BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Implement Electric Utility Wildfire Mitigation Plans Pursuant to Senate Bill 901 (2018).

R.18-10-007

OPENING COMMENTS OF THE ENERGY PRODUCERS AND USERS COALITION ON THE 2020 WILDFIRE MITIGATION PLANS

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SUMMARY OF RECOMMENDATIONS

EPUC provides the following recommendations to the Wildfire Safety Division and the Commission in its evaluation of the 2020 Wildfire Mitigation Plans (WMPs).

- Pursuant to the 2019 Guidance Decision, WMP approval should only reflect and consider Senate Bill 901 requirements. Commission approval should <u>not</u> include the reasonableness of cost assessments, nor judgments on the appropriate scope of the WMP programs. Rather, the appropriate venue for both the assessment of costs and scope of the WMP elements is through a fully litigated General Rate Case proceeding where ratepayers and stakeholders can meaningfully evaluate and address these factual, evidentiary issues.
- The Commission should require utilities to include the following Risk Spend Efficiency (RSE)-related information that is currently missing when seeking to recover WMP costs: (1) formulas to the RSEs, (2) inputs to the formulas, and (3) a narrative explanation to how the utility arrived at the inputs. Neither PG&E nor SCE provided enough essential RSE information in their 2020 WMPs to allow stakeholders to determine how WMP activities were prioritized and the cost effectiveness of each mitigation activity.

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Pursuant to Resolution WSD-001,¹ the Energy Producers and Users Coalition² (EPUC) submit these public comments on the California investor-owned utilities' (IOUs) 2020 Wildfire Mitigation Plans (WMPs). These comments focus on PG&E's³ and SCE's⁴ 2020 WMP programs.

I. INTRODUCTION

In the utilities' second round of WMPs, it remains at best difficult to plainly measure the cost effectiveness or reasonableness of the individual WMP program element choices that result in multi-billion dollar programs. Both PG&E and SCE provide limited, and in some instances, nonresponsive Risk Spend Efficiency (RSE) information in their submissions to the WMP Templates.⁵ Given the limited responses, it is unclear how closely PG&E and SCE adhered to prioritizing WMP activities based on RSE or cost effectiveness. While it is important that

¹ Issued January 24, 2020.

EPUC represents the electricity end-use interests of the following companies in this proceeding: Aera Energy LLC; California Resources Corp.; Chevron USA; PBF Holding Company; Phillips 66 Company; and Tesoro Refining & Marketing Company LLC.

³ Pacific Gas and Electric Company 2020 Wildfire Mitigation Plan Report, Updated (PG&E WMP), February 28, 2020.

Southern California Edison 2020-2022 Wildfire Mitigation Plan, Revision 3 (SCE WMP), March 18, 2020.

Administrative Law Judge's Ruling on Wildfire Mitigation Plan Templates and Related Material and Allowing Comments (ALJ Ruling on WMP Templates) and Attachments 1-5 (WMP Templates), December 16, 2019.

utilities prioritize spend based on risk evaluation, it is even more critical due to the cost and safety implications of wildfire infrastructure. It is revealing that both PG&E's and SCE's WMP contain such limited RSE information and further accentuates the need for complete RSE data during the Commission's cost recovery process.

In evaluating the 2020 WMPs, the Commission's role should be to approve the WMP programs without approving any cost-related or, by inference, the scope of the programs. The Commission's June 3, 2019 Guidance Decision on 2019 Wildfire Mitigation Plans Submitted Pursuant to Senate Bill 901 (Guidance Decision)⁶ provides effective guidelines for the Commission. The Guidance Decision explicitly concludes that WMP approval does not replace a reasonableness evaluation, nor does it include or intimate any approvals for ratepayer recovery of costs related to the programs. The Commission should emphasize this point in its approval of the 2020 WMPs for two reasons. First, it is essentially impossible to accurately measure the current cost effectiveness of the WMPs given the information received from the utilities in their responses to the WMP Templates. Second, it is unclear which program components existed before being adopted as part of the utilities' WMPs. If a program component or investment has already been submitted to the Commission as part of a GRC application and funds received, the utility should not now have a second opportunity to recover the same funding. This thorough analysis cannot be completed until a GRC process that includes time for investigation, risk modeling, testimony, and evidentiary hearings.

II. THE COMMISSION SHOULD APPROVE THE WMPS AS TO STATUTORY REQUIREMENTS ONLY

In keeping with its findings and orders in the Guidance Decision, the Commission should approve the 2020 WMPs only as they comply with Public Utilities Code Section 8386(c). In its

⁶ D.19-05-036.

first round of evaluating the WMPs in 2019, the Commission issued the Guidance Decision and individual decisions approving each investor-owned utility's WMP.⁷ The individual approvals were based primarily upon the WMPs' satisfaction of Public Utilities Code Section 8386(c).⁸ For the 2020 WMP decision, the Commission should explicitly state that WMP approval does not equate to any presumption of program cost approval. By inference, the 2020 WMP decision should <u>not</u> approve the WMP program scope. Not only are total WMP costs set to rival any recent infrastructure investment, but ascertaining accurate cost estimates are not within the scope of this proceeding. Any cost-based and cost effectiveness review in a future GRC would be rendered meaningless if the 2020 WMP decision referenced the scope and reach of each WMP program.

A. Total WMP Costs Will Dwarf Any Recent Infrastructure Investment

PG&E's and SCE's respective 2020 WMPs provide partial information as to the eventual costs of the infrastructure investments. This partial information paints a picture of staggering project costs that presumably will be shouldered by ratepayers. Already, rough estimates from PG&E's and SCE's 2020 WMPs range in the billions of dollars.

PG&E's WMP does not appear to contain an estimate of its total spend from 2020 to 2022. However, the summation of 2020 to 2022 WMP total costs reflected in Tables 21-30 suggest \$5.28 billion in capital costs and \$4.52 billion in O&M costs, totaling approximately

⁷ See, e.g., D.19-05-038 (approving SCE's 2019 WMP), and D.19-05-037 (approving PG&E's 2019 WMP).

See, D.19-05-038 approving SCE's 2019 WMP, at 51, Ordering Paragraph 1 ("Southern California Edison's (SCE's) Wildfire Mitigation Plan (WMP) contains the elements required by Public Utilities Code Section 8386(c). Subject to the reporting, metrics, data and advice letter requirements set forth below, SCE's WMP is approved.").

\$9.81 billion. In comparison, in its application for its 2020 GRC Phase 1 proceeding, PG&E requested a \$1.058 billion increase in 2020 over currently authorized rates, representing a 12.4% increase. PG&E's proposed WMP for 2020 to 2022 alone is approximately nine times the cost of its most recent GRC revenue request. SCE's estimated WMP costs from 2020 to 2022 are \$2.65 billion in capital costs and \$1.17 billion in O&M costs, totaling \$3.82 billion. In its GRC Phase 1 proceeding, SCE requested a \$1.295 billion in increase in 2021 over currently authorized rates, representing a 20.1% rate increase. Pointedly, the 2020 WMPs alone exceed the total revenue requirement from PG&E's and SCE's most recent Phase 1 General Rate Cases.

B. Plan Approval Should Include Statutory Requirements Only and Not Include Scope; Only a Meaningful Review as Part of a General Rate Case Will Provide an Essential Reasonable Review for Scope and Cost Approval

In evaluating the 2020 WMPs, the Commission should carefully and narrowly interpret any approval to compliance with Public Utilities Code Section 8386(c) only, conforming to Commission precedent. While the Guidance Decision expressly orders that Commission approval of the WMPs does not approve costs, it is important for the Commission to explicitly find that approval does not include program scope. First, it is impossible to determine at this juncture what the level of compliance the utilities have with the WMP Templates and guidance documents. In addition, it is also unclear as to which programs that are listed in SCE's and PG&E's WMPs that have already be incorporated into previous GRCs; in other words, a determination of what program funds have already been requested and received.

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See Appendix A. These sums are derived in two steps: (1) adding the total per-initiative spends for "2020-2022 plan total" shown in columns D and E in each of PG&E's tables 21-30; and (2) adding the calculated totals across Tables 21-30.

A.18-12-009 Test Year 2020 General Rate Case Application of Pacific Gas and Electric Company (U 39 M), December 13, 2018, at 1.

SCE Wildfire Mitigation Plan at 76, Table SCE 5-2.

¹² A.19-08-013 Test Year 2021 General Rate Case Application of Southern California Edison Company (U 338-E), August 30, 2019, at 1.

Limiting both program cost and program scope falls squarely within the Guidance Decision. The Guidance Decision explains that SB 901's drafters "separated WMP approval from cost recovery for the mitigation measures" and defers all consideration of cost to the GRC. ¹³

Senate Bill 901 is explicit that approval of Wildfire Mitigation Plans does not constitute approval of the costs associated with the actions in the plan. Rather, cost recovery is a separate matter to be addressed in each utility's General Rate Case. ¹⁴

The Guidance Decision further emphasizes the importance of integrating the GRC review after the WMP approval process to ensure adequate safety-related work. In reaching this conclusion, the Guidance Decision highlights the limitations of the WMP approval process.

There are limits on what can be accomplished in this proceeding, as the strict statutory deadlines – three months to approve the Wildfire Mitigation Plans, with very limited exceptions – provide little time to evaluate each Plan's effectiveness. 15

While the Guidance Decision referred to the procedural schedule of the 2019 proceeding, similar procedural limitations exist in the current 2020 approval process. For example, the 60-day timeline for public review does not include multiple rounds of testimony or evidentiary hearings. The WMPs themselves do not include detailed accounting of each program and in which memorandum accounts the costs are to be tracked.

In addition, the Guidance Decision explicitly found that the WMPs must still meet the Section 451 requirement of "just and reasonable" costs in a GRC.¹⁶ It is clear that "costs are not deemed reasonable until the Commission conducts a 'review [of] the costs.'"¹⁷ The Guidance

15 *Id.* at 4-5.

Guidance Decision at 21.

¹⁴ *Id.* at 4.

¹⁶ *Id.* at 21.

¹⁷ *Id.* at 22.

Decision swiftly disabused the utilities from their attempts to argue that Commission approval of the WMP represents "substantial compliance" with the plan and is determinative of whether the utility acted as a prudent manager. ¹⁸

Approval of the WMP does not determine whether, at the time an IOU seeks recovery for the costs of carrying out its plan, the IOU complied with the prudent manager standard. ¹⁹

We also do not find that substantial compliance with an element of a Plan, or all elements of a Plan, establishes that the electrical corporation acted prudently when it later seeks to recover its costs. Senate Bill 901 did not redefine the "prudent manager" test.²⁰

The importance of reserving a cost, scope, and reasonableness review is compounded when, as here, the RSE inputs and calculations for the 2020 WMPs do not appear to be fully developed. Future improved — and verifiable by parties — RSEs are not in place now, making the evaluation during the GRC even more critical.

III. PG&E'S AND SCE'S WMPS LACK MEANINGFUL RISK SPEND EFFICIENCIES AND OTHER COST EFFECTIVENESS PRIORITIZATION MEASURES

As described below, PG&E's and SCE's 2020 WMPs remain lacking in effective RSE data and related "cost effectiveness" information for the Commission and intervenors to conduct a meaningful analysis. A functional RSE model is of critical importance for WMP review for two reasons. First, it ensures that the WMPs themselves prioritize activities based on RSE models. Second, functional RSE information will allow the Commission to review the WMPs' cost effectiveness in future GRCs.

Id. at 40, Conclusion of Law 3 ("SB 901 does not provide that Commission approval of a WMP is dispositive of whether the WMP filer acted reasonably and prudently when the filer seeks recovery of WMP-related costs.").

¹⁹ *Id.* at 20.

²⁰ *Id.* at 4.

In emphasizing the importance of RSE, 21 the ALJ Ruling on WMP Templates calls for maximizing the amount of risk reduction achieved per dollar spent in determining the proper mitigation programs in the WMPs.²² The WMP Guidelines define RSE as follows:

> An estimate of the cost-effectiveness of initiatives, calculated by dividing the mitigation risk reduction benefit by the mitigation cost estimate based on the full set of risk reduction benefits estimated from the incurred costs.²³

The Commission's evaluative tools — such as the WMP Guidelines and Utility Wildfire Mitigation Maturity Model — heavily featured RSE as a metric, ²⁴ the utilization of which EPUC has long supported.²⁵ The provision of these data falls in line with the Commission's preference to use RSE in its S-MAP and GRC proceedings in prioritizing actions.²⁶

A properly conducted RSE analysis, including all of the proper inputs, should be a major driver in how the utilities should dedicate and deploy finite resources, in order to achieve the greatest amount of risk reduction. While the Commission correctly recognizes the importance of an effective RSE analysis, SCE's and PG&E's filings largely either do not report RSEs or do not rely on the results, favoring other factors, such as subjective judgement.

No Commission approval of rate recovery should be made on such large cost items such as those contemplated in the utilities' respective WMPs absent full compliance with expressed Commission standards and assessments, including RSE. The Commission should require PG&E and SCE to include the following information that is currently missing when they seek to recover

²¹ ALJ Ruling on WMP Templates at 4.

²² *Id.* at 4.

²³ Id., Attachment 1 (WMP Guidelines), at 12.

²⁴ See ALJ Ruling on WMP Templates and WMP Templates.

²⁵ Opening Comments of the Energy Producers and Users Coalition, March 13, 2019, at 14.

²⁶ Guidance Decision at 28.

WMP costs: (1) formulas to the RSEs, (2) inputs to the formulas, and (3) a narrative explanation to how the utility arrived at the inputs.

A. PG&E's WMP Does Not Provide Enough Information for the Commission or Parties to Fully Evaluate Cost Effectiveness

In light of the emphasis by the Commission on the importance of RSE, PG&E's estimation of its 2020 WMP RSE remains confusing and difficult to interpret. PG&E describes its RSE calculations and estimates as follows:

RSEs presented in this filing are projections based on the current model, which will continue to be enhanced and validated with actual data. *The RSEs in this filing should be seen as indicative of trends, rather than as forecasts of ignition probability.*²⁷

The RSE is not intended to be a trend indicator or forecast of ignition probability, per se. As indicated in the WMP guidelines, it is effectively a benefits to costs estimate. The benefits being assessed are the estimated value of the risk reduction of the mitigation measure, and the costs being the estimated costs of the mitigation measure.

The more acute problem presented for parties in this proceeding is that PG&E's RSE calculations are simply not provided. PG&E's responses to data requests in this regard reveal that the "calculations" do not contain formulas, but inexplicable "plug" numbers. This condition renders meaningless any examination of the estimates of risk reduction or cost. For example, in EPUC's data request 3-3, EPUC requested all workpapers and calculations used to derive PG&E's RSEs. PG&E responded with documents showing RSE numbers by major class, calculated by dividing the purported risk reduction by the purported cost, on an aggregated basis. But there were no workpapers or calculations (beyond the simple division of two hard-coded

PG&E WMP at 5-227, n. 30 (emphasis added).

input numbers that cannot be traced back to underlying assumptions).²⁸ Thus, EPUC and other parties are unable to assess the reasonableness of the purported RSE results.

The difficulty in evaluating the cost-effectiveness of PG&E's WMP, in part due to its limited responses to Tables 21-30 in the WMP Guidelines, has also been noted by the Wildfire Safety Division. In a data request to PG&E on its original submissions to the WMP Templates, WSD states:

In virtually all the other tables of proposed mitigations, PG&E has not provided RSE (or much other information), claiming these activities are "foundational" or "controls" or that costs are not tracked separately. The excuses are not acceptable, especially as RAMP filings provide such detailed data. PG&E should provide estimates of the effectiveness and RSE of all of its proposed mitigations, including an RSE calculation for any programs or projects that incur incremental spending in the timeframe.²⁹

The Wildfire Safety Division continues to observe several problems with PG&E's current RSE modeling:

In Section 5.3.8.3 of the WMP (page 5-227), PG&E describes its Risk Spend Efficiency analysis, but it provides almost no calculations of RSE for its many proposed mitigations, despite WSD's directions to do so.³⁰

In response, PG&E explains the considerations and measurements built into its current iteration of its RSE.

...Columns 'Risk reduction', 'Risk-spend efficiency' are not provided because the baseline risk score already takes these initiatives into account; the risk reduction due to the control is incorporated into the risk score and cannot be confidently separated. . . . In other words, certain activities have been a part of

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PG&E's Response to EPUC_003-Q03_Rev01, available here: https://www.pge.com/en_US/safety/emergency-preparedness/natural-disaster/wildfire-mitigation-plan-discovery-data-requests.page.

Wildfire Safety Division Data Request to PG&E, set 1, Question 42, available here: https://www.pge.com/en_US/safety/emergency-preparedness/natural-disaster/wildfires/wildfiresmitigation-plan-discovery-data-requests.page.

 $^{^{0}}$ Id.

electric operations for so long (e.g., inspections), it is difficult to isolate the risk reduction contribution of these activities. One way to measure this would be to estimate the level of increased risk exposure in the absence of such activities, however, it is difficult to estimate this counterfactual. PG&E intends to pilot the estimation of risk reduction for control before the 2020 Risk Assessment and Mitigation Phase ("RAMP") filing. In addition, PG&E will continue to explore the possibility of developing more control Risk Spend Efficiency ("RSE") estimates for the next General rate Case ("GRC") in June 2021, however, this process is resource intensive and complex.³¹

If PG&E is unable to "isolate the risk reduction contribution" of its own WMP components, intervenors cannot verify PG&E's calculations. As mentioned, EPUC attempted to analyze PG&E's workpapers on its RSE,³² but the input values in the calculation were "hard-coded." This prevented EPUC from verifying the reasonableness of the scores or the assumptions relied upon for the RSE. It is the input values that hold the key to the reasonableness of the estimated efficiency of the spend measures and there is no transparency on these values.

RSE assessments can be a valuable tool in determining whether to undertake a mitigation measure and how to prioritize the mitigation measures. Without insight into the projections, however, the reasonableness of the result cannot be determined.

The current iteration of PG&E's RSE includes subjective evaluation from a subject matter expert, adding to the inability of an intervenor or the Commission to accurately assess PG&E's RSE methodology.

The projections of percentage reduction on ignitions are based on SME [subject matter expert] judgements on the impact of mitigation in reducing frequency of each driver. SME judgements are based on a review of the ignitions data and the causes,

PG&E Response to WSD Data Request, Set 1, Q. 6 (emphasis added), available here: <a href="https://www.pge.com/en_US/safety/emergency-preparedness/natural-disaster/wildfires/wil

PG&E's Response to EPUC_003-Q03_Rev01, available here: https://www.pge.com/en_US/safety/emergency-preparedness/natural-disaster/wildfires/wildfiresmitigation-plan-discovery-data-requests.page.

assuming certain baseline conditions. Validation of the SME judgement can only be done by comparing the estimate with the actual reduction in ignitions by each driver 2020 onwards. As with any model, validation of the effectiveness estimate with actual data may lead to changing the effectiveness of mitigation to be used in future RSE analysis.³³

These problems must be resolved before any assessment can be made of the elections of plan components, or of course, before any cost approval of the WMPs should occur. The lack of clarity for PG&E RSE assessment underlies general difficulty with evaluating priorities of individual program elections and cost effectiveness.

B. SCE's WMP Does Not Provide Enough Information for the Commission or Parties to Fully Evaluate Cost Effectiveness

From SCE's WMP and data request responses, it appears that SCE does not provide details to enable parties to evaluate the reasonableness of the mitigation benefit and cost inputs to the RSE calculation. Unsurprisingly, SCE downplays the importance for prioritizing individual WMP programs. While SCE states it considered RSE in its WMP prioritization, it appears that SCE relied more heavily on operational considerations in determining its preferred WMP approach. Accordingly, the facility of a rigorous RSE analysis may be lost in the process. Notably, SCE cautions against relying solely on the RSE in prioritizing WMP components.

... while an RSE is a valuable contributing metric to inform the development of the overall WMP, it is important to recognize that RSEs are not, and should not, be the only factors used to develop a risk mitigation plan. The RSE metric does not take into account certain operational realities, including planning and execution lead times, resource constraints, work management efficiencies, and activity's total risk reduction potential on targeted areas of the system, and regulatory compliance requirements.³⁴

PG&E Response to EPUC Data Request, Set 1, Question 3(b), available here: https://www.pge.com/en_US/safety/emergency-preparedness/natural-disaster/wildfires/wildfiresmitigation-plan-discovery-data-requests.page.

Id. at 6.

For example, SCE asserts that, "programs with higher RSEs such as PSPS [Public Safety Power Shutoff] are not necessarily the preferred long-term solution over covered conductor installation with comparatively lower RSEs."35 To the extent that PSPS has high negative benefits (due to societal costs of disruption of service), these, at least in theory, could be factored into the RSE calculation.

Efforts to evaluate SCE's RSE are hampered by SCE's own discounting of its importance. SCE offers strong caveats in relying on RSE in program evaluation, observing the following in a data response:

> RSE offers insights into how effective mitigations appear to be in reducing risk at a system, or portfolio, level while providing guidance on how effective new mitigations may be. They are used as a valuable contributing metric to inform the development of the overall wildfire mitigation plan. For new mitigations, SCE would use RSEs, if appropriate, as a factor in deciding whether to widely deploy that mitigation. For existing mitigations, SCE continuously monitors RSEs and if one should change, SCE would make changes, if appropriate, to its WMP. It is important to recognize that RSEs are not and should not be the only factor used to develop a risk mitigation plan. The RSE metric does not take into account certain operational realities, resource constraints, and other factors that SCE must consider in developing its plan. . . .

> Accordingly, SCE developed a comprehensive and balanced mitigation plan with activities that will collectively reduce the greatest amount of risk in the shortest amount of time, considering RSE as well as various regulatory, operational, resource, and cost constraints. It would be inappropriate to implement a comprehensive wildfire risk mitigation plan based solely on RSEs, which would likely lead to significant parts of the system and potentially significant risk issues left unaddressed.³⁶

Tellingly, in its response to TURN's third data request, item 5, SCE identified the categories of initiatives for which it did not calculate RSEs as follows:

³⁵ Id. at 99.

SCE Response to EPUC Data Response, Set 3, Question 3(b), available here: https://www.sce.com/safety/wild-fire-mitigation.

- Pilot projects
- Traditional programs
- Enabling activities
- Supporting activities
- Activities with insufficient data

Many activities scattered throughout SCE's WMP fall within these categories and therefore simply do not contain RSE calculations.³⁷ If anything, the absence of widespread RSE evaluation highlights the importance of the future reasonableness review in a cost recovery application.

SCE asserts that it considered RSE results, along with operational considerations, in framing its WMP features. For example, SCE determined that the Wildfire Covered Conductor Program (WCCP) would reduce wildfire risks at a lower cost, as compared to other measures, such as undergrounding.³⁸ This led to SCE's conclusion that shifting resources to WCCP from traditional infrastructure replacement programs in the near term was warranted.³⁹ According to SCE, in 2020, it is transitioning to risk modeling that integrates wildfire ignition probability and fire spread prediction calculations.⁴⁰ SCE plans a future model to incorporate more granular weather forecasts along with detailed vegetation, population and structure data and accommodating dynamic updates.⁴¹ While this analysis is helpful, it is provided in a narrative description in something of a piecemeal fashion. What is lacking and should be expected is a

E.g., Table 22, Item 3 regarding fault indicators for detecting faults on electric lines and equipment describe several portions of its program as "Initiative addressed by Traditional Program" in the Risk Reduction and RSE columns.

SCE WMP at 5.

³⁹ *Id.*

⁴⁰ *Id.* at 5-6.

⁴¹ *Id.* at 6.

systematic, rigorous review of cost effectiveness. This is what the RSE data and assessment are designed to provide; yet, SCE has effectively dismissed the RSE process, which means parties and the Commission are left without an evaluative evidentiary record for review of SCE's WMP.

IV. CONCLUSION

For all of the foregoing reasons, the PG&E and SCE WMPs must be strictly conditioned and subject to future compliance obligations and reasonableness review assessments for cost allocation. The difficulty of parsing PG&E's and SCE's RSE alone is further justification that its next GRCs must be subject to a robust reasonableness review.

Respectfully submitted,

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April 7, 2020

PG&E 2020-2-22 Wildfire Mitigation Plan Summary of Costs in Tables (\$1000)

Table	Category of Spend	2019 plan	2019 actual	2020	2021	2022	2020-2022 plan total
	Total per-initiative spend	N/A	N/A	N/A	N/A	N/A	N/A
Table 21: Risk assessment and mapping	Subtotal A: Capital expenditure	N/A	N/A	N/A	N/A	N/A	N/A
•	Subtotal B: Operating expenses	N/A	N/A	N/A	N/A	N/A	N/A
		00 000 0	00.0444	10.050.1	10.510.5	10.017.5	110.055.5
Table 22: Situational awareness and	Total per-initiative spend	39,092.0	28,814.1	48,258.4	48,549.5	43,247.5	140,055.5
forecasting	Subtotal A: Capital expenditure	12,888.2	13,834.7	13,862.7	12,370.6	7,433.3	33,666.6
ű	Subtotal B: Operating expenses	26,203.8	14,979.4	34,395.7	36,178.9	35,814.2	106,388.8
	Total per-initiative spend	1,505,735.8	1,690,113.5	1,696,902.5	1,656,505.6	1,749,088.2	5,469,352.1
Table 23: Grid design and system hardening	Subtotal A: Capital expenditure	1,492,611.3	1,129,717.0	1,531,725.5	1,538,234.5	1,627,820.3	5,064,636.1
0,000	Subtotal B: Operating expenses	231,699.1	560,396.6	165,177.0	118,271.1	121,267.9	404,716.0
Table 24: Asset management and	Total per-initiative spend Subtotal A: Capital expenditure	160,474.3	235,051.4	162,135.2	166,188.1	170,342.9	498,666.3
inspections	Subtotal B: Operating expenses	160,474.3	235,050.4	162,135.2	166,188.1	170,342.9	498,666.3
	Cubicial B. Operating expenses	100,474.0	200,000.4	102,100.2	100,100.1	170,042.5	430,000.0
Table 25: Vegetation management and	Total per-initiative spend	511,786.8	709,508.6	857,100.4	881,337.1	906,298.1	2,644,735.5
inspections	Subtotal A: Capital expenditure	18,114.0	5,707.8	14,683.2	15,050.2	15,426.6	45,160.0
Inspections	Subtotal B: Operating expenses	493,672.8	703,800.8	842,417.2	866,286.9	890,871.5	2,599,575.5
	Total per-initiative spend	30.162.8	241.261.7	253,023.0	263.036.8	271.736.1	679,090.0
Table 26: Grid operations and protocols	Subtotal A: Capital expenditure	30,102.0	1,399.2	9,085.8	1,152.4	27 1,7 30.1	1,828.2
Table 20. Ond operations and protocols	Subtotal B: Operating expenses	30,162.8	239,862.5	243,936.8	261,884.4	271,735.6	677,261.8
		,	,	.,	, , , , ,	,	, .
	Total per-initiative spend	12,748.0	36,095.0	88,231.0	49,623.0	39,283.0	177,137.0
Table 27: Data governance	Subtotal A: Capital expenditure	10,751.7	27,002.0	46,399.0	43,236.0	34,402.0	124,037.0
	Subtotal B: Operating expenses	1,996.1	9,093.0	41,832.0	6,387.0	4,881.0	53,100.0
	Total per-initiative spend	N/A	N/A	N/A	N/A	N/A	N/A
Table 28: Resource allocation methodology	Subtotal A: Capital expenditure	N/A	N/A	N/A	N/A	N/A	N/A
	Subtotal B: Operating expenses	N/A	N/A	N/A	N/A	N/A	N/A
Table 29: Emergency planning and	Total per-initiative spend	27,067.9	19,665.1	36,918.2	37,855.6	38,818.3	113,592.1
preparedness	Subtotal A: Capital expenditure	11,607.0	4,441.1	5,000.0	5,125.0	5,253.0	15,378.0
FF	Subtotal B: Operating expenses	15,460.9	15,224.0	31,918.2	32,730.6	33,565.3	98,214.1
	Total per-initiative spend	8,561.5	38,769.3	28,749.7	27,248.3	27,802.7	83,800.6
Table 30: Stakeholder cooperation and	Subtotal A: Capital expenditure	541.1	91.8	,			-
community engagement	Subtotal B: Operating expenses	8,020.4	38,677.5	28,749.7	27,248.3	27,802.7	83,800.6
	Total per-initiative spend	2,295,629.1	2,999,278.6	3,171,318.4	3,130,344.0	3,246,616.7	9,806,429.0
Total of All Tables	Subtotal A: Capital expenditure	1 546 542 2	1,182,193.6	1 620 756 2	1,615,168.6	1 600 225 2	5 294 705 O
Total of All Tables	Subtotal A. Capital expellulture	1,546,513.3	1,102,193.6	1,620,756.2	1,010,108.6	1,690,335.2	5,284,705.9
	Subtotal B: Operating expenses	967,690.2	1,817,084.1	1,550,561.8	1,515,175.4	1,556,281.1	4,521,723.2