. "The same electric rate tracker adjustment to fuel cost is included in the Interruptible Schedule 91 and 92 FAC calculation under proposed rates . . . using a base electricity usage charge of 1,761,983 kWh, and a base electrical rate of \$0.2092 per kWh[.]"³⁶⁵

Hawaii Gas, in support of the first set of stipulated revisions, represents that "the requested method or process provided, have been approved in HG's Test Year 2009 rate case."³⁶⁶ Moreover, the FAC enables Hawaii Gas to:

1. Apply a factor (in cents per therm) to increase or decrease the commodity charge to account for price fluctuations in the cost of SNG feedstock, propane, LNG, and RNG above or below levels included in base rates, without a rate case proceeding.³⁶⁷

2. "[A]ccount for changes in SNG feedstock, propane, LNG, RNG and other related costs . . . which HG has little or no

³⁶⁴Stipulation, at 62 (citing Confidential/Restricted Third Revised Exhibit HG-813).

³⁶⁵Stipulation, at 62 (citing Third Revised Exhibit HG-818).

³⁶⁶HG T-8, at 36.

³⁶⁷HG T-8, at 39; see also HG T-13, at 25 (the primary cost in the FAC is the cost of SNG, propane, and LNG).

control, and which constitute a significant portion of HG's overall operating costs."³⁶⁸

The Parties, in support of the second set of stipulated revisions, state:

1. Hawaii Gas' non-regulated operations utilize approximately 85% of the LPG, while its regulated operations utilize the remaining balance. Under this scenario: (A) the regulated operations acquire 100% of its LPG from the non-regulated operations; and (B) the LPG transportation (both marine and surface), storage, handling, and commodity costs incurred by Hawaii Gas' non-regulated operations are charged proportionately to its regulated operations.³⁶⁹

2. The LPG Transfer Fee is assessed by the non-regulated operations to the regulated operations on a per gallon basis.³⁷⁰

3. The updated LPG Transfer Fee is reflected in Hawaii Gas' LPG Transfer Study (see Revised TGC-1305, Exhibit JAH-7 and Confidential Exhibit JAH-9 (02/14/18)).³⁷¹

³⁶⁸HG T-8, at 41.

³⁶⁹Stipulation, at 24 (citing HG T-8, at 3).

³⁷⁰Stipulation, at 24 (citing HG T-13).

³⁷¹Stipulation, Section III.D.1.a, LPG Transfer Charges, at 24-25 (citing Confidential Second Revised Exhibit HG-1307).

In further support thereto, Hawaii Gas states:

1. Currently, its: (A) foreign shipment costs are adjusted by subtracting the inter-island hauling costs of barging LPG between the islands, and not recovered through the FAC; and (B) expenses related to receiving the foreign shipments, such as port entry fees and pipeline tolls, are likewise not recovered through the FAC.

2. Due in part to the decline in LPG production from the local refineries, it currently imports approximately 85% of its LPG from foreign shipments.

3. With its increasing reliance on imported LPG due to reasons outside of its direct control, it seeks to fully recover the total utility costs associated with shipping LPG in bulk to the State, including the inter-island hauling costs of barging LPG between the islands.³⁷²

4. "The volumes of propane transported are anticipated to grow faster than sales of gas as more supply is procured by imports. Consequentially, excluding transportation costs from the FAC translates into Hawaii Gas not being able to recover the

³⁷²HG T-3, at 12; HG T-8, at 37-38, 42-43, and 46-47; and HG's response to CA-IR-81(a) (12/19/17); see also HG T-13, Section IX, Inclusion of LPG Transfer Costs and SNG Electric Costs in the FAC, at 25-31.

increased costs of propane transportation prior to its delivery to the utility holders."³⁷³

5. The inclusion of the LPG transportation costs in the LPG Transfer Fee component of its FAC: (A) comports with the requirements set forth in HRS § 269-16(g);³⁷⁴ and (B) is supported by its LPG Transfer Study (see Revised TGC-1305, Exhibit JAH-7 and Confidential Exhibit JAH-9 (02/14/18)).

Hawaii Gas, in support of the third set of revisions, represents:

1. It purchases the electricity: (A) its SNG Plant utilizes in manufacturing SNG from Par Hawaii Refining, LLC's co-generation unit, located adjacent to the SNG Plant; and (B) pursuant to a cost-sharing agreement with Par Hawaii Refining, LLC, that is structured to resemble Schedule P rates of HECO's tariff.³⁷⁵ The cost-sharing agreement, in turn, was previously approved by the commission.³⁷⁶

2. Electricity "costs constitute a significant portion of the total SNG plant production costs, other than the feedstock

³⁷³HG T-13, at 29.

³⁷⁴Application, at 17-19; and HG T-8, at 51.

³⁷⁵Application, at 14; HG T-6, at 4-5; and HG T-8, at 38 and 43-44.

³⁷⁶Application, at 14.

costs, and are an integral part of the overall costs for gas production."³⁷⁷

3. "[B]ecause the cost of electricity has fluctuated considerably with oil prices in recent years, HG proposes to include these costs as part of its fuel costs so that it may be automatically adjusted under HG's FAC mechanism so that customers immediately benefit when oil prices are low, and the utility does not unfairly absorb high plant production costs when oil prices are high."³⁷⁸

4. The inclusion of the electricity costs in processing SNG in its FAC: (A) comports with the requirements set forth in HRS § 269-16(g);³⁷⁹ and (B) is supported by its LPG Transfer Study (see Revised TGC-1305, Exhibit JAH-7 and Confidential Exhibit JAH-9 (02/14/18)).

Based on the supporting rationale and the commission's review of Hawaii Gas' LPG Transfer Study (see Revised TGC-1305, Exhibit JAH-7 and Confidential Exhibit JAH-9 (02/14/18)), the commission approves as just and reasonable the stipulated revisions to Hawaii Gas' existing FAC. As additional support thereto, the commission notes that authorizing Hawaii Gas to:

³⁷⁷HG T-8, at 43-44.

³⁷⁸HG T-8, at 44; see also HG T-13, Section IX, Inclusion of LPG Transfer Costs and SNG Electric Costs in the FAC, at 31-33.

³⁷⁹Application, at 17-19; and HG T-8, at 51.

1. Include in the LPG Transfer Fee component of its FAC, the variable portion of the transportation costs for LPG, is consistent with the "changes in the composite cost to the utility for fuel delivered to its service tanks" provision of HAR § 6-60-6(5)(B); and

2. Include in its FAC the electricity costs in processing SNG, is consistent with the "purchased energy" provisions of HAR § 6-60-6.

Lastly, the Parties confirm that the stipulated revisions to Hawaii Gas' existing FAC approved by the commission today will be calculated and included in the gas utility's monthly FAC filings with the commission.³⁸⁰

2.

Other Tariff Changes

The Parties stipulate to certain revisions to Hawaii Gas' existing Tariff Rules Nos. 7(J), 9, 13(A), and 14(H),³⁸¹ as set forth in black-line format of Hawaii Gas' response to PUC-IR-101 (2018) (07/05/18), Revised Attachment 1 (09/17/18).

³⁸⁰Stipulation, at 60 and 62 (citing Confidential/Restricted Third Revised Exhibits HG-813 and HG-817).

³⁸¹Stipulation, Section III.I.J.1, Applicant's Proposed Rule Changes to Rules & Regulations, at 87-91.

The commission's description of the stipulated tariff revisions and Hawaii Gas' supporting rationale is as follows:

1. Tariff Rule No. 7(J), Reconnection Service Charge: Subsection J applies to customers whose service is "discontinued" for the non-payment of bills, to protect against fraud, or for the failure to comply with Hawaii Gas' tariff rules, and such customers seek to reconnect their service.³⁸²

For customers that request the reconnection of service on the same day of the request or during other than normal business hours, the Parties stipulate to: (A) increasing the existing service reconnection charge from \$50 to \$85; and (B) adding an "extra visit charge" that is equal to the quoted charge for service reconnection, if service reconnection cannot be completed for certain specified reasons within the customer's control.³⁸³

Hawaii Gas, in support of the stipulated revisions, represents:

A. The proposed increase allocates the costs for same day or after normal business hours reconnections to the customers

³⁸²HG's response to CA-IR-6 (12/22/17), Attachment 1, Tariff Rule No. 7, at 30-33; and HG's response to PUC-IR-101 (2018) (07/05/18), Revised Attachment 1 (09/17/18), Tariff Rule No. 7, at 30-33.

³⁸³HG T-10, at 10-13; HG's response to CA-IR-6 (12/22/17), Attachment 1, Tariff Rule No. 7, at 30-33; and HG's response to PUC-IR-101 (2018) (07/05/18), Revised Attachment 1 (09/17/18), Tariff Rule No. 7, at 30-33.

that benefit from said service, rather than to all utility customers.

B. The proposed extra visit charge is intended to defray the costs resulting from unproductive visits, whereupon Hawaii Gas is unable to reconnect service at the customer's location due to certain specified reasons within the customer's control.

C. The proposed increase in the same day or after normal business hours service reconnection charge and the proposed extra visit charge are supported by the cost data attached to its Application (see Exhibits HG-1002 and HG-1003 thereto).³⁸⁴

2. Tariff Rule No. 9, Notice: The Parties stipulate to adding electronic communications to the existing methods by which Hawaii Gas may transmit written notices to customers, and customers may transmit written notices to Hawaii Gas.³⁸⁵

Hawaii Gas represents that adding electronic communications "provides customers with [an] additional choice regarding their preferred means of communication with HG."

³⁸⁴HG T-10, at 10-13.

³⁸⁵HG T-10, at 13-14; HG's response to CA-IR-6 (12/22/17), Attachment 1, Tariff Rule No. 9, at 37; and HG's response to PUC-IR-101 (2018)(07/05/18), Revised Attachment 1 (09/17/18), Tariff Rule No. 9, at 37.

Furthermore, "[a]s technology progresses, HG desires to remain flexible regarding customer needs."³⁸⁶

3. Tariff Rule No. 13(A), Main Extension and Service Connection to Service Bona Fide Prospective Customers/Extension Allowance: Subsection A currently provides that Hawaii Gas will construct distribution main extensions and/or service piping to service one or more bona fide prospective permanent residential or commercial customers, if the estimated adjusted revenue therefrom, calculated based on the current base gas rates minus the fuel cost (i.e., the margin), for a three-year period, equals or exceeds the construction cost (referred to as the "line extension allowance" or "Extension Allowance" by Hawaii Gas).³⁸⁷

The Parties stipulate to adding language which defines the three-year period (referred to the "revenue review period" by the Parties), as follows:

The revenue review period for a customer under this Rule 13(A) shall be the last 3 consecutive years of the 5-year period immediately following the Company's anticipated date of the commencement of construction of the customer's distribution main extension and/or service piping.

³⁸⁶HG T-10, at 14.

³⁸⁷HG T-13, at 23-25; HG's response to CA-IR-6 (12/22/17), Attachment 1, Tariff Rule No. 13, at 43-44; and HG's response to PUC-IR-101 (2018) (07/05/18), Revised Attachment 1 (09/17/18), Tariff Rule No. 13, at 43-45.

Stipulation, Revised Attachment 1, CA-IR-6, Tariff Rule No. 13, at 43-45; and HG's response to PUC-IR-101 (2018), Revised Attachment 1 (09/17/18), Tariff Rule No. 13, at 43-45.

The purpose of the stipulated revision is to include language which states that, on a prospective basis, the three-year period currently referenced in Subsection A, refers to the last three consecutive years of the five-year period immediately following Hawaii Gas' anticipated commencement of construction date.³⁸⁸

4. Tariff Rule No. 14(H), Service Connection Maintenance and Facilities on Customer's Premises: For customers that request that service be established on the same day of the request or during other than normal business hours: (A) increasing the existing service connection charge from \$50 to \$85; and (B) adding an "extra visit charge" that is equal to the quoted service charge, if service cannot be established for certain specified reasons within the customer's control.³⁸⁹

³⁸⁸See Stipulation, at 91 (citing Revised Attachment 1, CA-IR-6).

³⁸⁹HG T-10, at 14-17; HG's response to CA-IR-6 (12/22/17), Attachment 1, Tariff Rule No. 14, at 45-47; and HG's response to PUC-IR-101 (2018) (07/05/18), Revised Attachment 1 (09/17/18), Tariff Rule No. 14, at 47-48.

Hawaii Gas, in support of its proposed revisions, represents:

A. The proposed increase allocates the costs for same day or after normal business hours service connections to the customers that benefit from said service, rather than to all utility customers.

B. The proposed extra visit charge is intended to defray the costs resulting from unproductive visits, whereupon Hawaii Gas is unable to establish service at the customer's location due to certain specified reasons within the customer's control.

C. The proposed increase in the same day or after normal business hours service connection charge and the proposed extra visit charge are supported by the cost data attached to its Application (see Exhibits HG-1002 and HG-1003 thereto).³⁹⁰

Based on Hawaii Gas' supporting rationale and cost data, the commission approves as just and reasonable the stipulated revisions to Tariff Rules Nos. 7(J), 9, 13(A), and 14(H).

³⁹⁰HG T-10, at 14-17.

M.

Commission's Approval

Hawaii Gas' existing base rates took effect on June 1, 2010, based on TGC's 2009 calendar test year rate case. Approximately eight years later, on July 1, 2018, its interim increase in revenues based on the 2018 Test Year took effect.

The 8.39% interim increase in revenues over present rates initially authorized by the commission and now permanently authorized by this Decision and Order issued today, represents an approximate 1.048% annual increase in revenues on a non-compounding and non-retroactive bases, during the eight-year period from June 1, 2010 to July 1, 2018 ($8.39\%/8 \text{ years} = 1.048\% \text{ per year}$).

On balance, the increase in revenues of \$8,896,152, or approximately 8.39% over revenues at present rates, provides Hawaii Gas with the opportunity to recover its normalized, reasonable utility expenses and to earn a fair return on its average depreciated rate base balance, consistent with the ratepayers' attendant benefits of continuing to receive gas utility service at just and reasonable rates.

The commission: (1) finds that the Parties' agreements, as reflected in their Stipulation, taken as a whole, appear just and reasonable; and (2) approves the Stipulation, consistent with the terms of this Decision and Order.

That said, the commission's approval of the Stipulation or any of the methodologies used by the Parties in reaching their global settlement of all issues, may not be cited as precedent by any parties in any future commission proceeding. Consistent thereto, the commission makes it clear that it will continue to review future applications based on the existing law and evidence produced.

Because the commission, by this Decision and Order, permanently authorizes the increase in revenues of \$8,896,152, or approximately 8.39% over revenues at present rates, the final increase in revenues is the same amount as the interim increase in revenues previously approved by the commission. Accordingly, no refund is required under HRS § 269-16(d).

Lastly, Hawaii Gas: (1) makes numerous corrections to the Stipulation of the Parties for Full Settlement, initially filed on June 12, 2018; and (2) attempts to correct its June 12, 2018 filing via footnote 1 to its response to PUC-IR-301 (2018) (08/20/18), filed on August 20, 2018. Hawaii Gas, in fact, filed its latest corrections on September 17, 2018, more than three months after the June 12, 2018 filing.

Hawaii Gas asserts certain reservation of rights in some of its post-June 12, 2018 filings.³⁹¹ In the commission's view, Hawaii Gas appears to assert a unilateral, perpetual right to correct any errors it belatedly discovers and identifies in its global settlement agreement with the Consumer Advocate. The commission, in response, rejects Hawaii Gas' asserted reservation of rights. Such a unilateral, perpetual reservation of rights attempts to render meaningless: (1) Hawaii Gas' written, executed certifications filed with commission; and (2) the finality of settlement agreements filed for the commission's review and adjudication.

III.

Summary of Findings and Conclusions

The commission ultimately finds and concludes:

1. The stipulated Test Year revenues, expenses, and average depreciated rate base balance, as set forth in the attached results of operation schedules, are reasonable.
2. The stipulated rate of return of 7.095% is fair.
3. Hawaii Gas is entitled to an increase of \$8,896,152, or approximately 8.39% over revenues at present rates,

³⁹¹See Hawaii Gas' letter, dated June 29, 2018, at 2 n.3, and its Certification, at 2; and Hawaii Gas' Certification, filed on August 20, 2018, at 1.

based on a total revenue requirement of \$114,926,065, and a rate of return of 7.095%.

4. The stipulated final rate design is just and reasonable.

5. The stipulated revisions to Hawaii Gas' FAC are just and reasonable.

6. The stipulated revisions to Hawaii Gas' Tariff Rules Nos. 7(J), 9, 13(A), and 14(H), are just and reasonable.

7. No refund is required under HRS § 269-16(d).

IV.

Orders

THE COMMISSION ORDERS:

1. The Stipulation of the Parties for Full Settlement is approved, consistent with the terms of this Decision and Order. Said Stipulation, in turn, consists of the: (A) Single Filing of Settlement Documents, filed on June 29, 2018; (B) response to PUC-IR-101 (2018), with attachments, excluding Attachment 1, filed on July 5, 2018; (C) Second Revised Exhibit F, filed on August 14, 2018; and (D) Revised Attachment 1, filed on September 17, 2018.

2. The commission's approval of the Stipulation or any of the methodologies used by the Parties in reaching their global settlement of all issues, may not be cited as precedent by any parties in any future commission proceeding.

3. Hawaii Gas may adjust its respective gas utility base rates and charges to produce an increase in revenues of \$8,896,152, or approximately 8.39% over revenues at present rates, as reflected in the attached results of operation schedules, based on a total revenue requirement of \$114,926,065.

4. By December 28, 2018, Hawaii Gas shall file its revised tariff sheets for the commission's review and approval, consistent with the terms of this Decision and Order. For ease of reference, Hawaii Gas shall file its revised tariff sheets in black-lined and clean formats.

5. Hawaii Gas' revised tariff sheets shall not take effect until affirmatively approved by the commission.

6. Hawaii Gas shall calculate and include in its monthly FAC filings with the commission the commission-approved revisions to its FAC.

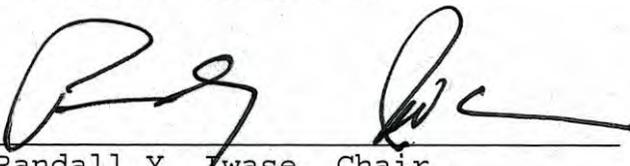
7. Given the need for further commission action in this docket, the commission does not consider this Decision and Order issued today to be its "final order."

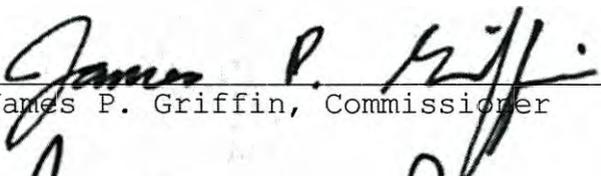
8. The failure to comply with any of the requirements set forth in Ordering Paragraphs Nos. 4, 5, and 6, above,

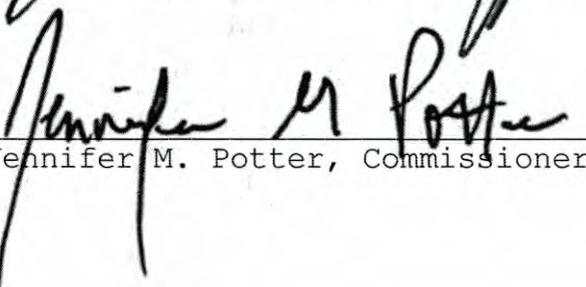
may constitute cause to void this Decision and Order, and may result in further regulatory action as authorized by State law.

DONE at Honolulu, Hawaii DEC 21 2018.

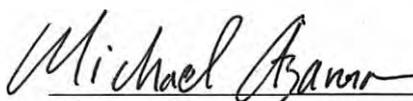
PUBLIC UTILITIES COMMISSION
OF THE STATE OF HAWAII

By 
Randall Y. Zwase, Chair

By 
James P. Griffin, Commissioner

By 
Jennifer M. Potter, Commissioner

APPROVED AS TO FORM:


Michael Azama
Commission Counsel

2017-0105.ljk

Results of Operation
 Test Year Ended December 31, 2018

	<u>Present Rates</u>	<u>Additional Amount</u>	<u>Approved Rates</u>	<u>Percent Revenue Change</u>
Revenue				
Gas Sales	\$ 104,779,740	\$ 8,868,455	\$ 113,648,195	8.46%
Other	1,250,172	27,697	1,277,869	2.22%
Total Revenue	<u>\$ 106,029,913</u>	<u>\$ 8,896,152</u>	<u>\$ 114,926,065</u>	8.39%
Operating & Maintenance Expense				
Fuel Cost	\$ 55,008,654	\$ -	\$ 55,008,654	
Production	8,690,269	-	8,690,269	
Transmission	294,870	-	294,870	
Distribution, Local Storage, Cust. Service	7,713,687	-	7,713,687	
Customer Accounts	1,834,884	9,725	1,844,610	
Sales	1,124,390	-	1,124,390	
Admin & Gen	10,346,553	-	10,346,553	
Subtotal	<u>\$ 85,013,307</u>	<u>\$ 9,725</u>	<u>\$ 85,023,032</u>	
Depreciation	\$ 6,115,077	\$ -	\$ 6,115,077	
Amortization of CIAC	(225,569)	-	(225,569)	
Ratemaking Adjustments	898,984	-	898,984	
Interest Cust Dep	53,598	-	53,598	
Taxes Other Than Income Tax	10,994,610	789,110	11,783,720	
Income Taxes	155,664	2,085,815	2,241,479	
Subtotal	<u>\$ 17,992,364</u>	<u>\$ 2,874,925</u>	<u>\$ 20,867,289</u>	
Total Expenses	<u>\$ 103,005,671</u>	<u>\$ 2,884,650</u>	<u>\$ 105,890,321</u>	
Net Operating Income	<u>\$ 3,024,242</u>	<u>\$ 6,011,501</u>	<u>\$ 9,035,744</u>	
Rate Base	<u>\$ 127,491,870</u>	<u>\$ (135,706)</u>	<u>\$ 127,356,164</u>	
Rate of Return On Rate Base	2.37%		7.09%	

Docket No. 2017-0105
 THE GAS COMPANY, LLC dba HAWAII GAS
 Consolidated Utility

Taxes Other Than Income Tax
 Test Year Ended December 31, 2018

	<u>Present Rates</u>	<u>Approved Rates</u>
Projected 2018 Revenues:		
Gas Sales Revenue	\$ 104,779,740	\$ 113,648,195
CO2 Sales Revenue*	698,978	698,978
Hydrogen Revenue*	-	-
Other Non-Gas Revenue **	284,274	311,971
Total Revenues	<u>\$ 105,762,992</u>	<u>\$ 114,659,144</u>
Revenue Taxes:		
Public Utility Tax 5.885%	\$ 6,217,289	\$ 6,740,255
Public Utility Fee 0.500%	528,232	572,664
Franchise Tax 2.500%	2,619,494	2,841,205
Environmental Response Tax \$0.0190 per Therm Sold	693,544	693,544
Total Revenue Taxes	<u>\$ 10,058,558</u>	<u>\$ 10,847,667</u>
Payroll Taxes	\$ 995,063	\$ 995,063
Taxes Other Than Income Taxes	<u>\$ 11,053,620</u>	<u>\$ 11,842,730</u>
Results of Operations Presentation:		
Taxes Other Than Income Tax	\$ 10,994,610	\$ 11,783,720
Clearing Acct PR Tax Alloc'ns in O&M	59,011	59,011
Total Taxes Other Than Income Taxes	<u>\$ 11,053,620</u>	<u>\$ 11,842,730</u>

* - Hydrogen Revenue is included in Oahu Production as an off-set to expenses.

** - Excludes Intra-Company Rent for Honolulu District in the amount of \$266,921

Docket No. 2017-0105
 THE GAS COMPANY, LLC dba HAWAII GAS
 Consolidated Utility

Income Taxes
 Test Year Ended December 31, 2018

	<u>Present Rates</u>	<u>Additional Amount</u>	<u>Approved Rates</u>
Revenue	\$ 106,029,913	\$ 8,896,152	\$ 114,926,065
Total Expenses	<u>\$ 102,850,006</u>	<u>\$ 798,835</u>	<u>\$ 103,648,841</u>
Income Before Tax	\$ 3,179,907	\$ 8,097,316	\$ 11,277,223
Less: Interest Expense	\$ 2,208,797	\$ (2,351)	\$ 2,206,446
Income Subject to Tax	\$ 971,110	\$ 8,099,668	\$ 9,070,778
Income Tax @ 25.75%	\$ 250,078	\$ 2,085,815	\$ 2,335,893
Less: Amortization Pre-1971 ITC HI Capital GET Credit	<u>\$ 94,414</u>	<u>\$ -</u>	<u>\$ 94,414</u>
Adjusted Income Tax	<u><u>\$ 155,664</u></u>	<u><u>\$ 2,085,815</u></u>	<u><u>\$ 2,241,479</u></u>

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 THE GAS COMPANY, LLC dba HAWAII GAS
 Consolidated Utility

Average Depreciated Rate Base
 Test Year Ended December 31, 2018

	Present Rates			Approved Rates		
	2017	2018	Average	2017	2018	Average
Plant In Service	\$ 245,769,794	\$ 261,510,488	\$ 253,640,141	\$ 245,769,794	\$ 261,510,488	\$ 253,640,141
Less Intangibles	445,158	445,158	445,158	445,158	445,158	445,158
Less Ratemaking Adjustment	1,402,952	1,402,952	1,402,952	1,402,952	1,402,952	1,402,952
Plant In Service	\$ 243,921,683	\$ 259,662,378	\$ 251,792,031	\$ 243,921,683	\$ 259,662,378	\$ 251,792,031
Depreciation Reserve	\$ 78,460,567	\$ 84,740,411	\$ 81,600,489	\$ 78,460,567	\$ 84,740,411	\$ 81,600,489
Less Intangibles	253,963	253,963	253,963	253,963	253,963	253,963
Less Ratemaking Adjustment	168,354	224,472	196,413	168,354	224,472	196,413
Depreciation Reserve	\$ 78,038,250	\$ 84,261,976	\$ 81,150,113	\$ 78,038,250	\$ 84,261,976	\$ 81,150,113
Net Plant In Service	\$ 165,883,434	\$ 175,400,402	\$ 170,641,918	\$ 165,883,434	\$ 175,400,402	\$ 170,641,918
Deductions:						
Adv. For Construction	\$ 664,036	\$ 769,427	\$ 716,732	\$ 664,036	\$ 769,427	\$ 716,732
Contribution In Aid of Construction	11,198,668	11,089,056	11,143,862	11,198,668	11,089,056	11,143,862
Customer Deposits	893,301	893,301	893,301	893,301	893,301	893,301
Accum. Deferred Income Tax	21,798,194	23,714,287	22,756,241	21,798,194	23,714,287	22,756,241
ADIT Ratemaking Adjustment	(178,927)	(178,385)	(178,656)	(178,927)	(178,385)	(178,656)
Regulatory Liability						
2017 Tax Reform Regulatory Liability	18,483,336	18,483,336	18,483,336	18,483,336	18,483,336	18,483,336
Unamortized ITC	-	-	-	-	-	-
Subtotal Deductions	\$ 52,858,608	\$ 54,771,022	\$ 53,814,815	\$ 52,858,608	\$ 54,771,022	\$ 53,814,815
Additions:						
Storage Gas	\$ 555,364	\$ 1,265,427	\$ 910,396	\$ 555,364	\$ 1,265,427	\$ 910,396
Material & Supplies	6,350,209	7,968,335	7,159,272	6,350,209	7,968,335	7,159,272
Subtotal Additions	\$ 6,905,573	\$ 9,233,762	\$ 8,069,668	\$ 6,905,573	\$ 9,233,762	\$ 8,069,668
Depreciated Rate Base	\$ 119,930,399	\$ 129,863,142	\$ 124,896,771	\$ 119,930,399	\$ 129,863,142	\$ 124,896,771
Working Cash			\$ 2,595,099			\$ 2,459,393
Average Depreciated Rate Base			\$ 127,491,870			\$ 127,356,164

CERTIFICATE OF SERVICE

The foregoing order was served on the date of filing by mail, postage prepaid, and properly addressed to the following parties:

DEAN NISHINA
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DIVISION OF CONSUMER ADVOCACY
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Counsel for THE GAS COMPANY, LLC, dba HAWAII GAS

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VICE PRESIDENT, COMMUNITY
ORGANIZING AND ACTION
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47-185A Hui Akepa Place
Kaneohe, HI 96744

Certificate of Service

Page 2

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HENRY CURTIS
VICE PRESIDENT FOR CONSUMER ISSUES
LIFE OF THE LAND
P. O. Box 37158
Honolulu, HI 96837-0158