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Application: A.22-09-
Witness: Manuel Rincon and Jimmy Yen
Chapter: 1

**PREPARED DIRECT TESTIMONY OF MANUEL RINCON
& JIMMY YEN ON BEHALF OF SOUTHERN
CALIFORNIA GAS COMPANY AND SAN DIEGO
GAS & ELECTRIC COMPANY**

(STORAGE OVERVIEW AND PROPOSALS)

September 30, 2022

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1 **CHAPTER 1**

2 **PREPARED TESTIMONY OF MANUEL RINCON AND JIMMY YEN**

3 **(STORAGE OVERVIEW AND PROPOSALS)**

4 **I. PURPOSE**

5 The purpose of this direct testimony on behalf of Southern California Gas Company
6 (SoCalGas) and San Diego Gas & Electric Company (SDG&E) (jointly, Applicants) is to
7 sponsor certain storage and load balancing proposals for this proposed Cost Allocation
8 Proceeding period (2024-2027). The proposals sponsored in this testimony are intended to
9 supplement the Applicant’s currently affective storage and balancing regime, which was most
10 recently addressed in the 2020 Triennial Cost Allocation Proceeding (TCAP) with Decision 20-
11 02-045. The testimony addresses the following items:

- 12 • Total storage capacities
- 13 • Core storage allocations
- 14 • The new Balancing Plus service
- 15 • The balancing function
- 16 • Additional proration scenarios
- 17 • Standby Procurement Charge
- 18 • Storage and Transmission in-kind fuel

19 **II. OVERVIEW OF STORAGE**

20 Underground gas storage provides accessible local supply of natural gas, which is
21 important for system resiliency, emergency response, and mitigating the impacts caused by
22 disruptions in delivery of interstate gas supply. Underground storage also provides system and
23 market flexibility, allowing SoCalGas to offer balancing services as well as allowing customers a
24 physical price hedge on gas commodity costs. The total allocated storage capacities established

1 by the 2020 TCAP with Aliso Canyon withdrawal capacity available are 92.06 billion cubic feet
2 (Bcf) of working inventory, 790 million cubic feet per day (MMcf/d) of summer injection, 500
3 MMcf/d of winter injection, 1,240 MMcf/d of summer withdrawal, and 2,400 MMcf/d of winter
4 withdrawal. Currently, core customers are allocated 82.5 Bcf of inventory, 445 MMcf/d of
5 summer injection, 155 MMcf/d of winter injection, 400 MMcf/d of summer withdrawal, and 2,000
6 MMcf/d of winter withdrawal. The balancing function is allocated 9.56 Bcf of inventory, 345
7 MMcf/d of summer and winter injection, 840 MMcf/d of summer withdrawal, and 400 MMcf/d of
8 winter withdrawal. In this proceeding, SoCalGas identifies the firm capacities of its storage
9 facilities and proposes an allocation of those firm storage capacities to three functions: core,
10 balancing and a new function called balancing plus.

11 **III. TOTAL STORAGE CAPACITIES**

12 The total storage capacities proposed for this cost allocation proceeding are 92.06 Bcf of
13 inventory, 700 MMcf/d of summer injection, 550 MMcf/d of winter injection, 900 MMcf/d of
14 summer withdrawal, and 1,400 MMcf/d of winter withdrawal.

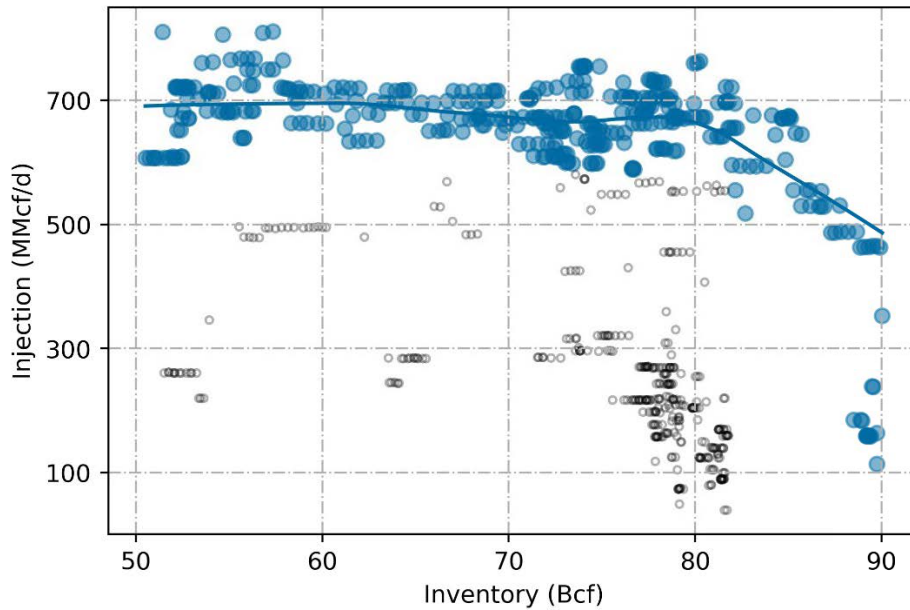
15 **A. Storage Inventories**

16 SoCalGas owns and operates four underground storage facilities in its service territory:
17 Honor Rancho, La Goleta, Playa del Rey, and Aliso Canyon. In Decision (D.)20-11-044, the
18 Commission set the maximum storage level for Aliso Canyon at 34 Bcf pending the modeling
19 results and the final report by the Energy Division. In November 2021, D.21-11-008 increased
20 the maximum storage level for Aliso Canyon to 41.16 Bcf until the completion of Phase 2 and
21 Phase 3 of Investigation (I.) 17-02-002. The proposed total inventory capacity of 92.06 assumes
22 Aliso Canyon will continue to operate at a maximum allowed capacity of 41.16 Bcf during the
23 cost allocation proceeding period. SoCalGas also assumes that Honor Rancho, La Goleta, and
24 Playa del Rey will operate at their current capacities.

1 **B. Injection Capacity**

2 Peak injection capacity can only be achieved at low storage inventory levels. Figure 1
3 shows the relationship between the average daily injection made available to all customers and
4 the posted ending storage balance at all fields between April 1, 2020, and March 31, 2022. The
5 average effective injection capacity was estimated after filtering out the observations marked
6 with a smaller hollow circle, since those observations are often associated with maintenance
7 events and inventory shut-ins. As shown, the proposed summer injection capacity of about 700
8 MMcf/d was on average sustained over the observation period until inventory levels reached
9 approximately 82 Bcf. During the winter, injection capacity declines due to a combination of
10 higher inventory levels and scheduled off-season maintenance events. Between April 1, 2020,
11 and March 31, 2022, the average injection capacity over the winter months of November to
12 March was approximately 550 MMcf/d.

1 **Figure 1: Injection Capacity and Total Inventory Between April 2020 and March 2022**



2
3 **Figure 1: Injection Capacity and Total Inventory Between April 2020 and March 2022.** The blue
4 marks were used to estimate the summer injection capacity. The black marks were filtered out of the
5 calculation as they are often associated with maintenance events and inventory shut-ins. Source:
6 SoCalGas Envoy Capacity Utilization, SoCalGas Envoy Daily Operations.

7 **C. Withdrawal Capacity**

8 Withdrawals from Aliso Canyon are under a Commission imposed Aliso Canyon
9 Withdrawal Protocol (Protocol).¹ Under the Protocol, the use of Aliso Canyon's withdrawal
10 capability is contingent on meeting at least one of four conditions. Withdrawal may occur if
11 preliminary low Operational Flow Order (OFO) calculations result in a Stage 2 low OFO or
12 higher for the applicable gas day; inventory at Aliso Canyon is above 70 percent of its maximum
13 allowable inventory between February 1 and March 31; inventories at Honor Rancho and/or La

¹ On July 23, 2019, the Commission's Energy Division issued the currently effective version of the Aliso Canyon Withdrawal Protocol, which specifies the circumstances and conditions when SoCalGas may execute a withdrawal operation from the Aliso Canyon storage field. Full details describing the protocol are available at: https://www.cpuc.ca.gov/-/media/cpuc-website/files/uploadedfiles/cpucwebsite/content/news_room/newsupdates/2020/withdrawalprotocol-revised-april2020clean.pdf.

1 Goleta storage fields fall below enumerated preset limits; or there is an imminent and identifiable
2 risk of gas curtailment created by an emergency condition that would impact public health and
3 safety or result in curtailments of electric load that could be mitigated by withdrawals from Aliso
4 Canyon. During the winter months of November 2020 to March 2021 and November 2021 to
5 March 2022, 153 out of 302 days met the conditions set by the Protocol. The average
6 withdrawal capacity made available to customers over the two winters was approximately 1,400
7 MMcf/d. The average withdrawal capacity made available to customers on the winter days that
8 met a protocol condition was about 1,850 MMcf/d. The average withdrawal capacity on the
9 remaining days was approximately 900 MMcf/d. The proposed winter withdrawal capacity of
10 1,400 MMcf/d reflects the mean capacity observed over the two winters.

11 During the summer months of April 2020 to October 2020 and April 2021 to October
12 2021, the Protocol was triggered on 35 out of 428 days. The proposed summer withdrawal
13 capacity of 900 MMcf/d approximates the average posted withdrawal capacity over the two
14 summers. The average withdrawal capacity on the summer days that met the conditions set by
15 the Protocol was about 1,650 MMcf/d. The average withdrawal capacity over the remaining
16 summer days was approximately 800 MMcf/d.

17 **IV. CORE STORAGE ALLOCATIONS**

18 The applicants propose an allocation to the core of 72 Bcf of storage inventory, 336
19 MMcf/d of summer injection, and 1,140 MMcf/d of winter withdrawal. The proposal also
20 allocates 125 MMcf/d of winter injection to the core, and 250 MMcf/d of summer withdrawal.
21 The 72 Bcf of inventory capacity will help bridge the gap between the 1-in-35 cold year winter
22 demand by core customers and the core's winter interstate firm capacity commitments. The
23 estimate was made using data from the 2022 California Gas Report (CGR) and guided by D.04-

09-022, which approved core interstate firm capacity purchases from 100% to 120% of the annual average core demand, as shown in Table 1.

Table 1: Cold Year 1-in-35 Core Inventory Requirement

| | Average Year Demand MMcfd | Cold Year 1-in-35 Demand MMcfd | Total Inventory MMcf |
|---------|----------------------------------|---------------------------------------|-----------------------------|
| 2024-27 | 988 | 1,465 | 72,000 |

Table 1: Cold Year 1-in-35 Core Inventory Requirement. The cold year inventory requirement of 72,000 MMcf equals the daily winter demand on a cold 1-in-35 year minus 100% of the average year demand times 151 days of winter. The 100% is the lowest point between the 100% and 120% of the approved interstate capacity purchases.

A minimum of 336 MMcf/d of summer injection is needed to fill the 72 Bcf of inventory over the 214 days of the injection season. The 1,140 MMcf/d of winter withdrawal is needed to meet the highest 1-in-35 peak cold day core demand of 3,355 MMcf/d estimated in the 2022 CGR with contracted interstate supplies and spot purchases. As discussed in the prior section, the total winter withdrawal capacity reflects the average withdrawal available over the last two winters. SoCalGas used average capacity instead of peak capacity to reduce the amount of proration. As will be explained in the Additional Scenarios Section, the allocated capacities will be prorated upwards when additional capacity becomes available and downwards when capacity decreases. For example, when the available withdrawal capacity reaches 2,309 MMcf/d, as it did on December 13, 2021, when the Aliso Canyon Withdrawal Protocol was triggered, the core will receive additional capacity and the need for spot purchases will be alleviated. If peak core demand occurs when the withdrawal capacity made available to customers is 2,309 MMcf/d, the need for spot purchases will be significantly reduced because the core will have access to approximately 1880 MMcf/d, or about 81% of the total posted capacity.

1 A portion of the core storage assets will continue to be made available to wholesalers
2 serving core customers in the SoCalGas service territory. D.20-02-045 allocated 3% of the core
3 storage assets to these wholesale customers. Southwest Gas Corporation received 2% of the
4 inventory, injection, and withdrawal capacity. The City of Long Beach received 1%. The
5 Applicants propose to maintain the same allocations over the cost allocation proceeding period.

6 **V. BALANCING PLUS STORAGE ALLOCATIONS**

7 The demand for balancing services is heterogeneous across customers. Customers with
8 predictable demands are better positioned to match their usage with scheduled deliveries than
9 customers with variable and unpredictable demands. To better serve all customers, SoCalGas is
10 proposing a new Balancing Plus service. If approved, customers with greater balancing needs
11 will have access to an additional tool for managing their loads by purchasing inventory capacity
12 along with optional firm injection and withdrawal. Buyers of Balancing Plus inventory capacity
13 will also have access to interruptible injection and withdrawal if they have storage capacity or
14 inventory in their Balancing Plus account. Buyers may also manage their regular imbalance
15 position by transferring inventories in and out of their contracted Balancing Plus capacity during
16 the imbalance trading period.

17 Balancing Plus services will be sold for a minimum of one month and a maximum of
18 eighteen months in monthly increments. Sales will be made via auctions conducted before the
19 start of the monthly imbalance trading period.² To prevent oversubscribing, storage capacities
20 offered on any given auction may be less than the full capacities allocated to the Balancing Plus
21 service. For example, Balancing Plus storage capacity will not be sold for a month if it

² The Utility System Operator currently provides a monthly imbalance service for customers to trade their monthly imbalances with other customers when their usage differs from their transportation deliveries to the Utility's system. Details are found in Schedule No. G-IMB.

1 impinges on the prior month's imbalance carried into that month. Results will be posted no
2 later than the end of the first business day of the imbalance trading period. The auctions will
3 have a reservation price equal to the embedded cost of the assets.

4 Unsold Balancing Plus assets will default to providing regular balancing services to all
5 transportation customers under the same conditions as regular balancing assets. Accordingly, all
6 Balancing Plus assets will initially be paid for by all transportation customers. However, all
7 revenues received from the sale of Balancing Plus services will be credited to a memorandum
8 account and will be used to reduce the effective cost of storage assets charged to transportation
9 customers.³ Because revenues will solely benefit transportation customers, and the assets will be
10 sold exclusively via auction on a predetermined schedule at a reservation price equal to the
11 embedded cost, there is no need to align incentives between customers and the utility with a
12 shareholder/ratepayer sharing mechanism.

13 The Applicants propose to allocate 8.3 Bcf of storage inventory to the Balancing Plus
14 service, 54 MMcf/d of summer injection, 71 MMcf/d of winter injection, and 142 MMcf/d of
15 summer withdrawal. The Balancing Plus service should not be allocated any firm withdrawal
16 during the winter.

17 **VI. THE BALANCING FUNCTION**

18 The balancing function refers to the service provided by the System Operator to
19 accommodate imbalances between a customer's actual usage and the gas it schedules for
20 delivery to the system. These aggregate imbalances result in either under deliveries or over
21 deliveries of gas to the system. SoCalGas utilizes high and low Operational Flow Orders (OFOs)

³ Further details regarding the mechanics of the proposed memorandum account can be found in the Prepared Direct Testimony of Nasim Ahmed in Ch. 6.

1 to limit imbalance flows in and out of storage to the physical injection and withdrawal capacities
2 allocated to the balancing function. A high OFO is called whenever expected over-deliveries
3 exceed the allocated injection capacity. A low OFO is called whenever expected under-
4 deliveries exceed the allocated withdrawal capacity. Unlike injections and withdrawals,
5 imbalance inventory constraints are only weakly tied to the storage capacity allocated to the
6 balancing function. In the current regime, imbalance inventory is limited solely by an end of the
7 month inventory constraint of plus or minus 8% of the cumulative demand during the flow
8 month.

9 The end of the month constraint is imperfect and often gives balancing customers the
10 ability to change their aggregate inventory position by an amount greater than the storage
11 capacity allocated to the balancing function. For example, the average daily demand posted on
12 Envoy from April 2021 to March 2022 was 2,420 MMcf/d. The tolerance band resulting from a
13 31-day month with an average demand of 2,420 MMcf/d is approximately plus or minus 6,000
14 MMcf. Therefore, under the current end of the month constraint customers can inject 12,000
15 MMcf of imbalance gas over a storage cycle by moving from an aggregate negative imbalance
16 position of 6,000 MMcf to an aggregate positive imbalance position of 6,000 MMcf. Imbalance
17 customers, then, have effective command over 12,000 MMcf of storage capacity, an amount that
18 significantly exceeds their current storage allocation.

19 Yet, in the same scenario, by the end of the month balancing customers can only
20 physically store 6,000 MMcf of positive imbalance gas without incurring penalties, even if they
21 are allocated a greater capacity. If balancing customers are allocated 9,600 MMcf, they must
22 leave 3,600 MMcf of their allocated capacity unused at the end of the month or incur penalties.

1 A different inefficiency occurs on the negative side of the band. When customers
 2 accumulate a negative imbalance, they may utilize gas stored by a different set of customers, and
 3 if their cumulative imbalance remains within the tolerance band, balancing customers have no
 4 obligation to re-inject the gas. As a result, the gas in storage is in effect promised to two sets of
 5 customers; first, to the storage customer that injected it, and second, to the balancing customers
 6 that are given access to it. If storage inventories fall to the point where both sets of customers
 7 require use of the same gas from storage, SoCalGas would be unable to fulfill both obligations.
 8 As explained in the Core Storage Allocation Section, core customers may require access to their
 9 full assets to meet a 1-in-35 cold year demand. Under the current regime, some of those assets
 10 may be utilized by balancing customers.

11 Table 2 uses the daily demand posted on Envoy to estimate the end of the month
 12 imbalance limits during the 2021-2022 winter. As shown, under the current rules, balancing
 13 customers entered the winter with a physical end of October upper limit of approximately 5,600
 14 MMcf despite being allocated 9,600 MMcf. Yet, from November 1 to the end of March
 15 balancing customers could have withdrawn about 11,500 MMcf by potentially moving from a
 16 positive imbalance of 5,600 MMcf to a negative imbalance of 5,900 MMcf, which would have
 17 included gas stored by other customers.

18 **Table 2: Upper and Lower End of the Month Bounds**

| Month | Demand | Lower Bound | Upper Bound |
|---------|--------|-------------|-------------|
| 2021-10 | 69,983 | -5,599 | 5,599 |
| 2021-11 | 70,741 | -5,659 | 5,659 |
| 2021-12 | 96,413 | -7,713 | 7,713 |
| 2022-1 | 88,653 | -7,092 | 7,092 |
| 2022-2 | 76,045 | -6,084 | 6,084 |
| 2022-3 | 73,768 | -5,901 | 5,901 |

19 **Table 2: Upper and Lower End of the Month Bounds.** The bounds represent 8% of the cumulative
 20 monthly demand. All values are in MMcf. Source: SoCalGas Envoy Daily Operations report.

1 To improve the existing regime, Applicants are proposing a modification to the high and
 2 low OFO declaration calculations. The proposed calculations are intended to solve the described
 3 problems by explicitly adding an inventory capacity constraint to the OFO triggers. For the high
 4 OFO, a declaration should occur when the expected positive daily imbalance exceeds the sum of
 5 the injection capacity allocated to the balancing function and the unsold injection capacity
 6 allocated to the Balancing Plus service, or the sum of the storage capacity allocated to the
 7 balancing function and the unsold storage capacity allocated to the Balancing Plus service less
 8 the cumulative positive imbalance inventory as shown in the following equation:

$$9 \quad \text{High OFO Trigger} = \min \left(\overbrace{B_{inj.} + B_{unsold\ inj.}^+}^{\text{injection constraint}}, \overbrace{\max(B_{cap.} + B_{unsold\ cap.}^+ - \text{Pos. Imb. Inv.}, 0)}^{\text{inventory constraint}} \right)$$

10 The first term of the equation limits daily positive imbalances to the injection assets
 11 allocated to the balancing function plus the unsold injection allocated to the Balancing Plus
 12 service. The second term prevents the cumulative positive imbalance from exceeding the
 13 inventory capacity allocated to the balancing function plus the unsold inventory capacity
 14 allocated to the Balancing Plus service.

15 For the low OFO, a declaration should occur when the expected daily negative imbalance
 16 exceeds the sum of the withdrawal capacity allocated to the balancing function and the unsold
 17 withdrawal capacity allocated to the Balancing Plus service, or the difference between 2,500
 18 MMcf and the cumulative negative imbalance inventory as shown in the following equation:

$$19 \quad \text{Low OFO Trigger} = \min \left(\overbrace{B_{wd.} + B_{unsold\ wd.}^+}^{\text{withdrawal constraint}}, \overbrace{\max(2.5B_{cf} - \text{Neg. Imb. Inv.}, 0)}^{\text{inventory constraint}} \right)$$

20 The first term of the equation limits daily negative imbalances to the withdrawal assets
 21 allocated to the balancing function and the unsold withdrawal allocated to the Balancing Plus

1 service. The second term limits cumulative negative imbalances to no more than 2,500 MMcf.
 2 The 2,500 MMcf caps the amount of gas that balancing customers can in aggregate borrow from
 3 other storage customers to approximately 110% of the average daily demand estimated in the
 4 2022 CGR.

5 If the OFO triggers are modified as proposed, the end of the month (EOM) 8% tolerance
 6 band is no longer needed to limit the aggregate utilization of storage inventory capacity by
 7 balancing customers. Nevertheless, an end of the month constraint is still required to ensure that
 8 a small subset of balancing customers do not capture an amount of inventory capacity that is
 9 disproportionate to their expected demand. If the OFO formulas are modified, SoCalGas
 10 proposes to determine the end of the month tolerance band with two formulas. On the positive
 11 side, the limit should be determined by dividing the inventory capacity allocated to the balancing
 12 function plus the unsold inventory capacity allocated to the Balancing Plus service by the
 13 expected cumulative monthly demand over the cost allocation proceeding period. The expected
 14 cumulative monthly demand is the average daily demand derived from the 2022 CGR times the
 15 number of days in the flow month (DIM). On the negative side, the limit should be determined
 16 by dividing 2.5 Bcf by the expected cumulative monthly demand over the cost allocation
 17 proceeding period.

$$18 \quad \text{EOM Tolerance} = + \frac{B_{cap.} + B_{unsold\ cap.}^+}{E[\text{monthly demand}]} = + \frac{B_{cap.} + B_{unsold\ cap.}^+}{\frac{2.27\text{Bcf} * \text{DIM}}{\text{CGR 2024-27 Estimate}}}$$

$$19 \quad \text{EOM Tolerance} = - \frac{2.5\text{Bcf}}{E[\text{monthly demand}]} = - \frac{2.5\text{Bcf}}{\frac{2.27\text{Bcf} * \text{DIM}}{\text{CGR 2024-27 Estimate}}}$$

The proposed tolerance band allows the full utilization of the physical inventory capacity allocated to storage customers while preventing a few imbalance customers from capturing a disproportionate amount of inventory allocated to the Balancing function.

SoCalGas proposes the allocation of 9.6 Bcf of inventory capacity, 300 MMcf/d of summer injection, 350 MMcf/d of winter injection, 500 MMcf/d of summer withdrawal, and 226 MMcf/d of winter withdrawal to the balancing function. As described in the Additional Scenarios section, when withdrawal capacity reaches 2,309 MMcf/d, as it did on December 13, 2021, the balancing function will have access to approximately 16% of the posted capacity, or about 370 MMcf/d of withdrawal.

VII. ADDITIONAL SCENARIOS

Table 4 summarizes the proposed allocation of storage assets across customer classes.

Table 4: Summary of Capacity Allocations

| | Inventory | Injection | | Withdrawal | |
|-----------|-----------|-----------|--------|------------|--------|
| | | Summer | Winter | Summer | Winter |
| Core | 72.000 | 0.336 | 0.125 | 0.250 | 1.140 |
| Balance | 9.600 | 0.300 | 0.350 | 0.500 | 0.226 |
| Balance+ | 8.300 | 0.054 | 0.071 | 0.142 | 0.000 |
| Wholesale | 2.160 | 0.010 | 0.004 | 0.008 | 0.034 |
| Total: | 92.060 | 0.700 | 0.550 | 0.900 | 1.400 |

Table 4: Summary of Capacity Allocations. All the values are in Bcf.

On days when operationally available withdrawal capacity differs from the nominal capacity allocated in Table 4, such as when the Aliso Canyon Withdrawal Protocol is met, SoCalGas should prorate upwards or downwards the available withdrawal capacity for each storage function using Table 4 as the reference base case. The same process should be used for all changes in the total storage inventory, injection, or withdrawal capacities. Table 5 shows the

1 approximate percentage of the total posted capacity that will be made available to each customer
 2 class under the current proposal.

3 **Table 5: Allocations as Percentage of Posted Capacity**

| | Inventory | Injection | | Withdrawal | |
|-----------|-----------|-----------|--------|------------|--------|
| | | Summer | Winter | Summer | Winter |
| Core | 78.2% | 48.0% | 22.7% | 27.8% | 81.4% |
| Balance | 10.4% | 42.9% | 63.6% | 55.6% | 16.1% |
| Balance+ | 9.0% | 7.7% | 12.9% | 15.8% | 0.0% |
| Wholesale | 2.3% | 1.4% | 0.7% | 0.9% | 2.4% |

4 **Table 5: Allocations as Percentage of Posted Capacity.** The percentages were estimated using values in
 5 Table 4. For example, core customers receive 125/550, or 22.7 percent, of the posted winter injection
 6 capacity. For readability, numbers in the table are rounded to one decimal point and may not add to
 7 100%.

8 **VIII. STANDBY PROCUREMENT CHARGE**

9 The Standby Procurement Charge associated with the modified end of the month
 10 tolerance band should be 150% of the highest daily Southern California Citygate index price
 11 instead of 150% of the highest Southern California Border index price. When transportation
 12 customers underdeliver, the resulting demand shortfall is met with gas in the Citygate pool, not
 13 with Border gas. Therefore, the penalty associated with the under delivery should move in line
 14 with the cost of gas at the Citygate. Other index-based tariff rates already use the Citygate rather
 15 than the Border index price. For example, the Daily Balancing Standby Rate associated with the
 16 Stage 5 Low OFOs, Emergency Flow Order, and curtailments, is based on the Citygate index
 17 price.

18 **IX. STORAGE AND TRANSMISSION IN-KIND FUEL**

19 In Phase 2 of the 2009 Biennial Cost Allocation Proceeding SoCalGas requested
 20 authorization to recover the non-natural-gas-fuel costs of electricity powered compressor stations
 21 in the storage fields by adding a calculated equivalent-gas-compressor-fuel component to the

1 actual gas compressor fuel. The mechanism was adopted, and SoCalGas was authorized to
2 estimate the equivalent-gas-compressor-fuel-volume using the following formula:

$$3 \quad \frac{\text{Electricity Cost}}{\text{Gas Daily So. Cal. Border Price}} = \text{Equivalent Gas Compressor Fuel}$$

4 As the equivalent-gas-compressor-fuel is collected, SoCalGas sells the gas in the
5 marketplace, and uses the revenues to pay for the fuel costs of electric compressors in the storage
6 fields.

7 The mechanism is simple and effective and therefore its use should be extended to
8 recover all non-natural-gas fuel costs of compressors in the storage fields and the backbone
9 transmission system. For compressors at storage fields, the numerator in the Equivalent Gas
10 Compressor Fuel formula should be changed from "Electricity Cost" to "Non-Natural-Gas-Fuel-
11 Costs." This change will allow for the recovery of costs associated with all alternative future
12 fuel sources, such as hydrogen.

$$13 \quad \frac{\text{Non Natural Gas Fuel Cost}}{\text{Gas Daily So. Cal. Border Price}} = \text{Equivalent Gas Compressor Fuel}$$

14 A similar mechanism should be used to recover non-natural gas fuel costs incurred by
15 customers transporting gas over the backbone transmission system. First, the modified formula
16 should be used to calculate the equivalent-natural-gas-compressor-fuel volume. The volume
17 should then be added to the actual gas fuel used by the system to estimate the transmission in-
18 kind energy charges and later sold in the market to recover all non-natural-gas fuel costs. In
19 accordance with D.11-04-032, SoCalGas will continue to update the in-kind energy charges in
20 Schedule G-BTS quarterly using data from the prior quarter. As described in Advice Letter

1 4304⁴, quarter to quarter volatility will remain limited since any adjustment for cumulative over
2 and under deliveries are limited to 25% of the lagged quarterly actual amount, and any amounts
3 over this 25% limit are only included in the following quarter's adjustment.

4 **X. INFORMATION SYSTEM MODIFICATIONS AND COSTS**

5 The presented proposal requires information system enhancements to SoCalGas Envoy
6 and the Special Contract Billing System. Much of the implementation can leverage existing
7 modules. The estimated cost of these enhancements is \$1.6 million. The project would
8 commence upon CPUC approval and will take approximately 12 months to complete. Cost
9 recovery details can be found in the testimony of Nasim Ahmed (Chapter 6).

⁴ SoCalGas Advice Letter 4304 (December 28, 2011) *available at:*
<https://tariff.socalgas.com/regulatory/tariffs/tm2/pdf/4304.pdf>.

1 **XI. QUALIFICATIONS**

2 My name is Manuel Rincon. I am employed by SoCalGas as a Senior Market Advisor.
3 My business address is 555 West Fifth Street, Los Angeles, California, 90013-1011. I received
4 Bachelor's degrees in Economics and Psychology and a Master's degree in Economics from the
5 University of Southern California. At SoCalGas, I have worked in the Gas Acquisition and the
6 Energy Markets and Capacity Products Departments. I provided testimony in the Application of
7 Southern California Gas Company and San Diego Gas & Electric Company for Authority to
8 Revise their Curtailment Procedures.

9 My name is Jimmy Yen. I am employed by SoCalGas as a Storage Products Manager.
10 My business address is 555 West Fifth Street, Los Angeles, California, 90013-1011. I received a
11 bachelor's degree in Mathematics/Applied Science from the University of California, Los
12 Angeles. At SoCalGas, I have worked in the Gas Acquisition and the Energy Markets and
13 Capacity Products Departments. I have not previously testified before the Commission.