

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298



November 13, 2020

Mr. Robert Kenney
Vice President, Regulatory and External Affairs
Pacific Gas and Electric Company
77 Beale Street, MC B23A
San Francisco, CA 94105

Dear Mr. Kenney:

The California Public Utilities Commission (CPUC) received the 2019 Interim Risk Spending Accountability Report (2019 iRSAR) of Pacific Gas and Electric Company (PG&E) that was filed on March 30, 2020. The CPUC's Energy Division (ED) prepared the enclosed review of this report and provides recommendations for PG&E to consider for future RSARs.

In the *Phase Two Decision Adopting Risk Spending Accountability Report Requirements and Safety Performance Metrics for Investor-Owned Utilities and Adopting a Safety Model Approach for Small and Multi-Jurisdictional Utilities*, Decision (D.) 19-04-020, the CPUC affirmed that ED's review of RSARs serves to raise concerns and seek understanding of the data and "does not constitute a reasonableness [review] of the utility's proposed risk mitigation budgets or programs required in Public Utilities Code Section 451."¹ Reasonableness review of utilities spending is accomplished in the general rate case (GRC) process.² In addition, review and verification of the utility's risk management activities that took place during the reporting period are part of Safety Performance Metrics reporting.³ Therefore, ED's review of PG&E's 2019 iRSAR in this letter is limited to the reporting on, and highlighting of, information and does not make any findings regarding the reasonableness of the utility's spending.

CONCLUSIONS

ED reviewed the utility's report and finds PG&E has complied with guidance provided to it by ED in its letter, *Review of the Pacific Gas and Electric Company 2016 Budget Report and 2017-2018 Spending Accountability Reports*, dated November 6, 2019, to incorporate the requirements of D.19-04-020 into its 2019 iRSAR among other recommendations.

PG&E presented authorized spending and units (as imputed regulatory values) and actual spending and units for its reportable GRC programs and provided explanations for those programs meeting the selection criteria. Work unit information is provided for programs in which the forecasted cost was derived from unit costs. PG&E applied the selection criteria for its GRC programs according to D.19-04-020 and included the information required for programs selected for an explanation. Although PG&E provided the information requested, improvements to the report can be made.

¹ D.19-04-020, pp. 39-40.

² Ibid.

³ Ibid, p. 40.

RECOMMENDATIONS

Upon the conclusion of staff's analysis of the 2019 iRSAR, ED recommends for PG&E to:

- Collaborate with ED in developing the 2020 RSAR.
- Include all companywide programs presented in the TY 2020 GRC that address safety or reliability risks or are related to maintenance.
- Note in the 2020 RSAR if the list of programs presented in the TY 2020 GRC changed with any updates to the utility's risks.
- Include more detailed explanations of spending and unit variances for selected programs that describe the decision-making process and the source and diversion of funds. See Attachments 1 and 2 to staff's analysis for types of questions that should be addressed in the explanation.
- Ensure spending information reported for each program and in the various regulatory accounts are consistent. Where values differ between the two sections of the report, an explanation of the difference including references to pertinent documents should be provided to ease verification of the information in the regulatory account section.

In accordance with the provisions of D.19-04-020, the 2020 RSAR should be filed and served to parties on the service lists for Proceedings A.15-09-001, A.18-12-009, and the 2020 Risk Assessment and Mitigation Phase (A.20-06-012), and made available to the CPUC's Safety Policy Division, Safety and Enforcement Division, and the Public Advocates Office. PG&E should also provide the 2020 RSAR to the ED Tariff Unit by emailing the report to edtariffunit@cpuc.ca.gov.

If you have any questions or comments, please contact Michael Zelazo, Senior Utilities Engineer, at (916) 327-6797 or michael.zelazo@cpuc.ca.gov on electric issues and Andrew Ngo, Utilities Engineer, at (213) 576-5719 or andrew.ngo@cpuc.ca.gov for natural gas issues.

Sincerely,

 FOR

Edward Randolph
Deputy Executive Director for Energy and Climate Policy/
Director Energy Division

Enclosure

*Cc: Mary Gandesbery
Pacific Gas and Electric Company*

*Lauren Hudson
Pacific Gas and Electric Company*

*Dorothy Duda, Branch Manager
Market Structure, Costs and Natural Gas Branch*

*Franz Cheng, Supervisor
Electric Costs Section*

*Elizabeth La Cour, Supervisor
Gas Costs and Rates Section*

Service Lists for A.15-09-001, A.18-12-009, and A.20-06-012

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Energy Division Review of the 2019 Interim Risk Spending Accountability Report of the Pacific Gas and Electric Company

The California Public Utilities Commission's (CPUC) Energy Division (ED) reviewed the 2019 Interim Risk Spending Accountability Report (2019 iRSAR) of Pacific Gas and Electric Company (PG&E) that was filed in PG&E's Test Year (TY) 2020 General Rate Case (GRC) Application (A.) 18-12-009 on March 30, 2020. ED conducted a review to provide the CPUC and parties to the GRC with information that may be useful in the GRC and other proceedings. The review verifies compliance with the guidance provided by ED in its letter dated November 6, 2019 in response to ED's review of PG&E's reports for 2016, 2017 and 2018. This review serves as a precursor to future RSARs required by CPUC Decision (D.) 19-04-020.

BACKGROUND

In December 2014, the CPUC issued D.14-12-025, *Decision Incorporating a Risk-Based Decision-Making Framework into the Rate Case Plan and Modifying Appendix A of D.07-07-004*, and directed the investor-owned utilities under its jurisdiction to prepare and submit to the CPUC annual RSARs that would compare authorized and actual spending on risk mitigation projects. The reports would follow the Risk Assessment and Mitigation Phase (RAMP) proceeding in which the utilities assess the top risks and propose risk mitigation activities. In April 2019, the CPUC issued D.19-04-020, *Phase Two Decision Adopting Risk Spending Accountability Report Requirements and Safety Performance Metrics for Investor-Owned Utilities and Adopting a Safety Model Approach for Small and Multi-Jurisdictional Utilities (Phase Two Decision)*, and provided the utilities with specific direction in complying with the reporting requirements of the new risk-based decision-making framework. The CPUC initiated its first RAMP proceeding for PG&E in November 2017, prior to PG&E's filing of its 2020 GRC, causing the reporting requirements of D.14-12-025 and D.19-04-020 to be effective beginning in 2020.

The CPUC required PG&E to file annual reports for 2017, 2018, and 2019 in its Decision on PG&E's TY 2017 GRC, D.17-05-013. PG&E applied the requirements of the new framework in its current report to comply with guidance provided by ED.

REPORTING REQUIREMENTS

The 2017 GRC Decision governs the period reported in the 2019 iRSAR. As such, the CPUC required the following of PG&E.⁴

- To compare authorized expense and capital to actual spending for all electric distribution, electric generation and gas distribution work.
- For safety and reliability work, compare units of work authorized with units of work performed.

⁴ D.17-05-013 at 186.

- To provide an explanation of any significant deviations between authorized and actual spending and between authorized and actual units of work.
- To file by March 31 and to serve on the Directors of the Safety and Enforcement Division and ED and the service list for the most recent GRC.

The CPUC did not modify the reporting requirements above for 2019 when it issued D.19-04-020. However, ED recommended that PG&E change its report to conform to the format applicable to 2020. That format requires PG&E to report on all programs presented in the GRC that relate to safety, reliability or maintenance work. Those programs are to be separated into two categories: one for risk mitigation programs identified in the RAMP and another for programs related to safety, reliability or maintenance presented in the GRC. Expense programs with a variance in spending of at least \$10 million, or 20% subject to a minimum variance of \$5 million, and capital programs with a variance in spending of at least \$20 million, or 20% subject to a minimum variance of \$10 million, require an explanation of the cause of the variance. The report also must include a separate section to discuss programs subject to balancing or memorandum accounts.⁵

Other recommendations specific to the content of the report include for PG&E to:

- Note if any tables include work that is not related to safety, reliability or maintenance.
- Take steps to ease verification of the report.
- Ensure programs listed in the report are thoroughly described.
- Direct parties to file any comments in the 2020 GRC with a copy emailed to ED

ED further requested PG&E to serve and file the report on the TY 2017 GRC application (A.15-09-001) and the TY 2020 GRC application (A.18-12-009) with specific service to the Office of the Safety Advocate and the Public Advocates Office, and to provide a copy of the report to ED Tariff Unit.

STAFF ANALYSIS

This review follows the guidelines in the Phase Two Decision ahead of the CPUC’s formal implementation of those guidelines in 2020. The Phase Two Decision requires more of the utility and staff is encouraged by PG&E’s proactive effort to comply. Staff also reviewed the additional recommendations of ED from its prior review of PG&E’s reports and finds improvement is needed in “taking steps to ease verification of the report.”

In the 2019 iRSAR, PG&E provided recorded and imputed regulatory values for operating and maintenance (O&M) expenses and capital expenditures for gas and electric programs – identified as either Major Work Categories (MWC) or Maintenance Activity Types (MAT) – associated with each safety risk identified in PG&E’s risk register, as provided in its 2017 GRC.⁶ PG&E cites ED guidance and the lack of a RAMP to support its method.

PG&E’s report excludes companywide items, including liability insurance premiums, and does not include certain costs recoverable through the Catastrophic Event Memorandum Account (CEMA). The report does include certain Fire Risk Mitigation Memorandum Account (FRMMA) and Wildfire Mitigation Plan Memorandum Account (WMPMA) costs that align with funding requested in the

⁵ D.19-04-020, Ordering Paragraph 10.

⁶ 2019 iRSAR, page 1-2, lines 21-23. The codes for each MWC and MAT are included in the 2019 iRSAR along with descriptions of the work conducted within them.

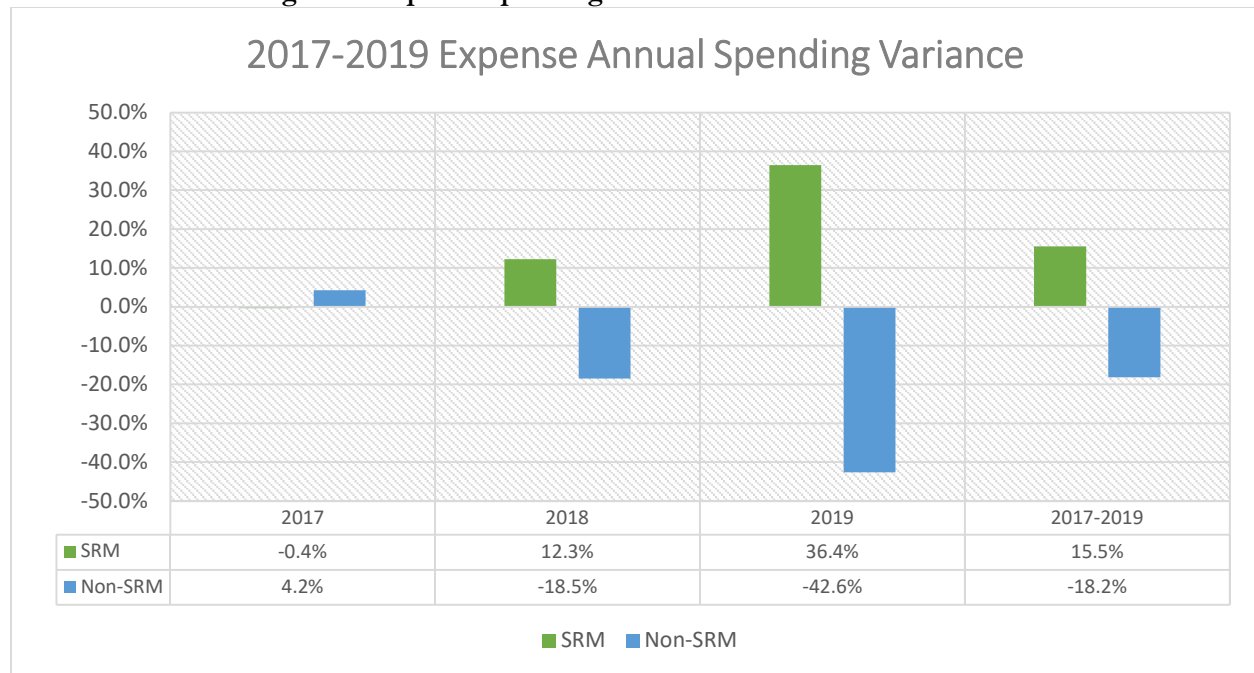
2017 GRC. ED staff conducted a review of PG&E’s electric and gas operations programs included in the report.

Gas Operations

A. Gas Distribution Expense Spending

PG&E overspent the 2019 authorized budget in expense programs. For programs that relate to safety, reliability and maintenance, the highest negative variance occurs in PG&E’s Corrective Maintenance (Gas) program at \$10.1 million underspent. The Operational Support and Information Technology programs both have a higher negative variance, at \$21.5 million and \$12.7 million underspent variance respectively, but do not relate directly to safety, reliability and maintenance.

Figure 1: Expense Spending Variance between 2017 and 2019⁷



SRM: Safety and/or Reliability and/or Maintenance⁸

In 2019, there is a total overspending of \$88.5 million in programs related to safety, reliability and maintenance (SRM) in contrast with underspending of \$35.7 million in programs not related to safety, reliability and maintenance (Non-SRM). In 2018, 2019 and the overall 2017-2019 GRC period, PG&E has diverted spending from non-safety, reliability and maintenance related programs to programs related to safety, reliability and maintenance. Staff analyzed the following select activities on the expense side.

1. Cathodic Protection - Casing Short Mitigation (MAT DGH)

This activity is overspent by \$3.3 million in 2019, which sees an increase from \$0.6 million overspent in 2018. Staff observed a large increase in cost per unit from \$65,000 per unit in 2018 to \$121,000

⁷ Data for expense spending variance from 2017 Budget Report p. B2-1 Table 2-1, 2018 iRSAR p. B2-1 Table 2-1 and 2019 iRSAR p. 2-2 Table 2-1.

⁸ Data for expense programs related to safety and/or reliability and/or maintenance from 2019 iRSAR, pp. 2-3 thru 2-9.

per unit in 2019. As provided in PG&E's 2017 GRC testimony: "PG&E designed the Casings program during the 2017 rate case period (2017-2019) to be a developmental program intended to increase casing monitoring and to determine the appropriate and most cost-effective mitigation measures for contacted casings on distribution pipelines."⁹

PG&E explains this increase is primarily due to an increase in the pace of work to complete the Developmental Program within the 2017 GRC rate case period.¹⁰ Because the pace of work was increasing during this period, the ratio of costs associated with future work (planning), current year work (execution), and prior year work (close-out) changed significantly from year-to-year.

2. Meter Protection Program Protections (MAT EXB)

This activity is overspent by \$7.6 million in 2019. As explained by PG&E, when PG&E field personnel visit a meter set, they are required to note Abnormal Operation Conditions (AOCs) that may need follow up.¹¹ These field observations would include encroachment and danger to vehicular traffic (e.g., a customer adds a new driveway or parking area near a meter set).

As described in PG&E's 2020 GRC testimony, between 2014-2017, AOC field observations were identified and recorded through several different programs including the leak survey program, atmospheric corrosion inspection program, and field services activities. These observations were recorded through separate applications and managed through different processes. As a result, AOC field observations were not directly and consistently captured within PG&E's standard work management system, which made it difficult to dispose and track work. In 2017, this information was consolidated into the AOC tool and since then PG&E has performed record reviews, field validations, and delivered this work into SAP. Due to this backlog, there were more actual units remediated in 2019, than PG&E forecasted in the 2017 GRC.

PG&E anticipates that employees will continue to identify AOCs while conducting leak survey and field service activities. PG&E will enter the AOCs into SAP going forward and assign a due date to address the AOCs in a timely manner. PG&E expects the AOC program to continue in future years.

B. Gas Distribution Capital Spending

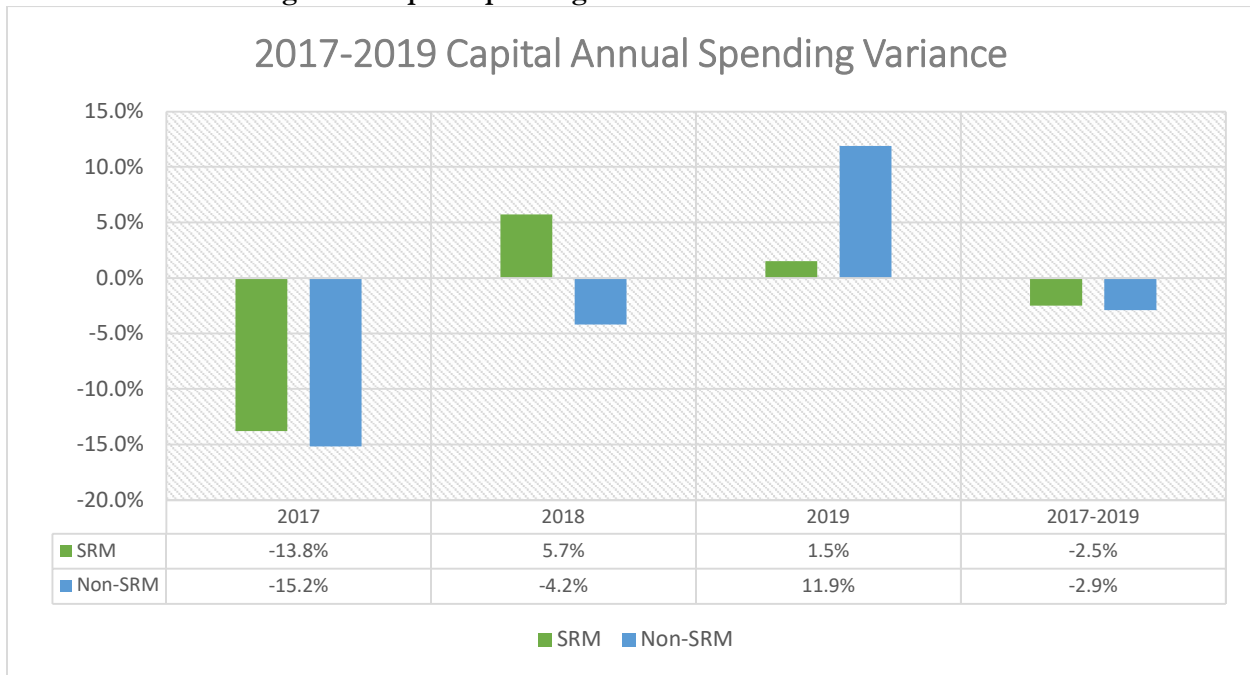
PG&E overspent the 2019 authorized budget in capital programs. For programs that relate to safety, reliability and maintenance, the highest negative variance occurs in PG&E's Gas Distribution Reliability program at \$17 million underspent. The Build IT Applications & Infrastructure program has a higher negative variance at \$25.5 million underspent, but does not relate directly to safety, reliability and maintenance.

⁹ 2017 GRC, Exhibit (PG&E-3), Chapter 6B, p. 6B-32, lines 18-24.

¹⁰ See PG&E Response to Data Request: GRC-2017-PhI_DR_ED-005RSAR2019-Q02

¹¹ See PG&E Response to Data Request: GRC-2017-PhI_DR_ED-005RSAR2019-Q03

Figure 2: Capital Spending Variance between 2017 and 2019¹²



SRM: *Safety and/or Reliability and/or Maintenance*¹³

In 2019, there is a total overspending of \$10.7 million in programs related to safety, reliability and maintenance along with an overspending of \$21.1 million in programs not related to safety, reliability and maintenance. The overall 2017-2019 GRC period has observed minimal underspending in both categories. Staff analyzed the following select activities on the capital side.

1. Pipeline Replacement Program – Mains and Services (MAT 14A)

This activity is underspent by \$49.0 million and has a negative unit variance of 150,300 units in 2019. This equates to replacing 150,300 less feet of gas main and service pipeline than imputed. Staff questioned PG&E about the substantial decrease in units for safety and reliability concerns.

PG&E explained that while they completed less feet of gas main, they mitigated more risk by developing and executing on a plan that prioritized projects with higher Risk-Informed Budget Allocation (RIBA) scores and work that has been engineered and ready for construction.¹⁴ PG&E selected projects across the three individual programs that make-up the overall gas distribution Pipeline Replacement Program (MATs 14A, 14D and 50A) and prioritized those projects to reduce risk and minimize stranded work by geographically bundling engineered ready work. PG&E is not carrying over any gas main replacement units in 2020 as the combined units completed across MAT codes 14A, 14D and 50A met the total GRC imputed units.

2. Gas Distribution Reliability Main Replacement – Improve Reliability – Gas Services (MAT 50A)

¹² Data for capital spending variance from 2017 Budget Report p. B2-2 Table 2-2, 2018 iRSAR p. B2-2 Table 2-2 and 2019 iRSAR p. 2-3 Table 2-2.

¹³ Data for capital programs related to safety and/or reliability and/or maintenance from 2019 iRSAR, pp. 2-9 thru 2-13.

¹⁴ See PG&E Response to Data Request: GRC-2017-PhI_DR_ED-005RSAR2019-Q05

This activity was overspent by \$20.1 million with a unit variance of 12,623 units. Program expense variance is a result of performing more replacement work related to wildfires. Staff questioned PG&E about specific wildfires that contributed to the overspend. PG&E explained there was additional main replacement work primarily due to the Tubbs Fire and Camp Fire.¹⁵ Approximately \$3.5 million of the 2019 recorded spend was attribute to replacement work related to wildfires while approximately \$16.6 million of the 2019 spend was attributed to emergent work project in San Francisco and North Bay areas. Examples of causes of emergent work projects include street moratoriums, fusion failure¹⁶ and high occurrence of leaks on the gas pipeline.

3. Emergency Response to Dig-Ins, Mains (MAT 52C)

This activity had a negative actual cost of \$218,000 while having an imputed adopted cost of \$0 and a unit variance of 608 units in 2019. Staff questioned PG&E about the negative actual cost. PG&E explained that they credit reimbursements from third parties for incidents or damages to PG&E facilities in this MAT code.¹⁷ In 2019, PG&E billed the final invoice for restoration work from a 2017 regulator station damage, which contributed to the negative actual cost in 2019.

Electric Operations

Staff's review of electric operations focuses on programs aimed at reducing catastrophic wildfires given the importance of this activity.

In its TY 2017 GRC, PG&E presented a summary of wildfire control activities forecasted for the 2017 – 2019 GRC cycle. PG&E categorized these activities as either “general,” “vegetation management,” or “distribution maintenance and asset management.” Each category included short descriptions of the activity; for example, “incorporate wildfire model results into annual plans” is an activity within the “general” category.¹⁸ PG&E further mapped these activities to specific programs in the GRC: Santa Barbara Wildfire Patrols (MAT BFL), Urban and Other Wildfire Inspections (MAT BFM), Overhead Expense Projects (MAT KAP), and Vegetation Management (MAT HN#).¹⁹

After the filing of the TY 2017 GRC in September 2015, PG&E entered the new risk-based decision-making framework with the CPUC's opening of the Risk Assessment and Mitigation Phase proceeding in November 2017. PG&E subsequently updated its wildfire risk modeling results in its TY 2020 GRC filed in December 2018. The utility expanded and redefined the activities related to reducing the risks of wildfires caused by utility operations in advance of conducting electric operations for 2019. One result was the separation of risk reduction activities into controls and mitigations. PG&E defines “controls” to be safety and compliance programs already in place, and “mitigations” to be specific additional or enhancement programs, beyond compliance, with specific start and end dates and a project budget, or an additional proposed activity not previously identified.²⁰

¹⁵ See PG&E Response to Data Request: GRC-2017-PhI_DR_ED-005RSAR2019-Q08

¹⁶ Failure of welded joints or fused joints are known as “fusion failure”.

¹⁷ See PG&E Response to Data Request: GRC-2017-PhI_DR_ED-005RSAR2019-Q12

¹⁸ PG&E 2017 GRC, Exhibit PG&E-4, page 2-11, Table 2-1, “Wildfire Controls”

¹⁹ PG&E 2017 GRC, Exhibit PG&E-4, Workpaper Table 2-5.

²⁰ PG&E 2020 GRC, Exhibit PG&E-4, page 2A-8, footnote 19.

ED staff selected the controls and mitigations presented in the TY 2020 GRC upon which to evaluate any wildfire spending authorized by the prior GRC for 2019. **Table 1** lists the programs along with spending information.²¹ Note, “mitigations” may have little or no authorized budget for 2019 since they represent work that is incremental to what is currently in place.

Table 1: Wildfire Risk-Reduction Activities in 2019

<u>Program</u>	<u>Maintenance Activity Type (MAT)</u>	<u>Variance*</u>	
		(\$M)	%
<i>Controls</i>			
Overhead Equipment Replacement	KAA, KAF, 2AA, 2AE, and 2AP	281	329
Deteriorated Pole Replacement	GAA and 07D	274	304
Overhead Patrols and Inspections	BFA, BFB, BFC, BFG, BFH, BFL, and BFM	163	665
Vegetation Management	HN and GCG	153	68
Protective Equipment	49B, 49D, 49E, 49S, 49X, and 09A	(40)	-73
Overhead Conductor Replacement	08J and 08W	(30)	-75
Animal Abatement	KAC, KAD, 2AB, and 2AC	(3)	-33
Wood Pole Bridging	KAQ	3	NA
Non-Exempt Equipment Replacement	2AP	0	NA
Controls Subtotal		799	152
<i>Mitigations</i>			
Enhanced Vegetation Management	IG#	672	NA
System Hardening	2AP and 08W	297	33,292
Automation and Protection	HG#, 49T, 49H, and 09A	60	2,333
Non-Exempt Surge Arrestor Replacement	2AR	22	NA
Emergency Preparedness and Response	AB6, AB#, and 21#	21	122
Resilience Zones	49M	3	NA
Reclose Blocking	BA#	3	4,322
Aviation Resources	BP#		
Mitigations Subtotal		1,078	5187
Total		1,877	343

*A positive variance corresponds to an undercollection (overspend) of the authorized (imputed) amount.

In 2019, PG&E overspent its authorized budget from the TY 2017 GRC by \$1.9 billion, or 343%, over the course of 2019 for both capital and expense electric programs dedicated to wildfire risk reduction. Much of the variance is caused by new or enhanced “mitigation” activities for which the TY 2017 GRC authorized little or no funding. Some funding authorized for “controls” was redirected towards these enhanced activities.

²¹ Employee Engagement, Training and Tools, and the Community Wildfire Safety Program (CWSP) Program Management Office mitigations are not included in the table since the report does not identify spending specific to these programs.

A. System Hardening

This section evaluates the System Hardening “mitigation” (MATs 2AP and O8W) as well as the Overhead Conductor Replacement “control” (MAT 08J) for a complete picture of these two closely related programs.

The System Hardening budget consists of \$32.2 million for Replace Deteriorated Overhead Conductor (MAT 08J), \$7.2 million for Wires Down Generated Projects (MAT 08W), and \$0.9 million for Overhead Capital Projects (MAT 2AP), for a total of \$40.2 million. System Hardening Wildfire Resiliency Projects (MAT 08W) were not forecasted in the TY 2017 GRC and are not included in the GRC budget. A summary of the variance information for these programs is shown in **Table 2**. Exclusion of the Wildfire Resiliency program illustrates PG&E’s performance in relation to the authorized programs for 2019. The \$20 million for authorized work was diverted to this new program along with authorized spending from other programs.

Table 2: System Hardening Program Summary

Program	Authorized (\$M)	Recorded (\$M)	Variance	
			(\$M)	%
Replace Deteriorated Overhead Conductor (MAT 08J)	32.2	9.7		
Wires Down Generated Projects (MAT 08W)	7.2	0		
System Hardening Wildfire Resiliency (MAT 08W)	0	287.4		
Overhead Capital Projects (MAT 2AP)	0.9	10.7		
Total	40.2	307.8	267.6	666
Less Wildfire Resiliency	40.2	20.4	(19.9)	-49

PG&E overspent the combined System Hardening budget for 2019 by \$267.6 million, or 666%. If the Wildfire Resiliency program is excluded, then the spending variance results in a \$19.9 million underspend. For MAT 08W specifically, PG&E states in the report that overhead conductor replacement work as part of the Wires Down program was moved to MAT 08J without identifying the amount of spending involved.²² The statement suggests the \$9.7 million recorded in MAT 08J was intended to meet the spending targets authorized for the Wires Down program. Accounting for this transfer, PG&E’s recorded spending on the MAT 08W increases to \$297.1 million resulting in an overspend of \$289.9 million, or 4,040%. PG&E explains that this spending is “due to a shift in strategy to support wildfire system hardening within Tier 2 and 3 [high fire threat districts] following the 2017 wildfires by starting this new program in 2018.”

It is not clear from the PG&E iRSAR whether any funds were spent on the Wires Down program other than an amount moved to MAT 08J. The recorded spend for the Wildfire Resiliency program could be considered a diversion of funds from other programs. If the conclusion on MAT 08J is true, then this diversion would amount to \$289.9 million.

The Overhead Capital Projects program (MAT 2AP) consists of overhead capital projects costing more than \$100,000 per location and includes the replacement of non-exempt fuses with exempt equipment types. MAT 2AP consists of several wildfire controls and mitigations and the report does not distinguish which portions of MAT 2AP are associated with each wildfire risk reduction activity. Taken as a whole, PG&E spent \$10 million, or 1,099%, above its authorized budget for this program. PG&E explains the difference as due to “replacement of non-exempt fuses in [High Fire-

²² PG&E iRSAR, page 3-49, lines 22-24.

Threat District] areas and replacement of non-wood streetlight poles, not included in the 2017 GRC forecast.” PG&E states that actual work units changed without stating that spending changed as a result. **Attachment 1** is PG&E’s response to ED’s request for more information.

B. Protective Equipment

MATs 49B, 49D, 49E, 49S, 49X, and 09A make up the Protective Equipment wildfire risk control which generally includes the installation of new equipment (e.g., fuses, reclosers, and Supervisory Control and Data Acquisition installations) that isolates equipment when abnormal system conditions are detected. PG&E underspent \$23 million, or 97%, from its authorized budget for MAT 49E General Installations/Replace Circuits/Zone, the largest underspending of any wildfire risk reduction program. PG&E explains that the underspending is due to “the reallocation of resources to higher priority work such as System Hardening, [Wildfire Safety Inspection Program] tags, and [Public Safety Power Shutoff].” **Attachment 2** is PG&E’s response to ED’s request for more information. Altogether, PG&E underspent its authorized budget for Protective Equipment programs by \$39.8 million, or 73%.

C. Animal Abatement

MATs KAC, KAD, 2AB, and 2AC make up the Animal Abatement wildfire risk control which generally includes the installation of new equipment or retrofitting existing equipment with protection measures intended to reduce animal contacts. This includes avian protection on distribution and transmission poles, such as jumper covers, bushing covers, perch guards, or perching platforms. The combined variance in work units for this program totaled 2,960 units, or 60%, less than what was authorized in the TY 2017 GRC. Capital and expense work units consist of the number of bird safe notifications and bird retrofits notifications. PG&E explains that less units were required due to fewer bird incidents than forecasted for MATs KAC and 2AB, and fewer units required due to work completed in other programs that included bird mitigation, such as system hardening, including tree wire projects, and pole replacement in raptor concentration zones for MATs KAD and 2AC.

D. Effect of Regulatory Accounts

PG&E is authorized to record certain safety, reliability and maintenance work in balancing accounts and memorandum accounts and to seek recovery of the costs for those activities from the CPUC. A few of those accounts relate to requests made in the TY 2017 GRC covering 2019 – specifically, the Vegetation Management Balancing Account (VMBA), the Major Emergency Balancing Account (MEBA), the FRMMA, and the WMPMA. All but the MEBA include activities related to wildfire risk reduction. Other accounts such as CEMA and the Fire Hazard Prevention Memorandum Account (FHPMA) record wildfire risk reduction activities but are not included in the GRC request. No approvals for cost recovery of memorandum account balances have been granted for 2019. Therefore, the variance for programs recorded in these accounts is unknown at this time.

Costs for routine vegetation management activities are recorded in the VMBA (MWC HN) and are provided to the CPUC in an annual advice letter. Routine vegetation management does not include work to clear vegetation from substations recorded in MWC GC, Electric Distribution Substation: Vegetation Management. The activity in the VMBA since 2017 is shown in **Table 3** below.

Table 3: VMBA Annual Balance/Overspending 2017 - 2019

Year	Balance*	Advice Letter
2017	\$395,607	5402-E
2018	\$46,889,378	5678-E
2019	\$151,878,294	5873-E
Total	\$199,163,279	

*Amounts include accrued interest.

The VMBA functions as a one-way account such that any costs incurred above authorized are not directly passed on to customers. Customers may pay for these unauthorized costs through the reprioritization of other program funding. The net effect is an increase in utility underspending despite zero recorded variance in vegetation management costs.

E. Ongoing Wildfire Spending

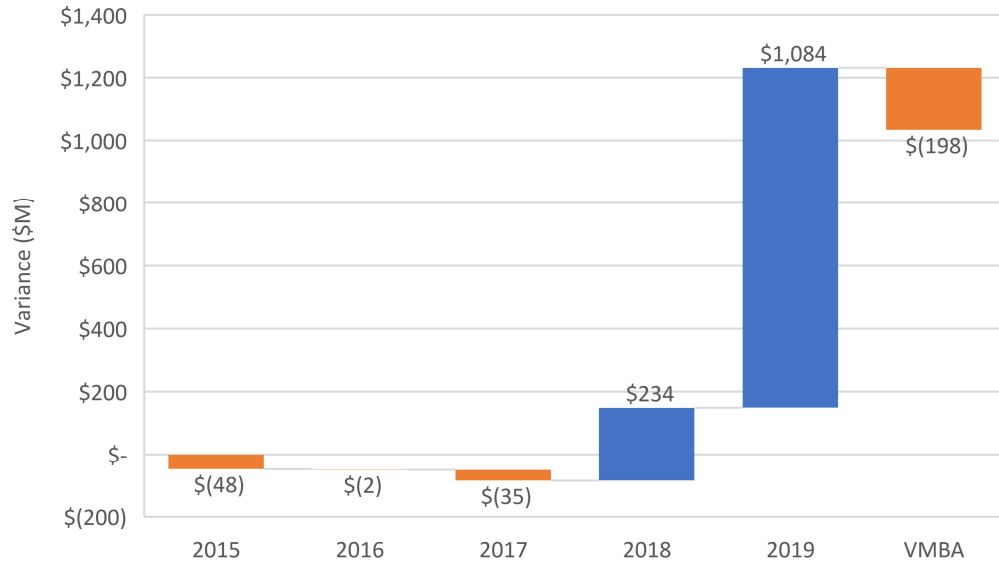
It is important to know how ratepayer funds have been spent for past and current wildfire programs and how forecasts have been developed with this information. This section explores PG&E's wildfire "Controls" through the TY 2017 GRC and how this information is incorporated into the TY 2020 GRC. Since "Mitigations" are new or expanded programs executed in 2019 and not forecasted in rates as a result of the TY 2017 GRC, they are not included in this section.

Figure 1 below shows the annual variance between recorded and imputed/authorized spending since 2015.²³²⁴ The TY 2017 GRC included capital expenditures for 2015 and a forecast for 2016 in addition to the costs forecasted for 2017 through 2019 when setting rates over the GRC cycle. As shown in the chart, PG&E spent less than what was authorized in rates through 2017 but spent more in 2018 and 2019 resulting in a total undercollection of about \$1.232 billion. As discussed in Section D, regulatory accounts allow utilities to recover an undercollection through rates thereby setting the authorized amount equal to what is recorded. The VMBA remains the most significant account for recording wildfire program costs. Since 2017, this account's share of the total undercollection is about \$198 million. Including the effect of the VMBA, PG&E underspent its authorized wildfire program budget by about \$1.034 billion.

²³ Data for Figure 1 is included as Attachment 3.

²⁴ Federal Energy Regulatory Commission allocated Vegetation Management costs of \$2.098 million since 2017 are excluded.

Figure 1: Annual Wildfire Program Variance



The recent increase in wildfire spending can be attributed to PG&E’s increased prioritization of reducing catastrophic wildfire risk. Future analysis of the effectiveness of wildfire and other risk spending can be improved through both an understanding of PG&E’s management of its risk profile and the prioritization of risk mitigation programs. Staff requests PG&E provide in its next RSAR for 2020 the most recent risk spend efficiencies in accordance with the method adopted in D.18-12-014, *Phase Two Decision Adopting Safety Model Assessment Proceeding (S-MAP) Settlement Agreement With Modifications*, or other measure of prioritization, and descriptions of how changes in priority occurred that led to shifting funds between programs.

**PACIFIC GAS AND ELECTRIC COMPANY
2017 General Rate Case Phase I
2019 Risk Spending Accountability Report
Application 15-09-001
Data Response**

PG&E Data Request No.:	ED_006-RSAR2019-Q03		
PG&E File Name:	GRC-2017-PhI_DR_ED_006-RSAR2019-Q03		
Request Date:	August 26, 2020	Requester DR No.:	006-RSAR2019
Date Sent:	September 9, 2020	Requesting Party:	Energy Division
PG&E Witness:	N/A	Requester:	Michael Zelazo

QUESTION 03

In its variance explanation for capital MAT 08W – System Hardening: Wildfire Resiliency Projects, PG&E states that the variance is “due to a shift in strategy to support wildfire system hardening within Tier 2 and 3 HFTDs following the 2017 wildfires by starting this new program in 2018.” Please provide more information relating to this explanation that answers the following questions:

- a. How was the “shift in strategy” determined, what alternatives were considered, what parties were involved, what data and risk modeling was considered?
- b. What was the source of funding for this new program – shareholders or ratepayers? What other programs were deprived of funding for this new program, were these programs related to safety, did these other programs have a risk-spend efficiency, RET or RIBA score better than this new program?

ANSWER 03

- a. PG&E describes the development of the System Hardening program, and the larger Community Wildfire Safety Program in its 2020 GRC in Exhibit (PG&E-4), Chapter 2A. See pages 2A-13 through 2A-21 for a description of PG&E’s analysis of wildfire risks, the wildfire risk bowtie, risk drivers and frequency, and PG&E’s comprehensive evaluate of wildfire risk mitigation options. Alternatives considered for the system hardening program are discussed in PG&E’s 2020 GRC Exhibit (PG&E-4) workpapers on page WP 9-31.
- b. PG&E obtained debtor in possession financing to support operations and capital projects in 2019 as part of its bankruptcy proceeding. Consistent with SB 901, PG&E recorded costs for wildfire mitigations included in its 2019 Wildfire Mitigation Plan in two memorandum accounts – either the Wildfire Mitigation Plan Memorandum Account (WMPMA) or the Fire Risk Mitigation Memorandum Account (FRMMA) . PG&E will file a separate application for recovery of 2019 recorded costs that are incremental to the revenue included in the 2017 GRC.

While there were no programs that were deprived of funding on account of PG&E’s wildfire mitigation work, certain programs were de-prioritized in 2019 in order to conduct this work, including distribution line and substation capacity (MWCs 06, 46),

reliability programs (MWC 49), and underground cable replacement (MWC 56). In general, the programs where work was reduced had lower RSE scores than the wildfire mitigation work. Work was re-prioritized to focus resources on wildfire mitigation work, and other higher priority work whose costs were not tracked in the WMPMA or FRMMA such as overhead pole replacements (MWC 07), overhead maintenance tags (MWC 2A), underground maintenance tags (MWC 2B), and substation emergency work (MWC 59). Lower risk work that was higher priority included new business (MWC 16) and work requested by others (MWC 10). See PG&E's response to ED_006-RSAR2019-Q05 for a description of PG&E's prioritization process.

**PACIFIC GAS AND ELECTRIC COMPANY
2017 General Rate Case Phase I
2019 Risk Spending Accountability Report
Application 15-09-001
Data Response**

PG&E Data Request No.:	ED_006-RSAR2019-Q04		
PG&E File Name:	GRC-2017-Phi_DR_ED_006-RSAR2019-Q04		
Request Date:	August 26, 2020	Requester DR No.:	006-RSAR2019
Date Sent:	September 9, 2020	Requesting Party:	Energy Division
PG&E Witness:	N/A	Requester:	Michael Zelazo

QUESTION 04

In its description of MAT 08W – Wires Down Generated Projects and System Hardening Wildfire Resiliency Projects, PG&E states that “prior to 2018, this MAT was used for overhead conductor replacements associated with PG&E’s wires-down program; this work has been moved to MAT 08J.” PG&E also describes this MAT as including work related to “replacement of non-exempt equipment, replacement of OH electric distribution line transformers, replacement of existing wood poles with more resilient poles, upgrades to electrical protective devices and systems through equipment replacements and device programming.” The following questions relate to the units measured: number of circuit miles.

- a. Prior to 2018, did the work in this MAT include what was described above in addition to “overhead conductor replacements associated with PG&E’s wires-down program?”
- b. Prior to 2018, was the units measurement the number of circuit miles of overhead conductor replaced or did the units measurement include other activities such as conductor repairs without replacement or appurtenant equipment repairs and/or replacements?
- c. Subsequent to 2018, did the units measurement change to account for the additional work described above?

ANSWER 04

- a. No. Prior to 2018, MAT 08W was used for overhead conductor replacements associated with PG&E’s wires-down program.
- b. Prior to 2018, the units for MAT 08W were measured in circuit miles of overhead conductor replaced. In the 2017 GRC workpapers, PG&E showed circuit feet as the unit of measurement but converted circuit feet to circuit miles for both the imputed and actual units for the RSAR for readability. Conductor replacement projects may include replacement of other equipment as needed. Poles and other equipment removed to facilitate reconductoring are rebuilt in accordance with PG&E’s current standards and equipment specifications.

Attachment 1: PG&E Data Responses Related to System Hardening

- c. Subsequent to 2018, the units for MAT 08W are still measured in circuit miles. However, the unit cost was adjusted to reflect the additional work required for system hardening.

**PACIFIC GAS AND ELECTRIC COMPANY
2017 General Rate Case Phase I
2019 Risk Spending Accountability Report
Application 15-09-001
Data Response**

PG&E Data Request No.:	ED 006-RSAR2019-Q05		
PG&E File Name:	GRC-2017-Phi_DR_ED_006-RSAR2019-Q05		
Request Date:	August 26, 2020	Requester DR No.:	006-RSAR2019
Date Sent:	September 9, 2020	Requesting Party:	Energy Division
PG&E Witness:	N/A	Requester:	Michael Zelazo

QUESTION 05

In its variance explanation for capital MAT 49E – General Installations/Replace Circuits/Zone, PG&E states that the variance is “due to the reallocation of resources to higher priority work such as System Hardening, WSIP tags, and PSPS.” Please provide more information relating to this explanation that answers the following questions:

- a. How was the “reallocation” determined, what alternatives were considered, what parties were involved, what data and risk modeling was considered?
- b. What was the breakdown of \$22.6 million in diverted funding for this new program to System Hardening, WSIP tabs, and PSPS? What other company activities received this diverted funding, were these activities related to safety?
- c. Did System Hardening, WSIP tags and PSPS have a risk-spend efficiency, RET or RIBA score better than MAT 49E?

ANSWER 05

- a. At the start of 2019, the initial Electric Operations workplan covered 100% of base GRC and balancing account work. The Wildfire Safety Plan for 2019 included extensive additional work, and in May 2019, Electric Operations approve workplan deferrals to meet resource constraint scenarios in order to prioritize the Wildfire Safety Plan work, and agreed on a prioritization to bring work back in if resource availability improved. Guiding principles utilized for work prioritization were:
 - Ensure that the highest public safety risk work gets prioritized first
 - Ensure work plan accounts for workforce safety
 - Build a plan and process that envisions re-plans due to emergency events such as PSPS and storms
 - Acknowledge and account for constraints such as time, resources, clearances, dependencies and financials
 - Be transparent about the trade-offs and provide the “why” across EO and key EO partners
 - Communicate and engage with stakeholders outside of PG&E to explain the plan and choices.

The re-prioritization for work was as follows:

Attachment 2: PG&E Data Responses Related to Protective Equipment

- 1) Work that prevents fire ignition (vegetation, threatening tags, system hardening)
- 2) Overhead work with a strong safety link (repair tags, conductor replacement, work that prevents wires down)
- 3) Emergency preparedness (PSPS, cameras, weather stations)
- 4) Underground / network work with a strong safety link (network replacement, maintenance tags)
- 5) Compliance/commitments with strong safety link (patrols and inspections, poles, vegetation)
- 6) New business / WRO
- 7) 2017 GRC Settlement Commitments (FLISR, UG Cable, Grasshopper switches)
- 8) Compliance / Commitments (but low safety risk)
- 9) Reliability (Targeted reliability, Non-customer capacity)

PG&E calculated new RIBA scores for the WSIP inspections and resulting tags which reflected the higher safety and environmental impacts of executing the work. Additional risk modeling is described in PG&E's 2020 GRC, Exhibit (PG&E-4), Chapter 2A.

PG&E did consider bringing on enough contract M&C crews to meet the full system demand, however, it was limited in its ability to scale support resources, such as clerical, coordinators, inspectors, auditors and supervisors. The ability to take all the necessary clearances to complete the full work portfolio was also a constraint.

Internally, Electric Operations engaged its Regulatory and Finance teams to determine the potential impacts of the work re-prioritization. In August 2019, PG&E met with the Safety Enforcement Division of the CPUC to review its Wildfire Safety Inspection Program, resulting maintenance tags, and plans for completing the corrective work. As a follow up to the August 2019 meeting, PG&E provided quarterly updates on the WSIP identified tags, and information on non-WSIP tags to provide a wholistic view on the volume of tags and efforts that are on-going to inspect, detect, repair and/or replace PG&E's electric assets.

- b. PG&E's budget allocation process does not specifically transfer dollars from one work type to another. The required work is prioritized and funding is allocated accordingly. Other work that was prioritized above reliability work in MAT 49E, where spending was \$22.6M lower than the imputed adopted amount, is listed above in subpart "a". Work not considered incremental wildfire mitigation that absorbed the underspend in MAT 49E included work in MWCs 2A (overhead maintenance tags), 2B (underground maintenance tags), 07 (pole replacements), 59 (substation emergency), 10 (WRO), and 16 (new business).
- c. The RIBA scores for targeted reliability projects in MAT 49E vary from 20 to 1303 with most projects scoring around 197, with the scores for primarily driven by reliability impacts. The RIBA scores for the higher priority work in 2019 were:
 - MAT 08W (System Hardening): 3314

Attachment 2: PG&E Data Responses Related to Protective Equipment

- WSIP tags:
 - MAT 07D (Pole Replacements): 3612
 - MAT 2AA (overhead notifications): 3623
 - MAT 17B (OH Emergency): 7324
- MWC IG (PSPS): 3314

Attachment 3: Ongoing Wildfire Program Spending 2015 - 2019

MAT	Recorded (\$000)					Forecast (\$000)		Imputed (\$000)		
	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
07D	79,306	79,377	98,196	220,105	346,832	86,258	76,288	86,328	68,557	76,503
08J	22,075	26,755	23,090	16,109	9,665	38,393	35,080	35,775	33,233	32,160
08W	4,433	5,006	2,869	23,759	287,429	7,734	6,000	7,983	7,416	7,176
09A	2,175	1,568	1,881	8,418	6,643	3,370	3,000	2,865	2,661	2,575
2AA	45,947	52,000	57,041	95,034	228,142	54,208	54,913	49,739	46,205	44,713
2AB	2,938	2,435	2,131	1,978	2,458	3,999	4,000	4,137	3,843	3,719
2AC	2,867	3,025	2,767	5,271	1,840	4,401	3,370	2,739	2,545	2,463
2AE	21,654	26,850	25,293	37,743	34,865	17,100	21,092	19,424	18,044	17,462
2AP	1,626	3,729	1,649	1,205	10,705	3,657	1,020	993	923	893
49B	473	238	115	318	16	500	500	547	508	492
49D	2,944	2,598	997	709	983	3,929	2,850	4,510	4,190	4,054
49E	13,617	24,838	8,279	4,175	768	19,880	24,500	26,036	24,186	23,405
49S	12,821	11,150	9,050	6,621	4,737	14,468	10,500	22,516	20,916	20,241
49X	3,382	7,565	5,513	4,384	1,943	6,630	6,000	4,579	4,254	4,116
BFA			2,693	4,550	6,152			3,308	3,497	3,653
BFB			8,546	10,787	138,261			9,948	10,518	10,986
BFC			1,788	1,861	1,919			4,001	4,230	4,418
BFG			2,286	2,089	2,108			2,122	2,244	2,344
BFH			503	1,276	38,510			1,654	1,749	1,827
BFL			20	0	0			49	52	54
BFM			682	0	0			1,036	1,095	1,144
GAA			11,218	8,842	17,849			12,170	13,087	13,819
GCG			1,499	1,914	52			1,146	1,211	1,265
HN#			200,449	259,157	373,272			200,028	212,304	222,056
KAA			16,282	21,270	87,754			15,505	16,412	17,149
KAC			491	699	802			1,138	1,205	1,259
KAD			533	1,354	354			637	674	704
KAF			5,143	4,743	5,354			4,715	4,990	5,215
KAQ			7	0	3			0	0	0