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BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF CALIFORNIA

Application of Pacific Gas and Electric Company for Authority to Establish Its Authorized Cost of Capital for Utility Operations for 2023 and to Reset the Cost of Capital Adjustment Mechanism (U39M).	Application 22-04-008 (Filed April 20, 2022)
And Related Matters.	Application 22-04-009 Application 22-04-011 Application 22-04-012 [Consolidated]

WILD TREE FOUNDATION REPLY BRIEF

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Dated: September 30, 2022

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WILD TREE FOUNDATION REPLY BRIEF

In accordance with Rule 13.11 of the California Public Utilities Commission's ("Commission") Rules of Practice and Procedure, Wild Tree Foundation submits the following reply brief in the above-captioned consolidated applications of the Southern California Edison Company ("SCE"), San Diego Gas & Electric Company ("SDG&E") and Pacific Gas and Electric Company ("PG&E") (collectively the "Utilities"), all seeking increases in their costs of capital.

The Utilities' direct showings in their testimony and opening briefs do not provide the clear and convincing evidence required for Commission approval of the applications. PG&E, SCE, and SDG&E have failed to meet their burden of proof that their requested capital structures, costs of capital, or changes to the cost of capital mechanism are just or reasonable. The Utilities have not made affirmative showings with percipient witnesses that support any elements of the applications. Wild Tree Foundation has made an affirmative showing supporting its recommendations in its Opening Brief and, therefore, will not repeat arguments made therein in this reply. Wild Tree does provide brief responses here to some of the faulty arguments presented in the Utilities' openings briefs.

REPLY

I. THE UTILITIES MISREPRESENT PRECEDENT AND INTERVENOR TESTIMONY

A. The Utilities Inflate The Results of Financial Models To Justify Higher ROEs

As described in Wild Tree and other intervenors' testimonies and opening briefs[1], SCE and PG&E manipulate the results of their financial modeling analyses to guarantee a higher recommended return on equity ("ROE"). SCE and PG&E claim that Wild Tree, EPUC, Indicated Shippers, TURN, FEA, and Cal Advocates' experts' CAPM results are *all* "downward biased" because the intervenor experts do not artificially increase the results of their analyses by pretending that the Utilities have lower betas than they actually do.[2]

In support of its argument that it is justified in adjusting financial modeling results SCE claims that "in D.12-12-034, the Commission cited Hamada derived betas. (D.12-12-034, p. 38 (citing SCE's CAPM results and ROE range of 9.73 percent to 11.71 percent, which were derived using the Hamada method).)"[3] SCE's witness further claims in her testimony that "the

[1] WTF-01 at p. 74.
[2] SCE Opening Brief at pp. 23-24; PG&E Opening Brief at p. 25.
[3] SCE Opening Brief at p. 22.

Commission in past cost of capital decisions has relied on results calculated using the Hamada approach."[4] These claims misrepresent Commission precedent.

In D.12-12-034 at page 38, the Commission provides a table of "the average results of different versions of the individual financial models used by the parties."[5] It says nothing about Hamada and certainly doesn't cite to any Hamada derived betas. The Decision simply reproduces the numbers provided by SCE. Furthermore, in that proceeding, while SCE requested a 11.10% ROE based on the upper end of the 9.73% - 11.71% range of its CAPM financial modeling results, the Commission determined that an ROE range of 9.8% - 10.6% was reasonable and authorized test year 2013 ROE of 10.45%. The authorized ROE was lower than both SCE's average CAPM results of 10.70% and its requested ROE.[6] As the Commission explained, "the ECAPM tends to produce higher overall cost of capital estimates because adjusting electric utilities' *betas*, which tend to have low *betas*, upward guarantees a higher ROE.[7] Here too, SCE and PG&E have adjusted betas upwards to guarantee a higher ROE. In reviewing SCE and PG&E's requests, the Commission should keep in mind that the recommendations are based upon manipulation of the witnesses' own financial modeling results.

Notably, SG&E's witness does not apply a Hamada or other leverage adjustment. Wild Tree's Opening Brief included a chart that inadvertently included *lower* requests than what the Utilities are presently requesting. Per the Utilities' September 2022 late filed exhibits[8] as well as the second errata to SCE's testimony correcting a computation error in the financial modeling, the Utilities' cost requests and ROE ranges are currently as follows:

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[4] SCE-02 at p. 12:12-13.
[5] D.12-12-034 at pp. 37-38.
[6] D.12-12-034 at pp. 38-39.
[7] D.12-12-034 at p. 25 citing 1 CPUC3d (1999) 146 at 168-169.
[8] PG&E-03, SCE-08, SDG&E-21.

**Utility Test Year 2023 Requests for Costs of Long-Term Debt,
Costs of Common Equity, and Rates of Return**

	SCE	PG&E	SDG&E
Cost of long-term debt	4.39%	4.31%	4.05%
Cost of preferred equity	6.50%	5.52%	0.00%
Cost of common equity financial modeling results	10.00% - 10.60%	10.00% - 11.00%	10.40%- 11.40%
Cost of common equity requests	10.53%	11.00%	10.55%
Rate of Return	7.69%	7.80%	7.56%

As can be seen in the chart above, both SCE and PG&E's requested ROEs - which include adjustments - are at the upper end of their financial modeling results. SDG&E's requested ROE - which is not adjusted - is below the midpoint of its modeling results range. Wild Tree's expert's Mr. Rothschild's recommended ROEs are at the midpoint of the range of results of his financial modeling.

In regards to previous cost of capital proceeding recommendation, SCE strangely claims that "Dr. Villadsen similarly observes that for the witnesses who provided testimony in both proceedings, the midpoints of their estimated ROE ranges have generally increased"[9] but footnotes this claim with a statement that, in fact, Mr. Rothschild's midpoint of his estimated ROEs have decreased. "The midpoint of Mr. Rothschild's range was one basis point higher in 2019, when he served as witness for Cal Advocates."[10] Mr. Rothschild's ROE recommendations for test year 2020 was higher than it is for test year 2023. It is unclear what point SCE is trying to make by these contradictory statements. What is clear, is that the Utilities have consistently requested increased ROEs above the current authorized rates, relying upon the same flawed

[9] SCE Opening Brief at p. 12.
[10] SCE Opening Brief at p. 12n37.

methodologies, results-oriented adjustments, and overblown claims of risk as they do in the present applications.

B. Options-Implied Betas Provide the Commission Valuable Information

The Utilities attempt to undermine the credibility of Mr. Rothschild's CAPM analysis based on misstatements regarding his option-implied beta methodology. For example, SCE states, "As SDG&E points out, Wild Tree "did not address one of the fundamental concerns cited by the authors that developed option-implied Betas," which is that "'[f]or other applications, such as cost of capital calculations, longer-horizon betas may be needed.'"[11]

The question of longer-horizon option-implied betas is thoroughly addressed in Wild Tree's testimony.

> For many applications, including cost of capital, one could argue that the longer the time horizon for the option-implied betas, the better. However, the limitation on the forecasting horizon is always set by the longest expiration period of the options currently traded in the market. Some companies trade options with expiration periods up to 2 or 3 years into the future. As evidenced by the exhaustive option data in my working papers, the maximum expiration period for the options of the companies in my RFC Electric Proxy Group is approximately 28 months. However, some of the companies in my proxy group only trade options with expiration periods of up to 8 months. For consistency across companies in my proxy group and across dates within the 3-month period on which my analysis is focused (April through June 2022), I chose to use 6 months for the time horizon of my option-implied betas. . . Simply because some may argue that it may be preferable to use longer time horizons in place of or in addition to a 6-month horizon, it does not mean that a 6-month option-implied beta is of no relevance or cannot be used. . . A final strong argument in support of using 6-month option-implied betas in a cost of capital calculation looking years into the future is that, as expanded upon on page 164, the authors of the paper on which I based my option-implied betas concluded that their predictive powers are not limited to 6 months into the future. In fact, they conclude that 6- month option-implied betas have stronger predictive power than 6-month, 1-year, or 5-year historical betas when attempting to forecast betas 1 or 2 years into the future.[12]

[11] SCE Opening Brief at p. 19.
[12] WTF-01 at p. 161:17 – 163:3.

SDG&E’s witness Mr. Coyne made the same criticism of Mr. Rothschild’s testimony in the Utilities off-cycle cost of capital applications in A.22-08-013 [cons.] that “longer-horizon betas may be needed” but admitted on the stand in that proceeding that he was not aware that Mr. Rothschild’s workpapers included calculations for betas up to 28 months:

> Q Let's talk a little bit about option-implied betas. And we're on the same page. This is SDG&E-04, your rebuttal -- excuse me. Different page. Page 3, line 3.
>
> A I'm with you.
>
> Q You state "Given that Mr. Rothschild did not address one of the fundamental concerns cited by the authors that developed option-implied betas, this radically different approach should be disregarded." Same page, line 7 you highlight the statements in the Christoffersen paper that [] for other applications, such as cost of capital calculations, longer-horizon betas may be needed. This is a fundamental concern you're referring to; correct?
>
> A My conclusion relates to concerns. . . with the financial underpinnings in the unusual approach taken by Mr. Rothschild using these option betas. And I cite in two cases articles that support that use of option applied betas as a basis for reaching this conclusion. In addition to that through my own experience having testified in many cost of capital proceedings, I've never encountered the approach used by Mr. Rothschild. So it is indeed unusual.
>
> Q So same page, line 4 you state "Mr. Rothschild's option-implied beta calculations are based on options data for the next six months." Correct?
>
> A That's my understanding, yes.
>
> Q And do I understand correctly this is one of the concerns that you have with the work?
>
> A That is one the concerns, yes. And as mentioned in the article that he cites as a basis for support, the authors indicate that a longer period may be appropriate or needed for purposes of estimating the cost of capital, for example. So I think that's relevant for the purposes of analyzing the CCM as we are here, although we are not specifically estimating the cost of capital.
>
> Q Did you review Mr. Rothschild's workpaper regarding his calculations of option-implied beta?
>
> A I read his testimony and the attachments to it, yes.

> Q Did you see the workpapers that include calculations and analysis of longer-horizon option-implied betas using options that expire up to 28 months in the future?
>
> A In his testimony he cites his use of six-month options. I'm not aware that he evaluated longer periods. I don't see that as evidence in the testimony that he presented.
>
> Q And you did not see that in the workpapers either?
>
> A I did not, no.
>
> Q And options that expire up to 28 months in the future would certainly be options that have longer term horizon; correct?
>
> A It would, but I did not see Mr. Rothschild's relying on those in the conclusions that he reached in his testimony, but they would begin to address that specific concern, yes.[13]

Mr. Coyne discusses in his testimony in this case how he derived results from the data provided in Mr. Rothschild's CAPM workpapers: "Exhibit ALR-4, page 3 provides the proxy group average Beta coefficients from March 29, 2022 through June 28, 2022. But Mr. Rothschild did not present the individual CAPM results for each of the proxy companies over the same time period in his exhibits. However, the results can be derived from the more than 17,000 Excel files contained in Mr. Rothschild's workpapers that were used in support of his CAPM calculations."[14]

Given Mr. Rothschild's testimony on time horizons of option-implied betas and Mr. Coyne's use of Mr. Rothschild's workpapers, Mr. Coyne is surely aware that the maximum expiration period for the options in Mr. Rothschild's analysis is approximately 28 months and that when option-implied betas over such longer time periods than 6 months are used, the results are actually lower betas which, in turn, lead to lower CAPM results.

[13] WTF-02 at p. 5:23 – 8:14.
[14] SDGE-08 at p. 38:8-12.

CONCLUSION

For the reasons described in Wild Tree Foundation's Opening Brief and elaborated upon herein, the Commission should reject the requests by the Utilities and adopt Wild Tree Foundation's recommendation on capital structure, costs of equity, and changes to the cost of capital mechanism.

Respectfully submitted,

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