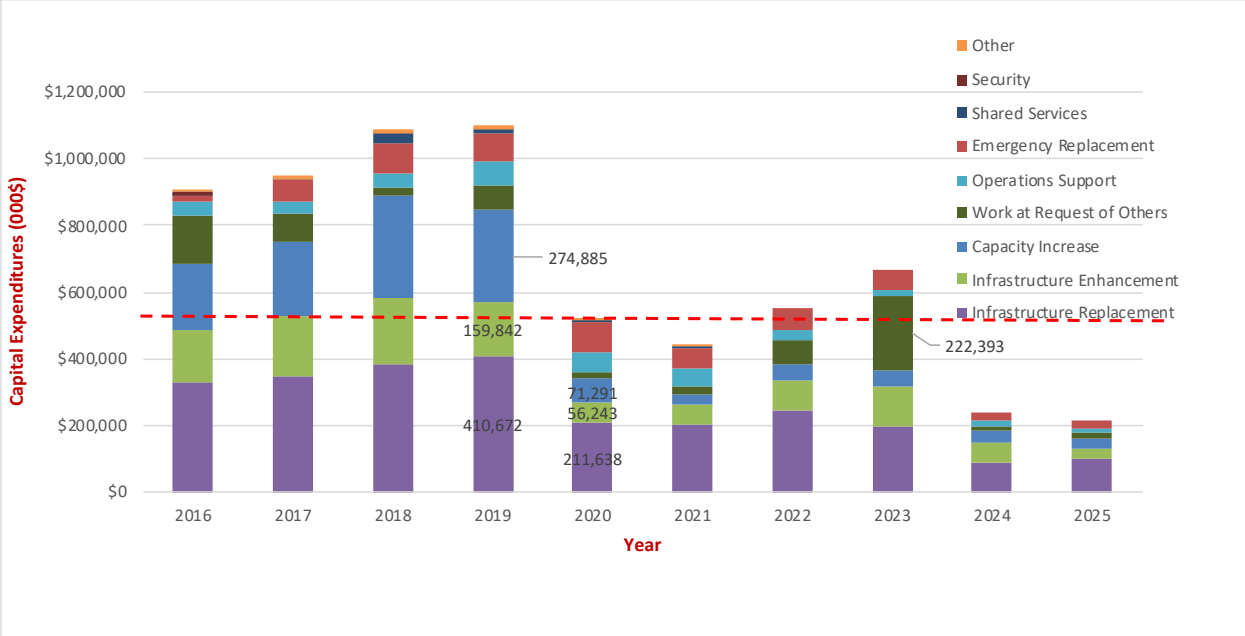
BAMx Comments on PG&E's Submission of Section 3.1 Material

The Bay Area Municipal Transmission group (BAMx)[1] appreciates the opportunity to comment on Pacific Gas and Electric Company's (PG&E) June 1, 2020 submission of Section 3.1 Material for the Stakeholder Transmission Asset Review (STAR) Process on PG&E's FERC-jurisdictional electric transmission projects, involving capital expenditures incurred over the past four years and/or anticipated to be incurred through the next five years.

Declining Future Capital Expenditure

Based upon BAMx's review of the Project Data Spreadsheet[2] provided by PG&E, we observe that PG&E's future capital expenditure is substantially less than PG&E's historical spending. The chart below summarizes our observation comparing 2020-2025 expenditures with what it has been for 2016-2019:



Question 1: We request PG&E to identify and explain in detail the key drivers for this apparent decline.[3] Also, please identify whether there are any major new projects that PG&E now envisions that were not included in the Project Data Spreadsheet. We believe the STAR stakeholders need additional information from PG&E to better understand PG&E's thinking and perspectives in structuring its capital expenditures (CapEx).

[1] BAMx consists of City of Palo Alto Utilities and City of Santa Clara, Silicon Valley Power.
[2] StakeholderTransmissionAssetReviewSTAR_Other-Doc_PGE_20200601_607468.xlsx, PG&E's Public and Confidential versions of the Project Data Spreadsheet (Section 3.1.1)"
[3] PG&E listed 1,209 FERC-jurisdictional electric transmission Projects, each with an expected cost of $1 million or more.

The following questions (2 thru 6) focus on PG&E's stated project primary and secondary purposes.[4]

Question 2: PG&E's data indicated its "Infrastructure Replacement" capital expenditures will be declining from about $400 million in 2019 to about $200 million per year for the years 2020-2023 and further down to about $100 million per year for the years 2024-2025 as shown in the Table below.

Year	2019	2020	2021	2022	2023	2024	2025
Infrastructure Replacement (M$)	$410M	$211M	$200M	$243M	$196M	$86M	$101M

Please explain in detail the reasons and drivers for such a decline. In reviewing PG&E's data, it appears that Bus Upgrade, Modular Protection and Automation Control, Substation Reliability and Targeted Line Reliability have the largest declines. Please provide additional details. For example, are these programs or categories of work coming to an end? Further, we noticed that Replace Wood Poles has close to zero expenditures for the years 2024-2025. What assumptions does PG&E use in determining the quantity, the location and when a wood pole needs to be replaced?

Question 3: PG&E's data indicated its "Infrastructure Enhancement" capital expenditures will be declining from ~$160 million in 2019 to an average of ~$70 million per year for the years 2020-2025 with a low of ~$28M (in 2025) and a peak of ~$121M (in 2023).

Year	2019	2020	2021	2022	2023	2024	2025
Infrastructure Enhancement (M$)	$160	$56	$63	$94	$121	$63	$28

Please explain in detail the reasons and drivers for such a decline. In reviewing PG&E's data, it appears that NERC Compliance - GO95, Replace Other Substation Equipment, Replace Wood Poles and Security Upgrades have the largest declines. Please provide additional details. For example, are these programs or categories of work coming to an end? BAMx also noticed that SCADA Switch Installation has zero expenditures starting in 2024. How many SCADA switches does PG&E plan to install in its system by 2024? What drivers and factors does PG&E employ in determining the quantity and locations of SCADA switch installations?

[4] In the Project Data Spreadsheet, the primary purpose of all the transmission projects are identified as one of the following categories: Capacity Increase, Emergency Replacement, Infrastructure Enhancement, Infrastructure Replacement, Operations Support, Security, Work Requested By Others, or Other (if Other, an explanation is included in the "Notes" data field). The Secondary purpose include the following but are not limited to: 3rd Party Damage, Age/Condition, Age/Condition - 230/115/70/60 kV Relay Replacement, Age/Condition - 500 kV Relay Replacement, Age/Condition - Anti Climb Guards, Age/Condition - Insulator Replacement - Steel, Age/Condition - Insulator Replacement - Wood, Age/Condition - Raptor Protection - Steel, Age/Condition - Replace 230/115/70/60 kV Breakers, Age/Condition - Replace 230/115/70/60 kV Transformers, etc. If the secondary purpose is to comply with a NERC, WECC, or CAISO requirement, list the standard, requirement, and/or any contingencies that are being addressed.

Question 4: PG&E's data indicated its "Capacity Increase" capital expenditures will be declining from $275 million in 2019 to an average of $41 million per year for the years 2020-2025.

Year	2019	2020	2021	2022	2023	2024	2025
Capacity Increase (M$)	$275	$71	$28	$42	$46	$34	$28

Please explain in detail the reasons and drivers for such a decline. BAMx noticed that the CAISO has canceled certain previously approved projects. BAMx applauds PG&E's diligence and efforts in working with the CAISO and planning stakeholders to verify which of these capacity projects are still needed given today's energy efficiency, demand response and distributed energy resources assumptions. Given the California Energy Commission's latest declining demand forecasts, does PG&E anticipate any additional CAISO previously approved projects to be canceled?

Question 5: PG&E's data indicates that its "Work at the Request of Others" capital expenditures will continue to fluctuate. Expenditures for the year 2019 was recorded at ~$74 million. Future year expenditures are forecasted at a relatively lower level at around $20M per year, except for the years 2022 and 2023.

Year	2019	2020	2021	2022	2023	2024	2025
Work at the Request of Others (M$)	$74	$19	$24	$72	$222	$14	$18

Please explain in detail the reasons and drivers for the fluctuations. For projects with this primary purpose, PG&E has included a column in the spreadsheet indicated "percentage of Work at the Request of Others passed onto ratepayers." Can PG&E provide more detail on what sort of projects are accounted for in this category? We also noticed that PG&E has indicated that some projects with "Final allocation not yet finalized with CPUC & FERC."

Please explain in detail PG&E's cost allocation criteria. Please also explain in detail FERC vs. CPUC jurisdiction and how and when PG&E will finalize the cost allocation with the regulators.

Question 6: We found PG&E's asset management plan documents TD-8100, 8101, 8102, 8103 and 8104 helpful. These documents provided a clear asset inventory and certain data on types, age, performance, and risk assessments. These documents, published by PG&E in December 2018, also provided a multi-year investment forecast which we summarize as follows:

Year	2019	2020	2021	2022	2023
Transmission Overhead Capital (M$)	$464	$543	$550	$569	$695
Transmission Underground Capital (M$)	$17	$7	$7	$6	$6
Substation Capital[5] (M$)	$920	$1,087	$1,011	$1,177	$875
Operation Capital (M$)	$265	$256	$244	$268	$272

[5] We understand this includes distribution substation investments which are outside of the STAR process.

However, it is unclear how this forecast differs from data included in PG&E's Project Data Spreadsheet. On a cursory review, it appears the forecast included in the asset management plan documents far exceeds that included in the spreadsheet. Please explain in detail the differences between the asset management plan and the spreadsheet.

Need for Greater Clarity on Risk Informed Budget Allocation's (RIBA) Role in Budget Development and Work Prioritization

PG&E explains it uses a Risk Informed Budget Allocation (RIBA) scores and classifications to inform budget prioritization decisions for capital projects and programs.[6] However, it is unclear how PG&E applies RIBA to projects included in its Transmission Owner's Rate Case and PG&E's Project Data Spreadsheet.

Question 7: What are the RIBA scores and classifications for each project in PG&E's Project Data Spreadsheet? It appears the Utility Prioritization Code Rank column in the spreadsheet provides some ranking information – can PG&E verify?

Question 8: For the years 2016-2019, were there any capital projects or expenditures not funded because of PG&E's prioritization process or RIBA?

Question 9: Similarly, for the years 2020-2025, were there any capital projects or expenditures not funded because of PG&E's prioritization process or RIBA?

Question 10: It appears once a total overall budget amount is established for a given year, PG&E then uses its RIBA process to allocate budget dollars to its capital projects. Please describe in detail PG&E's process in establishing an annual capital budget target.

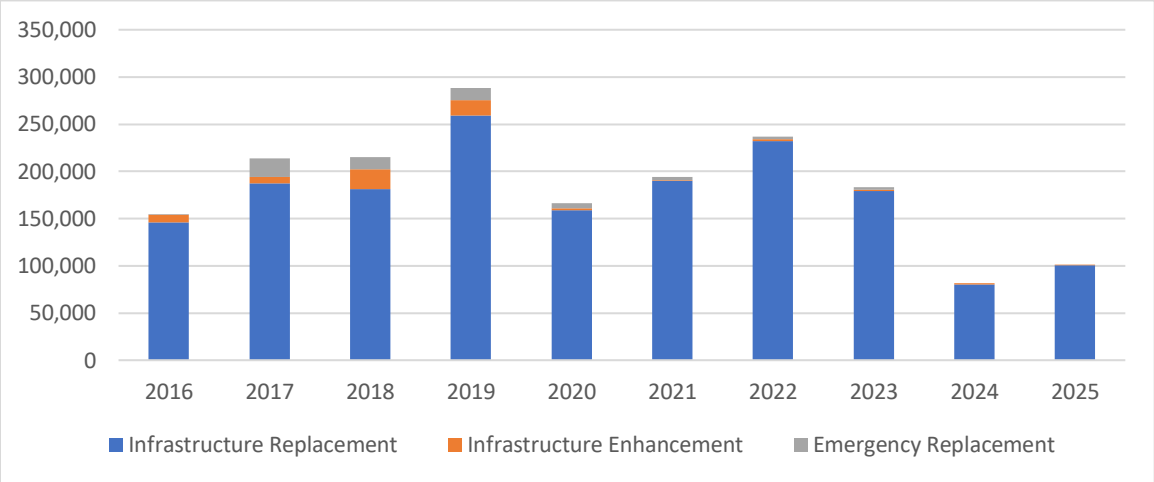
Question 11: Should PG&E fund projects or expenditures with a low priority score even if its budget allows? Assuming a higher rank number means higher priority, it is reasonable to fund and proceed immediately with a project with a high rank score of 4,478.[7] However, perhaps low priority work as indicated by its low ranking should be postponed to a later year. Please explain in detail PG&E's treatment of low priority work.

Question 12: Please describe PG&E's process or methodology in evaluating the cost-effectiveness of a proposed capital project or expenditure. We noticed that 1,196 out of the 1,203 have a ***N/A*** benefit-to-cost (BC) ratio. We understand it may be meaningless to calculate a BC ratio when replacing a failed capital unit of equipment during an emergency event. However, we believe some type of BC or cost-effectiveness evaluation would be appropriate for infrastructure enhancement and capacity increase expenditures. If PG&E disagrees, please explain its rational and reasonings.

[6] Risk Informed Budget Allocation Scoring Standard, 5/17/2019 Revision: 1.
[7] The highest rank number under the Utility Prioritization Code Rank column.

Need to Identify Criteria Applied to Determine Wildfire Mitigation Expenditures

The Project Data Spreadsheet indicates that the projects related to transmission wildfire mitigation work amount to approximately $200 million per year.



Question 13: It appears the majority of PG&E's proposed transmission wildfire mitigation work is proactive equipment replacement based on age and condition. Please provide insights and supporting documentation, if any, as to the criteria applied for this work.

Question 14: Specifically, please describe in detail why PG&E is focusing the majority of its wildfire mitigation work on pole replacement, conductor replacement and Right of Way Access.

Question 15: Please describe all metrics PG&E uses to measure the effectiveness of its wildfire mitigation work.

Question 16: PG&E's asset management plan document TD-8101 Transmission Line Overhead Asset Management Plan listed wildfire as PG&E's highest risk with a risk score of 791.[8] How effective is PG&E's proposed wildfire mitigation work in reducing its wildfire risk? With the completion of its proposed transmission wildfire mitigation work, what is PG&E's projected wildfire risk score for the years 2020-2025, respectively?

Question 17: Similarly, how effective is PG&E's proposed wildfire mitigation work in reducing transmission-related Public Safety Power Shutoff (PSPS) events and customer impacts? In 2019, PG&E invoked eight PSPS events that impacted 2 million customer accounts. With the completion of its proposed transmission wildfire mitigation work, what is PG&E's forecast on the frequency and customer impact due to transmission PSPS events for the years 2020-2025, respectively?

[8] See page 40 of TD 8101.

Conclusion

BAMx appreciates the opportunity to comment on the STAR process. BAMx would also like to acknowledge PG&E's willingness to work with the stakeholders in these efforts.

If you have any questions concerning these comments, please contact Paulo Apolinario (papolinario@svpower.com or (408) 615-6630).