Exhibit No.:
Application No: A.18-07-024
Witness: Sim-Cheng Fung
Chapter: 16a

PREPARED REBUTTAL TESTIMONY OF

SIM-CHENG FUNG

ON BEHALF OF SOUTHERN CALIFORNIA GAS COMPANY

AND SAN DIEGO GAS & ELECTRIC COMPANY

(EMBEDDED COSTS)

May 2019

(Errata dated June 3, 2019)

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CHAPTER 16a

PREPARED REBUTTAL TESTIMONY OF SIM-CHENG FUNG

(EMBEDDED COSTS)

I. INTRODUCTION

My prepared rebuttal testimony addresses the arguments, positions, and recommendations contained in intervenor testimonies submitted by The Utility Reform Network (TURN); Public Advocates Office (Cal PA); and City of Long Beach, Energy Resources Department (Long Beach) regarding SoCalGas' and SDG&E's transmission and storage embedded cost studies.

II. SUMMARY

Cal PA does not oppose Applicants' embedded cost study methodology and allocation of costs, as proposed in Chapter 8 (Fung), but does oppose the allocation of 21 billion cubic feet of gas inventory associated with the new Reliability function, as proposed in Chapter 1 (Dandridge), and the $8.3 million in costs associated with that function.[1] Cal PA also recommends that Applicants update their cost studies with 2018 recorded data,[2] which is not feasible and practical from the Applicants' standpoint. I address these two points of contention, but I view Cal PA as largely supportive (or not in opposition) of Applicants' embedded cost studies. I also address Cal PA's recommendation related to the Aliso Canyon Turbine Replacement Project costs.

[1] See Ex. PubAdv-06 (Kjensli) (April 12, 2019), pp. 2-3.

[2] See Ex. PubAdv-07 (Sabino) (April 12, 2019), p. 3.

The bulk of my rebuttal testimony addresses TURN's testimony. TURN makes the following recommendations:[3]

1) the embedded cost of transmission in 2016 should be increased by approximately $53.5 million, and the embedded cost of storage should be increased by $37.2 million as a result of the following three changes:

   a) exclude Asset Retirement Obligations from the plant data used to allocate return, income taxes, and property taxes.

   b) directly assign Customer Advances for Construction (a subtraction from rate base) to distribution because none of these advances are related to other functions.

   c) allocate Administrative and General expenses and general plant by labor without a 50% reduction factor.

2) escalate non-Pipeline Safety Enhancement Plan transmission costs and non-Aliso Canyon Turbine Replacement storage costs. TURN's proposed escalation would increase the cost of transmission by $30 million and storage by $15 million.

3) functionalize compressor station operations and maintenance costs to backbone transmission only to be consistent with Applicants' treatment of compressor station plant. TURN's method would increase costs allocated to backbone transmission customers by $5.9 million, and reduce costs allocated to local transmission customers (which includes core customers) by the same amount.

[3] See Prepared testimony of William Perea Marcus on behalf of The Utility Reform Network (April 12, 2019) (TURN/Marcus), pp. 1-2.

Through its reliance on technical plant accounting concepts, TURN attempts to find fault with Applicants' embedded cost study methodology and results, so that TURN can justify allocating more transmission and storage costs to noncore customers. However, there are problematic aspects to TURN's analysis that lead Applicants to conclude that TURN's recommendations do not result in more reasonable outcomes than those produced by Applicants' studies.

Long Beach recommends that if SoCalGas continues to rely on historical embedded costs in future TCAPs, then SoCalGas should provide a summary of changes to its embedded costs between the prior and current TCAP, and a list of major drivers of the changes to each Federal Energy Regulatory Commission (FERC) account in which recorded costs changed significantly.[4] Long Beach's recommendation should be rejected because explaining changes in capital expenditures, operating and maintenance expenses over a three year period for individual FERC accounts is outside the scope of this proceeding. The embedded cost studies simply use recorded costs as inputs for purposes of proposing an allocation of costs; the studies do not determine the level of cost themselves.

III. REBUTTAL TO TURN'S PROPOSALS

A. The Commission Should Reject TURN's Argument that Asset Retirement Obligations Should Be Excluded from the Plant Data Used to Allocate Return, Income Taxes, and Property Taxes

TURN uses a technical plant accounting concept known as the Asset Retirement Obligations to argue that Applicants' embedded cost studies are allocating too much costs to core customers. Asset Retirement Obligations are capitalized costs of a utility's legal obligations

[4] See Testimony on behalf of the City of Long Beach, Energy Resources Department (April 12, 2019) (Long Beach Direct), p. 1-2.

related to retirement costs which are directly linked to storage, transmission, distribution and general plant. Certain assets cannot simply be abandoned, but require special decommissioning. When a facility is decommissioned, a utility has an obligation to clean-up the site. The amount expected to be spent on the clean-up will be the basis for the Asset Retirement Obligation. Therefore, it is appropriate to include Asset Retirement Obligations in determining functional cost allocation factors.

Applicants disagree with TURN's proposal to exclude Asset Retirement Obligations from the plant data used to allocate return, income taxes, and property taxes. Including Asset Retirement Obligations in the embedded cost study maintains consistency with the data published in SDG&E's and SoCalGas' FERC Form 1 and FERC Form 2, respectively. For fiscal years beginning after June 15, 2002, the Financial Accounting Standards Board (FASB) issued Statement 143[5] to provide a mechanism to improve companies' balance sheets to more clearly reflect the economic realities of the retirement obligations directly associated with each asset category. The changes are particularly significant for capital-intensive companies such as SoCalGas and SDG&E. With the emphasis toward a more balance-sheet-oriented focus in accounting, FASB has fixed its attention on how entities account for obligations associated with the retirement of tangible long-term assets.[6] Applicants have complied with this accounting requirement in their FERC Forms 1 and 2.

Furthermore, Asset Retirement Obligations are directly related to assets used to provide utility services to existing utility customers and therefore must be included in the cost allocation process, which relies on "cost causation" as a guiding principle. In other words, Asset

[5] FASB Statement 143 is now referred to as Accounting Standards Codification 410.

[6] http://www.journalofaccountancy.com/issues/2001/dec/accountingforassetretirementobligations.html

Retirement Obligations need to be reflected in the allocation percentages so that customers benefitting from storage, transmission, and distribution services are appropriately charged for services rendered. By excluding Asset Retirement Obligations in the allocation percentages for storage, transmission, and distribution, TURN is essentially recommending that current customers do not have to bear any future obligations which are directly caused by existing assets that are being used to serve existing customers. This concept of assigning costs associated with assets (including retirement, depreciation, and removal costs) to the generation of customers that receive service from those assets, is a fundamental concept in utility plant accounting, sometimes referred to as "intergenerational equity." Without getting mired in these plant accounting concepts, based on my review of TURN's analysis, TURN's exclusion of Asset Retirement Obligations from storage, transmission, and distribution allocation factors would violate intergenerational equity, such that future generations of customers would have to subsidize the current generation.

Moreover, removing Asset Retirement Obligations from the embedded cost study would result in an ongoing subsidy for distribution customers (mainly core) by storage and transmission customers (mainly noncore), because SoCalGas' and SDG&E's percentage of Distribution Asset Retirement Obligations are 88% and 96% of total Asset Retirement Obligations, respectively. Because TURN's recommendation would ultimately result in cross-subsidization of costs from one customer class to another, and cross-subsidization from one generation of customers to another, it does not result in a more equitable or reasonable cost allocation than the one proposed by Applicants.

B. The Commission Should Reject TURN's Proposed Treatment of Customer Advances for Construction

As it did with Asset Retirement Obligations, TURN relies on another plant accounting concept, Customer Advances for Construction, to attempt to justify a larger cost allocation to noncore customers. TURN states that Customer Advances for Construction are an offset to (or subtraction from) rate base that can be directly assigned and therefore should not be allocated because it is known that Customer Advances for Construction are entirely distribution-related.[7] TURN recommends that Customer Advances for Construction be removed from the general allocation by rate base, and instead, be directly assigned to distribution before the rest of the rate base is allocated.[8] This would result in an increase to transmission costs ($2,458,000 for SoCalGas and $71,000 for SDG&E) and to storage costs ($1,361,000 for SoCalGas),[9] which again would have noncore customers bearing more of the costs. See Table 1, Column (A).

Table 1
Increase in Embedded Cost Due To Excluding CAC

	(A) TURN's Analysis	(B) SoCalGas/SDGE	(C) (A) / (B)
	($000)	($000)	
SoCalGas' Transmission	$2,458	$1,376	179%
SoCalGas' Storage	$1,361	$690	197%
SDG&E's Transmission	$71	$38	187%

TURN's proposed treatment of Customer Advances for Construction would not appear to materially impact the embedded cost study results. However, I attempted to replicate TURN's analysis to reach TURN's figures. My analysis, which attempted to isolate TURN's proposed

[7] TURN/Marcus at 10 (Section II.B.2).

[8] *Id.*

[9] *Id.*

Customer Advances for Construction adjustment, resulted in even smaller cost impacts, as shown in Table 1, Column (B). Therefore, Applicants do not recommend any adjustments to the embedded cost study based on TURN's treatment of Customer Advances for Construction.

C. TURN's Proposed Treatment of Administrative and General (A&G) Expenses and General Plant Should Be Rejected

TURN claims that Applicants allocate A&G expenses and costs of general plant by labor, but then assign to transmission and storage only 50% of the labor allocation, which results in distribution customers subsidizing transmission and storage customers.[10] TURN quantifies this impact as $30 million of transmission-related costs to distribution customers ($23.8 million for SoCalGas and $6.2 million for SDG&E) and $23.8 million in SoCalGas' storage costs."[11]

Applicants' A&G methodology was used in prior cost allocation proceedings, all of which resulted in settled outcomes for embedded costs where the results of this methodology were part of those outcomes (*i.e.*, 2009 BCAP decision, D.09-11-006, the 2011 TCAP decision, D.14-06-007 and also the 2016 TCAP, Phase 1 decision, D.16-06-039). These prior settlements are not precedent-setting and do not represent resolution of substantive issues, such as which methodology is more reasonable and appropriate. However, they are indicative of compromises reached by settling parties. On balance, Applicants' A&G allocation attempts to reach a balanced allocation of a significant cost that is difficult to assign to specific functional categories. Adoption of TURN's position would assign 100% of the labor allocation of A&G to transmission and storage customers, which would result in price spikes for transmission and storage rates, relative to the outcomes that were adopted in the prior cost allocation cycles.

[10] See TURN/Marcus at 11.

[11] TURN/Marcus at 12. Applicants believe TURN's figures are overstated due to a possible calculation error. Specifically, TURN's $30 million transmission cost may be overstated by $700,000, and $23.8 million storage cost may be overstated by $600,000.

Applicants therefore believe their study results represent a more balanced and consistent allocation of A&G costs, and should be approved by the Commission.

D. TURN's Proposal to Escalate Transmission and Storage Costs Should Be Rejected

Applicants oppose TURN's notion that the underlying costs that were used in the embedded cost studies for SoCalGas and SDG&E (i.e., 2016 recorded costs from FERC forms) should be escalated, by holding them as a constant percentage of base margin.

1. Updating Embedded Cost Studies with Later Data Is Not as Simple as TURN Represents

TURN is critical of Applicants' use of 2016 recorded FERC Form 2 data, claiming that Applicants' explanation is not consistent with its own exercise: "[w][hile Sempra found it too hard to use recent data, TURN did not."[12] However, my analysis of TURN's workpapers suggest that TURN's attempt at producing an embedded cost study using 2017 recorded FERC Form 2 data was flawed and inconsistent.

For example, TURN continued to rely on 2016 recorded accounting data to differentiate between SoCalGas' backbone and local transmission lines (as shown in Chapter 8's Appendix F). This is one of the critical components of the embedded *backbone* transmission study which also happens to be the most time-consuming part of the analysis. TURN appears to have completely passed on updating this segment of the embedded cost study. A bottom-up approach should be utilized so that backbone and local transmission lines are categorized correctly to reflect 2017 capital improvements, which in turn impact the net book value of individual transmission pipelines. Instead, TURN used 2016 data as a proxy.[13]

[12] TURN/Marcus at 14.

[13] TURN/Marcus 2017 Embedded Transmission workpapers, tab "2016 SoCaGas BBT."

TURN also opted not to update Chapter 8's Appendix G to incorporate 2017 storage recorded data, and instead used 2016 storage allocation factors for injection, withdrawal and inventory, another major oversight that affects cost allocation factors to each of these three services.[14] Had TURN truly run a comprehensive embedded cost study, TURN may have found it a more complicated and time consuming exercise, rather than an exercise that took TURN only ". . . a matter of hours to fill out Sempra's embedded cost template to obtain aggregate costs for transmission and storage . . . ."[15] If it were simply a matter of updating cost figures over the course of a few hours, Applicants' embedded cost studies would have used 2017 FERC Form 2 data. This is a gross oversimplication of what it takes to prepare a sound embedded cost study.

In addition, given the limited time Applicants had to review TURN's version of an embedded cost study (in contrast to the over eight months TURN had to review Applicants' embedded cost studies), I found flaws in how TURN calculated SoCalGas' functional labor factors, which were based only on labor costs of the operating expenses of storage, transmission, distribution, instead of the combined O&M expenses recorded in 2017 SoCalGas FERC Form 2. Moreover, TURN does not use 2017 recorded data for payroll, ad valorem, federal and state income taxes, but instead uses prorated estimates based on 2016 recorded data.[16] If Applicants were afforded more time to review TURN's analysis, additional flaws and shortcomings would likely reveal themselves. However, from what has been observed already, TURN's analysis does not represent a comprehensive and accurate embedded cost study, contrary to TURN's belief that it was able to perform one in a matter of hours. Therefore, TURN's calculation of 2017

[14] TURN/Marcus at 20, Table 11.

[15] TURN/Marcus at 14.

[16] TURN/Marcus 2017 Embedded Transmission and Storage Cost workpapers.

SoCalGas/SDG&E's transmission costs, backbone transmission service (BTS) rate and SoCalGas' storage costs should be rejected.

2. TURN's Proposal to Simply Escalate 2016 Recorded Costs by an Attrition Factor Is Inappropriate

Applicants disagree with TURN's notion that the embedded cost study results should be escalated based on 3.5% annual attrition rate.[17] This rate was authorized in Applicants' 2016 Test Year General Rate Case (per D.16-06-054). A similar experiment had already been performed in 2010 based on 2009 Cost Allocation Proceeding decision, D.09-11-006 in which the escalation of 2009 recorded data to 2010 was adopted as a cost allocation method. The problems manifested by escalating 2009 embedded transmission and storage costs were described in the subsequent Cost Allocation Proceeding application, A.11-11-002. In A.11-11-002, SoCalGas and SDG&E observed that the *2010 actual transmission cost of $198 million* was **below** the *2010 allocated cost of $210 million*[18], which indicates that the escalation adopted in D.09-11-006 overstated actual 2010 embedded transmission costs.[19] Similarly, SoCalGas and SDG&E stated that "The $80.3 million (represents recorded 2010 storage embedded cost…) is below the 2011 allocation of existing storage cost of $90 million, which indicates that the escalation based on Phase 2 BCAP D.09-11-006 significantly overstated actual embedded storage costs."[20] These escalations or historical attrition adjustments described above resulted in

[17] TURN/Marcus at 15.

[18] Based on escalation of recorded cost adopted in D.09-11-006, Section II.B.2.C. of Appendix A, Settlement Agreement, using annual growth rate of base margin authorized in GRC at that time.

[19] A.11-11-002, Revised Updated Prepared Direct Testimony of Sim-Cheng Fung at 12, lines 9-11.

[20] *Id.* at 19, lines 2-7. The *2010 actual storage cost of $80.3 million* was **below** the 2010 allocated storage cost of $87 million.

overstating allocated costs to SoCalGas and SDG&E's transmission functions and SoCalGas' storage function.

D.09-11-006 adopted embedded cost allocation for transmission and storage facilities for both SoCalGas and SDG&E. In an embedded cost study, utilities recover their recorded costs which follow the Uniform System of Accounts (USOA) such as the FERC accounts. General Rate Case authorized base margin are *not* synonymous with recorded costs. A utility could spend more or less in any particular year compared to its authorized Test Year General Rate Case base margin or authorized attrition year base margin.

In addition, another shortcoming of simply using a~~n attrition~~ factor ~~approved in the 2016 General Rate Case~~ to escalate embedded costs is that the 2016 General Rate Case excluded major incremental projects such as Pipeline Safety Enhancement Plan, Aliso Canyon Turbine Replacement project, and Advanced Metering Infrastructure. Some costs associated with these projects are currently under Commission review as part of Applicants' Test Year 2019 General Rate Case, while other costs continue to remain outside of the rate case process. By simply escalating 2016 to 2019 General Rate Case authorized base margin, the percentage increase would be materially flawed because it would not represent a reliable factor to escalate costs that were not included in the 2016 General Rate Case.

Therefore, Applicants reject the notion that an embedded cost escalation can be based on a percentage increase of 2019 authorized margin compared to 2016 authorized margin. TURN's suggestion of the System Average Percent Change in Mr. Florio's testimony[21] is obsolete due to the subsequent showing in A.11-11-002 in which SoCalGas and SDG&E demonstrated that the

[21] See Prepared testimony of Michel Peter Florio on behalf of The Utility Reform Network (April 12, 2019) (TURN/Florio Direct), p.5.

systemwide attrition year escalation factor did not translate to the functional areas of transmission and storage, evidenced by lower 2010 recorded data compared to previously allocated 2010 data based on ~~SAPC~~ System Average Percent Change.

For these reasons, the Commission should reject TURN's proposal to escalate transmission and storage costs from 2016 to the TCAP period by holding them as a constant percentage of base margin.

E. TURN's Proposal to Modify Functionalization of SoCalGas' Transmission O&M Costs Between Backbone and Local Transmission Should Be Rejected

TURN proposed a 100% allocation of compressor station O&M expenses to the backbone transmission system instead of SoCalGas' allocation of O&M expenses based on mileage of backbone and local transmission pipelines.[22] The compressor station equipment physically exists on the backbone transmission system. However, the use of compression supports customers on both the backbone and local transmission systems. Compressor stations are operated to provide critical functions, such as moving natural gas supplies to changing load centers, increasing system pressures, and balancing gas entering and leaving SoCalGas' and SDG&E's system. Therefore, it is reasonable to allocate compressor station O&M expenses based on mileage to both backbone and local transmission pipelines.

Furthermore, in attempting to produce its own 2016 embedded cost study, TURN arbitrarily assigns $5.1 million of purported overheads to SoCalGas' compressor station O&M expenses of $10.3 million in 2016 (a 50% overhead allocation).[23] The $10.3 million compressor station O&M expense figure is comprised of:

[22] TURN/Marcus at 17.

[23] Id. at 18, Table 8.

1. FERC Acct. 853, Comp. Station Labor & Expenses

2. FERC Acct. 864, Maintenance of Comp Station Equipment

TURN then characterizes the "overheads" by incorrectly loading up the $10.3 million of compressor station labor, expenses and maintenance of compressor station equipment with additional costs of $5.1 million that are comprised of:

3. FERC acct. 850, Operation *Supervision & Engineering*

4. FERC acct. 859, *Other* Expenses

5. FERC acct. 860, *Rents*

6. FERC account 867, Maintenance of *Other* Equipment

However, none of the items 3-6 above should be allocated to compressor station O&M expenses. Those are neither compressor station O&M expenses nor overheads. Overheads include A&G expenses such as pensions, benefits, office supplies, property insurance, etc. Given these flaws, TURN's proposals do not represent reasonable and appropriate modifications to Applicants' treatment of transmission compressor station O&M expenses.

IV. REBUTTAL TO CAL PA

A. Cal PA's Opposition to the Reliability Function has no Bearing on Applicants' Embedded Cost Studies

Cal PA opposes the establishment of the new Reliability function, as proposed in Chapter 1 (Dandridge), and the allocation of $8.3 million in associated costs.[24] As Applicants' TCAP proposals are comprehensive and interrelated, the embedded cost study allocates costs related to storage. However, given Applicants' embedded cost studies were based on 2016 recorded FERC Form 2 data, which would not have included costs specifically associated with the new

[24] See Ex. PubAdv-06 (Kjensli) at 14.

Reliability function, Applicants do not believe their embedded costs studies need to be adjusted for Cal PA's concern. The ultimate disposition by the Commission of Applicants' storage proposals should therefore not impact Applicants' embedded cost study methodology nor results.

B. The Commission Should Not Direct Applicants to Update Their Embedded Cost Studies

In its review of Chapter 9 (Schmidt-Pines) and Chapter 10 (Foster), Cal PA recommends that Applicants update their cost studies with 2018 recorded data.[25] This would be an impractical and burdensome request for the reasons stated earlier in rebuttal to TURN. Further, Cal PA does not adequately consider that 2018 recorded data, in the context of an embedded cost study, would be based on FERC Form 2, which were just published on March 27, 2019 (for SoCalGas) and April 16, 2019 (for SDG&E). It would be unreasonable and infeasible to have Applicants update embedded cost studies at this juncture, for 2017 recorded data (as suggested by TURN), and moreso for 2018 recorded data (as suggested by Cal PA).

C. Cal PA's Recommendation Regarding the Contribution of the Aliso Canyon Turbine Replacement (ACTR) Project to Embedded Costs Is Reasonable

Applicants are amenable in concept to Cal PA's recommendation to initially set the embedded cost of storage using only the $27 million revenue requirement directly related to the initial $200.9 million of ACTR project cost.[26] Once Applicants receive a final decision in the 2019 General Rate Case proceeding,[27] and upon implementation of the rates approved therein, Applicants would increase the embedded cost of storage to incoproate the total project cost approved. Accordingly, if the entire incremental $74.6 million ACTR cost is found to be

[25] See Ex. PubAdv-07 (Sabino) (April 12, 2019), p. 3.

[26] See Ex. PubAdv-06 (Kjensli) (April 12, 2019), p. 3.

[27] A.17-10-007 / A.17-10-008 (consolidated).

reasonable, SoCalGas and SDG&E will increase the embedded cost of storage to $32.9 million ($27 million + $5.9 million) as shown in Chapter 8, Table 22.

V. REBUTTAL TO LONG BEACH

Applicants disagree with Long Beach's proposal that the utilities need to provide a summary of changes to its embedded cost studies between the prior and current TCAP and a list of major drivers of the changes to each FERC account in which recorded costs changed significantly.[28] The embedded cost study uses recorded costs (as reported to the Commission in SoCalGas' and SDG&E's FERC Form 2) as its inputs. In other words, the embedded cost study is not intended to explain why costs increased or decreased, but merely uses recorded costs as inputs. The TCAP is not a proceeding where the utilities' recorded costs over time are examined and litigated. Thus, Long Beach's request is beyond the scope of a TCAP application, and should be rejected.

This concludes my prepared rebuttal testimony.

[28] See Footnote 4.