

COMMISSION ON CATASTROPHIC WILDFIRE COST AND RECOVERY REQUEST FOR COMMENT

COMMENTS SUBMITTED BY SOUTHERN CALIFORNIA EDISON (SCE) APRIL 22, 2019

EXECUTIVE SUMMARY

The Commission on Catastrophic Wildfire Cost and Recovery (Commission) has an important task to help California prevent wildfires while preserving a resilient energy infrastructure in a changing climate. As noted in Governor Newsom's Strike Force report, electric utilities play a key role in helping the state meet its ambitious clean energy goals, while providing safe, reliable and affordable service to customers. Given the essential role electric utilities play in achieving important state goals, it is critical that investor-owned utilities (IOUs) remain financially healthy to attract the capital needed to meet the state's objectives.

The health of California's investor-owned utilities is dependent on California's long-standing regulatory compact. In return for a duty to serve all customers, regardless of risk, IOUs are entitled to recover prudently incurred costs from customers, with prudence determined based on objective standards. That regulatory compact is broken and must be restored.

There are three components needed to restore the regulatory compact in California and address the current wildfire/utility crisis:

- **Enhanced mitigation and strong accountability.** Electric utilities must do more to reduce the risk of their equipment igniting wildfires, going beyond long-standing industry practices to address climate-change driven wildfire risk, such as the measures described in SCE's proposed Grid Safety and Resiliency Program (GSRP) and wildfire mitigation plan (WMP): (1) hardening the grid to significantly reduce potential fire ignitions; (2) bolstering situational awareness capabilities; and (3) enhancing operational practices.
- **Timely cost recovery based on objective standards.** If the IOU has complied with its approved wildfire mitigation plan, the company should be deemed a prudent operator for cost recovery purposes. Denial of cost recovery for wildfire claims payments in excess of insurance should only occur to the extent that a utility's non-compliance with its approved WMP is found to be a significant cause of a wildfire and its damages, and such denial must be in proportion to other factors which contributed to the wildfire and its damages.
- **Early securitization and wildfire recovery fund.** In addition to the ability for utilities to securitize losses in advance of and independent from a California Public Utilities Commission (CPUC) prudency review, a catastrophic wildfire recovery fund should be established to achieve broad risk and cost sharing that covers property damage resulting from wildfires if they are caused by electric utility equipment. Such a fund would benefit property owners by providing relief more quickly and with more certainty with minimal

impact to utility customers. In the event the wildfire fund exists but cannot respond, securitization of losses not covered by the wildfire fund should be an available option.

The Commission and the Governor's Strike Force report ask whether reform of the current strict liability standard associated with inverse condemnation is needed. While SCE continues to believe the strict liability standard is bad public policy (potentially burdening utility customers and investors with tens of billions of dollars of wildfire costs, regardless of the utility's conduct), the Company stresses that no matter what liability standard is applied to investor-owned utilities, reform of the regulatory compact through the establishment of a clear, durable and repeatable process for timely cost recovery, based on objective standards of prudence, is urgently needed.

Finally, SCE joins Governor Newsom in encouraging this Commission and ultimately the Legislature to bring needed reform legislation to the governor's desk as soon as possible and before the Legislature's summer recess.

1. WILDFIRE LIABILITY REGIME

a. What, if any, issues exist with the application of the inverse condemnation doctrine? Do they limit the equitable distribution of wildfire costs, and if so, how?

Application of inverse condemnation's strict liability framework to investor-owned utilities without a predictable, objective process for timely cost recovery at the CPUC has damaged the IOUs' financial health.

Inverse condemnation is a constitutional cause of action for property owners to seek just compensation when the government takes or damages property to further the public interest. It gives property owners a claim against government entities when the failure of one of its facilities damages private property. Although investor-owned utilities are not state or local government entities, California courts have extended the concept of inverse condemnation to the state's investor-owned utilities in a series of court decisions, based on the erroneous assumption that IOUs have the same ability to spread costs to their customers as government entities do among taxpayers. Application of inverse condemnation to the state's IOUs without regard to fault and without the utilities' ability to socialize wildfire damages has had a significant, widespread, and damaging effect on them, their ability to serve their customers effectively, and their capacity to assist the state in meeting its challenging environmental goals.

Unlike almost every other state, California courts apply inverse condemnation with a "no fault" strict liability standard, which means that a utility is liable for all property damage from a wildfire ignited by its facilities, even if the utility followed all the rules, and even if the spread of the fire and the extent of its damages were caused by circumstances beyond the utility's control. This makes utilities, and their customers or investors, the insurers of all property owners in the state, and exposes them to billions of dollars in wildfire losses. If IOUs are prevented from recovering those costs from customers, utility investors pay. It is unfair to require customers and investors to pay when the utility was prudent in the operation of its infrastructure.

Investor-owned utilities differ in important ways from government entities. Government entities are largely shielded from liability and unpredictable litigation costs by sovereign immunity, while investor-owned utilities enjoy no such protection. Government entities can recover cost increases through taxes, fees, rate increases, and the power to issue tax-exempt debt, while IOUs cannot do any of these things. Investor-owned utilities must obtain approval from the CPUC before raising rates to recover their costs, but the CPUC has made clear that it does not consider inverse condemnation relevant to its ratemaking determinations.¹ And unlike most private companies, utilities cannot choose to avoid high-risk or fire-prone areas or choose which customers they will serve — utilities are required to provide service to all customers, including those in high fire risk areas.

Judicial expansion of inverse condemnation has also impacted insurance costs for some utilities. Insurance carriers are increasingly reluctant to underwrite wildfire risk given climate change, expansion of commercial and residential development in the wildland-urban interface (WUI), and the increased destructiveness of California wildfires. These issues expose investor-owned utilities to potentially enormous losses under the application of inverse condemnation with a strict liability standard. In this environment, wildfire liability insurance coverage has become more expensive and may, in the future, become unavailable for certain utilities.

b. What benefits, if any, are provided by the current application of the inverse condemnation doctrine?

Our employees, families, and customers live and work in the communities we serve, and SCE's top priority is the safety of its customers, communities, employees, and contractor workers. Utilities have strong incentives to mitigate wildfire risk because of our safety focus. In addition, utilities must construct and maintain their electrical systems in accordance with industry standards and regulatory requirements or face substantial penalties.

The current application of a strict liability standard for inverse condemnation claims does not incentivize the company to maintain a safe system. In fact, a utility can operate its system in the safest manner possible and would still be liable under a strict liability standard, including for circumstances beyond its control.

c. What, if any, changes to the utility wildfire liability regime do you recommend, and what are the consequences of these changes?

SCE believes inverse condemnation applied with a strict liability standard is bad policy. Regardless of the standard of care, a clear, durable, and repeatable process for timely cost recovery at the CPUC, based on objective standards of prudence, is needed to restore the regulatory compact.

As noted in 1a above, inverse condemnation applied with a strict liability standard is bad policy. Several options to reform inverse have been discussed by various stakeholders. These include,

¹ Decision (D.)17-11-033 of the CPUC denying Application (A.)15-09-010 of San Diego Gas & Electric Company (U902E), for authorization to recover costs related to the 2007 Southern California wildfires recorded in the Wildfire Expense Memorandum Account (WEMA), pp. 64-65.

as recommended in the Strike Force report, adopting a fault-based standard for inverse condemnation claims, which would bring California jurisprudence more in line with how the rest of the country manages these claims. Another option that has been discussed is adopting the reasonableness standard that is already used in California for flood control districts for all inverse condemnation claims; this standard properly balances the risks and benefits arising from public works and would determine reasonableness by “balancing the public need” for the service “against the gravity of the harm caused by unnecessary damage to private property.”² And a third option that has been discussed is requiring utilities to meet statewide, objective standards to mitigate wildfire risks; utility compliance with the objective standards set by a regulatory agency would be a bar to any litigation (i.e., no inverse or negligence claims for property damage).

Regardless of the standard of care (strict liability, fault-based or another method), any change to the utility wildfire liability regime must restore the regulatory compact by addressing the current risk associated with the uncertainty and timing of cost recovery at the CPUC. In return for a duty to serve all customers, regardless of risk, investor-owned utilities should be allowed to recover their costs of service from customers, when those costs are prudently incurred. This is the regulatory compact in its most fundamental form.³

The regulatory compact provides the underpinning of the predictable business environment relied upon by investors, lenders, power generators selling electricity, suppliers of goods and services, and other stakeholders doing business with California IOUs. These same parties consider the risk of California’s business environment, compared to other jurisdictions, in making decisions to invest in and do business with California IOUs. A constructive regulatory environment gives the utility the means to access relatively low-cost capital provided by private debt and equity investors and establishes it as a reliable counterparty that will honor its contractual obligations to suppliers. In order to re-establish a constructive regulatory environment, the CPUC should have explicit policies that support the ongoing maintenance of investment grade credit ratings by each IOU in order to limit potential harm to customers.⁴ By maintaining a stable regulatory compact, the CPUC ensures investors have confidence they will have the opportunity to earn a reasonable, risk-adjusted rate of return on their invested capital. This confidence is essential to IOUs’ continued access to capital markets — without it, IOU investments and operations may be affected, which will harm customers.

A sound regulatory compact allows investor-owned utilities to raise billions of dollars each year and invest those funds to advance the state’s clean energy goals, create thousands of jobs, and

² *Belair v. Riverside County Flood Control Dist.*, 47 Cal.3d 440, 565 (1988); *Locklin v. City of Lafayette*, 7 Cal.4th 327, 368-69 (1994).

³ See *FPC v. Hope Natural Gas Co.*, 320 U.S. 591 (1944); *Penn Central Transportation Company v. New York*, 438 U.S. 104, 124 (1978) (listing factors involved in the U.S. Supreme Court’s 5th Amendment Takings analysis, including the “economic impact of the regulation on the claimant and, particularly, the extent to which the regulation has interfered with distinct investment-backed expectations”).

⁴ Senate Bill 901 (SB 901) required the development of a “stress test” by the CPUC, which is currently being established for the 2017 fires. The stress test is built on the principle of protecting utility customers from the harm that results from downgrades to an IOU’s credit rating. As this is always a sound principle, the stress test should be expanded to negative events that occur after 2017.

provide safe, reliable, and affordable electric service to their customers. In the recent past, SCE has had capital expenditures of approximately \$4 billion per year. The current wildfire cost recovery framework, with an unclear and prolonged process, has broken that regulatory compact and has created an increasingly negative investment risk profile in the eyes of investors, lenders and others, resulting in higher costs for borrowing needed capital.⁵

SCE cited the extraordinary risk stemming from uncertainty about state wildfire policies in its April 11th transmission return on equity (ROE) request to the Federal Energy Regulatory Commission (FERC). The Company also noted the asymmetric wildfire risk in its April 22nd Cost of Capital application to the CPUC. The increase in authorized cost of capital is necessary for an investor-owned utility like SCE to be able to continue to attract capital from investors, who must consider the extra risk associated with an investment in the company. Providing this opportunity to earn a return on investment is necessary to reflect the risks in the business, although ultimately, SCE must apply prudent management and decision making in order to actually earn the authorized return. SCE does not take these types of rate increases lightly, and the Company emphasized to the FERC and CPUC that the wildfire-related adjustments are not a long-term solution for attracting necessary levels of capital investment. Rather, as noted here, California needs policy reforms that will provide stability and certainty to the rules and processes affecting utility cost recovery and liability associated with wildfires. Once they are achieved, SCE will propose to reduce or eliminate the wildfire components from its FERC and CPUC rates.

One of the most critical changes to restore the regulatory compact is a clear, durable, and repeatable process for assessing the prudence of IOU wildfire operations tied to compliance with the approved wildfire mitigation plans, and enabling timely recovery of prudently incurred wildfire expenses. Swiftly resetting the regulatory compact between the CPUC, the IOUs, customers, and the financial community will enable the state's IOUs to attract the capital needed to safely deliver reliable, clean, and affordable electric power to customers. SB 901 did not adequately address this issue because it does not require a critical feature: an upfront and objective process for assessing prudent wildfire operations and determining cost recoverability.

California's own history proves that cost recovery frameworks based on clear, upfront, objective standards and timely, after-the-fact compliance reviews restore investor confidence and enable utility access to low-cost debt and equity capital. Specifically, Assembly Bill (AB) 57 successfully restored confidence in the regulatory compact that was fractured during the Energy Crisis, by providing for CPUC-approved energy procurement plans with upfront, achievable standards and timely, robust reviews to ensure compliance with those approved plans; AB 57 linked compliance to cost recovery, with utility actions being deemed "per se reasonable" for purposes of cost recovery if the utility was in compliance with its CPUC-approved procurement plan. This clear and predictable framework helped stabilize the state's energy landscape and transform its energy markets — California's IOUs have maintained strong investment grade credit ratings in the decades since the CPUC implemented the AB 57 procurement framework. AB 57 also

⁵ See attached S&P FAQ "Will California Still Have an Investment-Grade Investor-Owned Electric Utility?" (Feb. 19, 2019). SCE investors required significantly higher interest rates to place \$1.1 billion of long-term first mortgage bonds in March 2019. SCE had to offer 0.9% of additional interest rate spread on its 30-year first mortgage bonds as a part of the offering relative to its 2018 bond offering. The higher interest rate translates into \$9 million per year of additional interest expense for the next 30 years (or \$270 million over the life of the bonds) for each \$1 billion of bonds issued. For reference, SCE issued \$2.75 billion of long-term bonds in 2018.

helped position the IOUs to propel key state climate initiatives (in SCE's case, doubling the percentage of its retail sales served by renewable power to 32 percent over the last decade) and advancing others like transportation electrification and grid modernization. In many respects, the restoration of the regulatory compact implemented by AB 57 gave utility investors the confidence to invest their capital in California's investor-owned utilities, which has allowed California to lead the nation in clean energy and has ensured utility actions are clearly aligned with customers' needs.

Like AB 57, SB 901 provides a process for timely CPUC approval of proposed wildfire mitigation plans with upfront, achievable metrics and for assessing IOUs' compliance with their approved plans. However, unlike AB57, SB 901 does not clearly establish a link between compliance with those plans and cost recovery. The worsening wildfire crisis since SB 901 illustrates the immediate need to clearly link a finding of compliance with those approved plans⁶ to an overall determination that the utility acted prudently and may recover wildfire-related costs and expenses. Prudence is not intended to be, and cannot be, a perfection standard. When the utility performs in good faith to implement programs designed to achieve compliance with its plan, every reasonable objective of the plan should be deemed to be satisfied. Minor deviations, including minor instances of regulatory non-compliance, do not mean the utility is imprudent. This is consistent with how prudence is determined for the purposes of cost recovery by the Federal Energy Regulatory Commission. However, when the utility engages in willful misconduct, acts with reckless disregard of consequences, or engages in a persistent pattern of misconduct, such misconduct should be considered imprudent.

Even if a utility does not fully comply with its wildfire mitigation plan and is determined to have acted imprudently, cost recovery should not be an "all or nothing" proposition during prudency reviews. When considering the extent to which an IOU's non-compliance with the established standards may have contributed to a wildfire and associated damages, the CPUC should consider all other causes of a wildfire ignition and factors (like those listed in SB 901 (now Public Utilities Code Section 451.1)) contributing to the wildfire's size and damages and disallow only costs proportional to the IOU's imprudence. The CPUC should use these factors to create a cost recovery methodology that accounts for external factors beyond the utility's control, such as wind, fuel stock, duration of the fire, and low humidity and limits disallowance risk from an imprudence finding accordingly. Again, AB 57 could be a useful model, as any disallowances under the procurement plan are a function of noncompliance coupled with a subsequent imprudence finding (noncompliance by itself does not lead to a disallowance, but an accelerated prudence review occurs on the noncompliant transactions).

Finally, a determination of prudence must be made promptly. Utilities and financial markets cannot operate efficiently during extended periods of uncertainty related to the recovery of billions of dollars of potential wildfire costs.

⁶ Compliance with the metrics established in approved wildfire mitigation plans is one way to set objective, upfront standards. The forum or vehicle for establishing the standards is not as important as the fact that such standards are established, and that compliance with the standards is the basis for determining prudence for the purposes of cost recovery.

2. INSURANCE

a. What actions can improve utility access to affordable wildfire liability insurance?

Reducing the frequency of wildfires caused by utility facilities is key to improving utility access to affordable wildfire liability insurance. Approval of the utilities' mitigation measures, and a utility catastrophic wildfire recovery fund that covers property damage claims in excess of the utility's own insurance would provide capacity that is otherwise not available in the markets.

Many insurers believe that California presents an uninsurable risk given the state's four large wildfires experienced in the last two years. The insurance market deteriorated after the 2017 wildfires, and only worsened after the 2018 wildfires, adding substantial costs to SCE and its customers in the form of ever higher premiums amid a tightening insurance market. To provide a sense of the magnitude of cost increases, in 2017, SCE's total wildfire and non-wildfire liability insurance expense was approximately \$75 million; in 2018, SCE's wildfire liability insurance expense alone was approximately \$235 million, a greater than three-fold increase.

Over the past six years, SCE has secured annual wildfire liability coverage totaling approximately \$1 billion. Unfortunately, both the insurance and reinsurance markets for wildfire liability coverage are "hardening," meaning the number of insurance companies willing to provide this coverage at the same level is going down and pricing is going up. The hardening in the wildfire liability insurance market is also impacting contractors who perform work for the utilities in areas that carry potential wildfire risk (e.g., contractors performing vegetation management and power line construction). These contractors are also no longer able to obtain the level of wildfire insurance that they previously had.

The hardening of the wildfire liability coverage market is due to three key factors:

- **first**, the increased risk that is driven by commercial and residential development in high fire risk areas, increased population densities, higher property values, continued drought effects (including dead and dying trees), lack of adequate fuels management, and quick and dramatic change to the environmental conditions in which utility infrastructure was designed to be deployed (i.e., climate change)
- **second**, the increased frequency and severity of wildfire events throughout California; and
- **third**, the unique application of inverse condemnation in California to investor-owned utilities.

With respect to the second factor, the increased frequency and severity of wildfire events, insurance companies, like all businesses, need to be able to earn a profit on the product they sell. With respect to the third factor, inverse condemnation, insurers face a risk in California that is different from virtually any other state in the country, as described above in 1a.

Reducing the frequency of wildfires caused by utility facilities is key to improving utility access to affordable wildfire liability insurance. This cannot be accomplished without strong statewide support for utility proposals to mitigate increased wildfire risk, including further grid hardening

measures. For SCE, this includes timely CPUC review and approval of the utility's proposed Grid Safety and Resiliency Program and 2019 wildfire mitigation plan.

SCE proposed the GSRP in September 2018, requesting approximately \$600 million for a comprehensive portfolio of enhanced grid hardening, situational awareness measures, and operational practices that are based on leading practices used in other jurisdictions with extreme wildfire risk. SCE has already begun the work proposed in the GSRP and WMP, such as installing covered conductor to insulate electric wires, deploying high definition cameras and micro weather stations, and implementing other enhanced measures, including proactively turning off the power when the risk of wildfire propagation is highest. These mitigation measures, which will take time to implement, should bring some stability to the insurance market.

SCE requested the CPUC review and approve its GSRP by year end 2019 and enable the utility to recover program costs beginning in 2020. Timely approval of the utilities' proposed wildfire mitigation measures, coupled with Public Safety Power Shutoff protocols to reduce the risk of a utility-caused wildfire, should allow the insurers to improve their loss ratios to align with their underwriting guidelines and thus commit more capital at more commercially reasonable prices. It may also attract new capital and corresponding competition.

However, the commercial insurance markets do not have the overall capacity to insure catastrophic wildfire events. While wildfires can cause damage into the tens of billions of dollars, the commercial insurance and reinsurance markets by all accounts only cover up to approximately \$1.5 billion per IOU insured. A utility catastrophic wildfire recovery fund (Wildfire Fund or the Fund) that covers property damage claims in excess of the utility's own insurance would provide capacity that is otherwise not available in the markets. It could be capitalized with initial and ongoing contributions from all utilities, both public- and investor-owned, covered by customer rates (such as through continuation of the collection of revenue currently paying off the Department of Water Resources (DWR) bonds, directed to the Fund), just like insurance premiums. Furthermore, a catastrophic wildfire recovery fund would allow limits to be aggregated among numerous utilities as would any reinsurance that the fund purchased. This, too, would potentially lead to greater commercial capacity by helping the reinsurers better manage their accumulated or aggregate risk.

b. What actions can ensure that local governments, homeowners, and businesses are adequately insured for wildfire loss? What actions can improve availability and affordability of homeowners' and commercial insurance?

California should take steps to reduce wildfire risks to foster a competitive insurance environment with stable rates for homeowners.

Short of mandating that homeowners and businesses have fire insurance, the most effective way to achieve the goal of more universal and affordable wildfire insurance coverage for homeowners and businesses is for California to take meaningful steps to reduce wildfire risk to foster a competitive environment for insurance companies with stable rates for homeowners. Several factors make California a risky state for insurance companies. Among these factors are the increased residential and commercial development in high fire risk areas – in the so-called

wildland urban interface – and increased population densities, higher property values, continued drought effects (including dead and dying trees), lack of adequate fuels management, and climate change. These factors contribute to the increased frequency and severity of wildfire events throughout California and make the state less attractive to insurance companies. Many of these factors are beyond the state’s control, but some are not.

For example, as noted in Governor Newsom’s Strike Force report (pages 14-16) and detailed in response to Question 5a below, the State can reduce risk in the WUI by prioritizing building in low fire risk areas, strengthening the safety element of local general plans in high fire risk areas, encouraging cost effective home retrofits to harden against wildfire and enforcing defensible space standards. All these steps would make California a more attractive environment for insurance companies, which should reduce insurance premiums over time and allow for more reasonable costs and attractive terms for insurance customers.

With respect to a utility catastrophic wildfire recovery fund, payouts to under- and uninsured property owners should be discounted to some degree to avoid the moral hazard that could disincentivize some property owners in the WUI not to properly insure their property. A means test, similar to what is currently used for lower income utility customers, could be an exception to this discount.

Related questions from Strike Force report

On page 34, the Strike Force report poses questions for consideration, including “Should all insurers be obligated to offer insurance to homeowners living in the WUI if the insured conducts specific wildfire mitigation?” and “Should all insurers be obligated to offer reduced rates for those homeowners and communities that implement prescribed wildfire mitigation measures?” SCE expects the insurance industry will respond comprehensively to these questions. In general, however, SCE believes that incentives for homeowners and communities to protect against damage from wildfire will be more successful in keeping insurers in the market than prescriptive legislative mandates on the insurance industry.

On page 37, the Strike Force report mentions “a cap on [insurers] subrogation claims”, and, on page 39, asks whether capping subrogation claims would transfer risk from utilities to insurers, raising costs for homeowners. Today, even with the application of a strict liability standard for inverse condemnation claims, insurers settle their subrogation claims against the utilities at a discount that incorporates litigation risk and certainty of payment (timing). A discount from a catastrophic wildfire recovery fund that approximates today’s discounts will likely have little effect on homeowners’ insurance premiums. In addition, the Wildfire Fund would likely need to incorporate a similar discount and claims validation for under- and uninsured property owners’ claims to encourage property owners to purchase insurance, deter fraudulent or inflated claims, and account for litigation risk and certainty of payment via settlement. Finally, the Strike Force report, on page 39, asks whether the subrogation discount would apply to both property and casualty claims. A property damage-only fund would not cover casualty claims; thus, such claims would continue to be litigated through the court system to resolution via judgment or settlement. In SCE’s experience, property damage claims drive the bulk of damages from catastrophic wildfires and are the claims for which quick payment supports victims most effectively.

3. FINANCING MECHANISMS

a. What specific problems related to wildfire cost assignment and recovery should a dedicated wildfire fund or other financial mechanism address?

A catastrophic wildfire recovery fund covering third party property damage for wildfires caused by utility facilities, in excess of a specified amount of utility insurance, would address the need for “equitable distribution of wildfire liability”⁷ in California.

SCE notes the Strike Force report’s recommendation to consider changing the strict liability standard to a fault-based standard for inverse condemnation claims (pages 36, 37). Changing the standard of care applicable to inverse condemnation claims likely will not have a significant impact on total damages where utility facilities are involved in an ignition, nor will changing the standard of care result in quicker payments of claims, as utilities may contest causation and liability. Thus, to ensure an equitable allocation of wildfire liability, SCE believes efforts should focus on establishing a fair, predictable, and timely cost recovery framework at the CPUC (as noted in response to question 1c) and establishing a Wildfire Fund.

Put simply, there must be a better way for California to collectively manage increased wildfire risk and take the utilities out of the role of serving as the insurers of last resort for wildfire damages. This is clearly not the utilities’ mandate and impedes their ability to lead the implementation of California’s clean energy policies. SCE believes that by taking steps to reduce the frequency and severity of wildfire events, through grid hardening investments and improvements in situational awareness and operational processes, along with establishing an appropriately capitalized risk financing mechanism, such as a catastrophic wildfire recovery fund,⁸ our State will be able to address the challenges caused by the deteriorating insurance market for regulated utilities for the benefit of utility customers and the communities the utilities serve.

Three powerful safeguards would continue to incentivize investor-owned utilities to mitigate wildfire risk.⁹ First, the CPUC retains its authority to investigate and penalize utilities for violations of its regulations, and any such fines and penalties could be paid directly to the catastrophic wildfire recovery fund as a shareholder contribution. Second, the Wildfire Fund, which would pay claims the same way insurance does, would not cover punitive damages, fines and penalties, or willful misconduct, which would be paid by utility shareholders in cases where the utility has such liabilities. And third, if the fund responds to a loss, the loss causer should be assessed an increased annual premium. If an investor-owned utility is the loss causer, that

⁷ See Strike Force report on page 4.

⁸ SCE notes and appreciates the concept of a “Liquidity Fund” backed by continuing collection of DWR bond revenue in rates as described in the Strike Force Report, pages 35-36. SCE believes the “Liquidity Fund” concept can be combined with the Wildfire Fund to provide more protection for customers and help ensure the solvency of the fund.

⁹ This paragraph also answers the question posed in the Strike Force report, on page 39: “How can we design a fund that provides the proper incentives for utilities to invest in prevention to reduce wildfire damages and claims...?”

annual premium could be subject to allocation between shareholders and customers based upon a CPUC prudence review.

b. What financial mechanism(s) best address the problems you identify within the current liability and insurance regimes? Please provide as much detail as possible regarding proposals (e.g., what liabilities would be covered? Who are the involved parties? What is the administrative structure? How is it capitalized and funded? What level of capitalization is needed? How would subrogation and damage claims be handled? Is it scalable and how? What are the consumer impacts? What are the risks to the proposed approach?)

A utility catastrophic wildfire recovery fund concept, which includes the critical liquidity benefits provided by a liquidity only fund described in the Strike Force report, should be established to achieve broad risk and cost sharing that covers property damage resulting from wildfires caused by electric utility ignitions.¹⁰

SCE believes that a catastrophic wildfire recovery fund should be established to achieve broad risk and cost sharing that covers property damage resulting from wildfires caused by electric utility ignitions. SCE does not believe a liquidity-only fund is a viable solution, by itself, to solve the current inequitable socialization of wildfire liability in California. Instead, the key features of the liquidity fund concept described in the Strike Force report (pages 35, 36) should be integrated into the Wildfire Fund. Importantly, the dedicated revenue stream (via continuation of DWR bond collection) could help quickly capitalize the Wildfire Fund and pay claims to future fire victims without having a negative impact on customers from annual premiums paid to the catastrophic wildfire recovery fund.¹¹

The Strike Force report also calls for utility shareholder contributions to the Fund. SCE agrees shareholder contributions are appropriate when the utility is imprudent. To address the need for equitable distribution of wildfire liability, SCE's catastrophic wildfire recovery fund is designed to restore the regulatory compact in California by collecting pre-loss premiums in customer rates just like insurance, with post-loss shareholder contributions tied to the revised prudence standard described above in response to question 1c. For example, a utility could have a \$100 pre-loss obligation to the Wildfire Fund that the Fund could rely on for its own financing, where the obligation does not become payable until a loss occurs, when the allocation between customers and shareholders would be determined based upon a CPUC determination of prudence. In the case of a wildfire covered by the Wildfire Fund, utility shareholders would be responsible to pay a portion of the post-loss increased premium to the Wildfire Fund that corresponds with the extent the utility acted imprudently, if such imprudence was a direct cause of the fire.

¹⁰ See Strike Force report, pages 35-38.

¹¹ Combining the Liquidity Fund with the Wildfire Fund will also allow the funds raised for the Liquidity Fund to enjoy the tax benefits of the Wildfire Fund.

SCE recommends that the catastrophic wildfire recovery fund be guided by the following principles:¹²

1. Applicability: These principles apply to a catastrophic wildfire recovery fund to pay property damage claims resulting from wildfires caused by electric utility ignitions. SCE's modeling suggests the Fund should be subject to a \$20 billion per incident cap and \$30 billion aggregate per year per utility.¹³ With the parameters described in these principles, SCE's modeling shows that the Fund is about 98% likely to remain solvent after 10 years (not including additional inflows to the Fund from fines/penalties, GHG cap-and-trade auction revenues, or other non-utility sources).¹⁴
2. Governance: A governing board should be appointed and include representation from participating utilities (investor-owned and publicly-owned), electric utility customers, and members with expertise in actuarial science, commercial investing, and wildfire mitigation; this governing body would make decisions on utility contributions, reinsurance, and other means to reduce customer impacts.
3. Insurance requirement: Participating electric utilities should be required to continue purchasing commercial insurance; the governing body will require the electric utilities to continue to procure economically feasible amounts of commercial insurance and continue to mitigate wildfire risks.
4. Fund pays out after utility insurance regardless of fault: The Wildfire Fund should respond and pay claims for property damage once an individual electric utility's insurance is exhausted. All property damage claims, regardless of fault, covered by the underlying utility insurance are also covered by the Fund.
 - a. SCE's Wildfire Fund design builds in a 50% subrogation claims discount as an initial assumption, which is applied to all property damage claims; this value can be adjusted, and a different value could be applied to under- and uninsured claims.
 - b. SCE's Wildfire Fund design assumes that claims are paid out of the Fund over a period of several years (insured homeowners still receive timely insurance payouts from their insurance companies), following investigation and establishment of liability. This assumption can be adjusted to provide a quicker resolution of claims.
5. Required risk mitigation: Electric utilities should continue to aggressively implement wildfire risk mitigation measures as described in their approved wildfire mitigation plans.
6. Avoid moral hazard: (1) The CPUC should retain authority to fine/penalize IOUs for conduct or regulatory violations related to a fire, with such fines/penalties paid by shareholders into the Fund to increase its claims-paying resources;¹⁵ (2) for wildfire covered by the Wildfire Fund, IOU shareholders would be responsible to pay a portion of the post-loss increased premium to the Wildfire Fund that corresponds with the extent the utility acted imprudently; and (3) willful misconduct and punitive damages are not covered by the Wildfire Fund and would be paid by utility shareholders.

¹² See SCE's Fund cash flow scenarios spreadsheet.

¹³ This answers the question posed in the Strike Force report, on page 39: "How large would the fund need to be to be durable over the anticipated period of time necessary for utilities to make material progress in containing catastrophic wildfire risk?"

¹⁴ This level of success would be required to achieve a top A.M. Best rating.

¹⁵ See Strike Force report, page 38.

7. Need for pre-loss upfront and annual contributions: The Wildfire Fund should be funded by electric utilities' initial and ongoing, annual premium contributions:
 - a. Premiums should be based on: (1) risk (e.g., miles of distribution line or number of metered customers in high fire risk areas) and (2) modeling/actuarial analysis that includes a factor for implemented risk mitigation.
 - b. SCE's Wildfire Fund design calls for a \$2 billion initial contribution (aggregate, split among all participants), and a \$700 million aggregate annual contribution (could be met, in whole in or in part, by the liquidity fund's continuing collection of DWR bond revenue).
8. Premiums paid by customers: Initial and ongoing, annual premium contributions to the Wildfire Fund should be recovered from customers (like insurance premiums).
 - a. Low customer impacts: SCE understands, subject to verification, that current statewide collection of DWR bond revenue exceeds the proposed \$700 million annual premium contribution. If that revenue is redirected to the Fund, customers would see no rate increase from those contributions over today's electric rates. If such funds are not redirected, and the initial contribution is securitized over 20 years, SCE's analysis shows the residential customer impact, if allocated to all meters in the state (averaged, currently without any risk adjustments), is about \$2 per month.
9. Securitization: Electric utilities should be able to securitize, with a dedicated rate component, the initial and ongoing, annual Fund premium contributions, and any additional post-loss premium increase, as appropriate. The purpose of securitization is to moderate the impact of rate increases on customers by allowing the recovery of wildfire costs from customers over time.
10. Increased premiums for a loss-causer after an event: If an electric utility suffers a loss paid by the Wildfire Fund, the Wildfire Fund will require the loss-causer to pay an increased additional premium per underwriting guidelines; recoverability of an IOU's increased annual contributions may be subject to a CPUC prudence review, and a portion may be allocated to shareholders proportional to a finding of imprudence, to the extent such imprudence was a direct cause of the wildfire.
11. Tax-exempt contributions: The Wildfire Fund should include a tax-exempt feature (both state and federal).
12. Accessing reinsurance and other risk financing: The Wildfire Fund may purchase reinsurance and other risk financing instruments. SCE's proposed approach permits the Fund to carry at least \$8 billion of its own issued bonds at any one time.
13. State contribution: Due to the statewide impact of catastrophic wildfire and to protect all utility customers, the state should make regular contributions to the Wildfire Fund from sources such as GHG cap-and-trade auction revenues. To provide immediate confidence in the Fund's viability to the financial markets, the State should act as a backstop until the Wildfire Fund is adequately established by providing low-cost loans to the Fund, if needed.

Attached is a cash flow spreadsheet based on modeling by AIR and Guy Carpenter, well-known fire risk modelers / risk managers in the insurance industry, who conducted expected loss modeling of utility-caused wildfires to size the Fund. The cash flow model uses the assumptions stated above, stressed by several large fires in the early years of the Fund. The spreadsheet's assumptions can be changed to see how the Fund would respond to different scenarios. The

modeling strongly suggests SCE's proposed Fund design will work (98% chance of remaining solvent after 10 years). For example, the cash flow spreadsheet shows two ways of testing the Fund's viability under stressful conditions. The first case demonstrates that the Fund can survive more than \$6 billion per year in annual losses for ten years. The second case demonstrates that the Fund can survive a \$20 billion loss in the first year of its existence followed by two additional years of \$10 billion losses. In each case, the Fund has the capital, ongoing annual premiums, and bonding capacity to withstand the incurred losses. Other cases can be run by making changes in the spreadsheet. SCE welcomes validation by other stakeholders performing their own modeling.

4. COMMUNITY AND WILDFIRE VICTIM IMPACTS

a. What are the specific needs of communities and wildfire victims in considering how costs are socialized?

Safety remains SCE's top priority. The Company assists and supports customers affected by wildfires and continues to work diligently to invest in wildfire risk mitigation measures and facilitate improvements in customer and community wildfire resiliency, in partnership with non-profit partners and emergency services organizations.

The safety of our customers, our employees and our communities remains our most important focus. SCE continues to proactively enhance its operational practices and infrastructure through its comprehensive wildfire risk mitigation strategy, with a focus on ignition avoidance and targeting the highest fire risk areas. SCE employs several protocols to identify and mitigate fire risks, including vegetation management practices, pole inspections and replacement programs, and partnerships with local and state fire agencies.

SCE conducts frequent vegetation patrols in the most severe high-fire areas to scout for hazards, inspecting approximately 900,000 trees annually and trimming nearly 690,000 of them per year. SCE also inspects another 2 million trees outside trimming zones that could potentially fall into lines to determine whether they are dead or dying – which is happening more frequently due to drought, bark beetle infestations and other climate change-driven effects.

To educate customers and communities on wildfire risk mitigation measures the company is taking, SCE hosts community meetings in high fire risk areas across its territory. One approach that the utility may utilize is shutting off power under extreme weather conditions as a preemptive measure to reduce the risk of a power line starting a fire. When used, a public safety power shutoff (PSPS) will not necessarily affect a whole jurisdiction - only the areas identified as having high fire risk under the specific circumstances at the time. SCE will continue to consult with local officials and emergency response personnel, such as local fire departments, before any PSPS event.

SCE continues its commitment to strengthen the region's emergency preparedness capacity by actively participating in wildfire response planning with fire agencies throughout our service territory. These partnerships improve service reliability during critical incidents, support public and firefighter safety and foster relationships that improve response times. These efforts are led by SCE's fire management team, which serves as the Company's primary point of contact for all

fire agencies in the service territory. During wildfire incidents, members of this team are typically on scene working closely with fire agencies to advise them of any issues related to SCE's electrical system.

One example of an SCE partnership with fire agencies is Operation Santa Ana, which has been in place since 2001. This is an annual event SCE hosts with state and county fire agencies to address tree and brush clearance. In addition, members of SCE's fire management team serve on the board of directors of the California Fire Safe Council and on the board of the Southern California Association of Foresters and Fire Wardens, which have representatives from every county, state and federal fire agency in SCE's service area.

Given the complexity of the extraordinary climate challenges facing California, wildfire prevention and mitigation programs and activities will require broader statewide partnerships in order to maximize effectiveness. SCE will continue to work with state and local governments, regulatory agencies, first responders and fire agencies, as well as the communities to ensure that efforts are fully coordinated.

We know that we cannot do this alone. SCE partners with various non-profits across the service territory to assist our community preparedness and resiliency efforts. Contributions, funded by shareholders, to these vital non-profits that serve diverse ethnic groups, seniors, women, disabled and low-income families, among others, build capacity across SCE's diverse customer base. Over the past two years, the Company has identified additional non-profit partners to augment the existing public safety/emergency preparedness portfolio and to better support wildfire mitigation and preparedness, first responder capacity building, and community engagement, resiliency and disaster recovery.

b. What are the specific needs of communities and wildfire victims in considering a potential wildfire fund or other financial mechanism?

The Wildfire Fund can help communities and victims in at least two ways. First, the Fund can provide a source of needed funds to assist under- and uninsured victims and property owners' insurance companies in recovering from catastrophic wildfires started by electric utility facilities. Second, the Fund can provide a level of financial protection to the electric utility so that the utility can restore electric service quickly after an event and continue providing safe, reliable and affordable electric service to the communities it serves.

5. MISCELLANEOUS

a. Do you have other recommendations for ways to reduce wildfire damage and costs that the Commission should consider?

The State should build on reforms enacted in 2018 to further mitigate the dramatically increased wildfire threat by, among other things: (1) ensuring that more homes are built flame- and ember-resistant; (2) prioritizing sustainable, safe development with more protective land use planning; and (3) providing for strategic wildfire fuels reduction.

The damage and costs of wildfires are felt by all Californians, and in all aspects of their lives – health and safety, climate and environment, property, infrastructure, and economy. As noted in

the Strike Force report, “[c]limate change, forest management practice, and real estate development patterns in the WUI” are all contributing to wildfire damage and all stakeholders must be involved in the solutions.¹⁶ Policies that support resilient and sustainable communities can reduce the occurrence of catastrophic wildfires, reduce the damage done when fires occur, and ensure that communities bounce back quickly. An all-of-the-above approach, as outlined in the Strike Force report, that includes smart regulation and financial support for individual action should address smarter land use planning that prioritizes ensuring buildings – new and existing – are flame- and ember-resistant; sustainable and safe development; and strategic wildfire fuels treatment – focusing on areas of greatest risk in the wildland-urban interface.

The rapid expansion of development in the WUI – the most fire-prone regions of the state – demands significant investments and purposeful actions by all levels of government and homeowners to fire-harden homes and communities. While recent wind-driven firestorms appeared to destroy everything in their paths, research shows that when protective building standards are followed, homes have a significantly higher chance for survival.¹⁷ California has been a leader on adopting the most protective building codes in the nation, and the state and local governments should continue that leadership by incorporating the latest science and best available building materials and processes. It is also critical that these protective building codes and practices are applied to more communities and more homes. Cost should not be a barrier to protecting homes and communities with today’s safer building codes, because the protections they afford save homes and lives, and also greatly limit the total economic impact on communities when fires occur.¹⁸ To ensure the protection afforded by these codes and practices is long-lasting, the state and local governments need resources for education, inspection, and enforcement focused on maintenance and compliance.¹⁹

Building fire-resistant communities is critical, but no building is fire-proof. Communities can reduce wildfire costs and risks by limiting the scale and pace of development in the WUI and similar high-risk areas. This is not an easy task, and the state’s housing crisis does not make it any easier. But California needs a sustainable solution to the housing crisis, which requires building smarter. Local governments are at the forefront of planning and building resilient communities, and many have tackled wildfire risk head-on, adopting robust wildfire hazard plans and implementing zoning ordinances that target wildfire risk. The use of these land-use tools must be more widespread, and governments need to be supported and incentivized to use these tools (and others) more frequently and aggressively to meet the increasing wildfire risk.

¹⁶ See Strike Force report, pages 2, 26.

¹⁷ See <https://www.kqed.org/news/11738573/step-1-build-a-house-step-2-set-it-on-fire>, discussing research by the Insurance Institute for Business & Home Safety on the effectiveness of fire-resistant builds.

¹⁸ The State Fire Marshall and CAL FIRE are working on a list of low-cost retrofits, which is a great first step. Finding ways to ensure the retrofits are adopted is critical. And – as documented in a study by the Insurance Institute for Business & Home Safety and Headwater Economics – the cost of constructing new homes to be wildfire-resistant is not substantially different than the cost of typical construction. Report can be accessed at <https://headwaterseconomics.org/wp-content/uploads/building-costs-codes-report.pdf>

¹⁹ See Strike Force report, page 16, noting that compliance and enforcement are “key to ensure that defensible space standards are met.”

The build-up of hazardous fuels has increased fire intensity, rate of spread, and total acreage burned, which is why significant investments in fuel reduction are key to combatting wildfire risk. Leaders in Sacramento have taken aggressive action to implement more sustainable forestry management and to ensure funds are available for forest thinning, prescribed burns, mechanical treatments, and grazing. As CAL FIRE's 2018 Strategic Fire Plan notes, these are critical parts of a holistic solution, none of which will be successful on its own.²⁰ These fuel reduction efforts must be linked with efforts to fire-harden communities and investments for sustainable maintenance of the fuel reductions. Because of the great expanse and diversity of the state's wildlands – covering federal, state, and private lands, and ranging from dense conifer forests to coastal scrublands – it is critical that resources are focused on projects that target risk reduction for vulnerable communities and areas with the most residents in danger. Careful planning and deployment of resources is imperative to prioritize the protection of property and lives by targeting fuel management activities near communities and through community-adjacent fuel breaks to provide fire-fighters safety to defend lives and homes.

b. Do you have other recommendations to ensure a more equitable distribution of wildfire costs and liabilities that the Commission should consider?

SCE believes that it is imperative this Commission and other key policymakers avoid pursuing proposals that do not directly address our state's increased wildfire risk and could reduce the equitable socialization of wildfire risk mitigation measures and cost recovery, pose additional risks to safely operating the electric system, and hinder the achievement of the State's clean energy policies. This includes proposals to break up PG&E into smaller regional utilities and potentially municipalizing it in whole or in part, as well as proposals to adjust the return on equity of investor-owned utilities based on safety performance.

SCE understands this Commission's focus does not directly include utility restructuring; we nonetheless raise this issue for awareness considering the serious and negative consequences of Balkanizing the state's electrical system. These implications include, but are not limited to: increasing cybersecurity risks (the overall system will only be as secure as its weakest link); impeding the coordination and deployment of resources during emergency events; producing disparate and inequitable electric rates between customers served by utilities located in urban versus rural areas; concentrating wildfire risk within smaller and less affluent utility service territories, and customers' ability to finance necessary wildfire risk mitigation investments (in cases where large cities municipalize the electric utility functions); and ultimately serving as a costly and prolonged distraction from implementing key state energy goals.

The Governor and other leaders have made clear that the state's IOUs remain important partners in promoting a safe, reliable, affordable, and clean electric grid, and there are better ways to hold utilities accountable for ensuring they meet these shared objectives that are being considered as part of this Commission's work and in other forums.

In addition to proposals that contemplate restructuring PG&E, the Strike Force report and CPUC's assessment of PG&E's safety culture consider modifications to an investor-owned

²⁰ CAL Fire Strategic Fire Plan, page 11, available at http://cdfdata.fire.ca.gov/fire_er/fpp_planning_cafireplan.

utility's allowed return on equity (ROE), based on wildfire safety performance. The CPUC sets "the ROE at a level of return commensurate with market returns on investments having corresponding risks, and adequate to enable a utility to attract investors to finance the replacement and expansion of a utility's facilities to fulfill its public utility service obligation."²¹ Adjustments to the allowed ROE that are not based on changes in the utility's risk profile can compromise the ability of a utility to attract the capital necessary to advance public policy initiatives. While such proposals to modify the allowed ROE are based on good intentions – reducing the risk of future wildfires – they are unnecessary and would introduce uncertainty that would further reduce investor confidence, leading to higher, not lower, costs for customers.

Modifications to the utilities' ROEs are simply unnecessary to incentivize aggressive wildfire mitigation. Utilities' focus on employee and community safety motivates them to reduce fire risks. Moreover, as noted in response to question 1 above, if prudence is based on a utility's compliance with its wildfire mitigation plan and cost recovery is linked to a fair and timely determination of prudence, if utilities fail to comply with the commitments described in their wildfire mitigation plans, or violate regulatory requirements, they are subject to potentially large fines and penalties paid by shareholders. In addition, costs incurred due to imprudent activity are not recoverable from customers and are borne by shareholders. These mechanisms ensure utilities are incentivized to work diligently to lower wildfire risk associated with their equipment. Any additional action associated with the ROE will act as a second penalty for the same conduct, causing uncertainty and a further loss of investor confidence in the ability of California to restore the regulatory compact.

²¹ CPUC D.12-12-034 *Decision on Test Year 2013 Cost of Capital for the Major Energy Utilities* p.18.

Credit FAQ:

Will California Still Have An Investment-Grade Investor-Owned Electric Utility?

February 19, 2019

On Jan. 29, 2019, PG&E Corp. and subsidiary Pacific Gas & Electric Co. filed for reorganization under Chapter 11 of the U.S. Bankruptcy Code, about two months after the start of the devastating Camp Fire. S&P Global Ratings has been actively reexamining its assessment of California's regulatory construct for electric utilities. Our initial reassessment led to a one-notch downgrade on Jan. 21, 2019, on Edison International (Edison) (BBB/Watch Neg/A-2) and its subsidiary, Southern California Edison Co. (SCE) (BBB/Watch Neg/A-2), and a one-notch downgrade on Sempra Energy's (BBB+/Negative/A-2) subsidiary San Diego Gas & Electric Co. (SDG&E) (BBB+/Negative/A-2). Furthermore, we indicated that we could lower the ratings on these companies by one or more notches within the next few months. This raises the possibility that our issuer credit ratings (ICR) for all of California's investor-owned regulated electric utilities could be below investment grade before the start of the 2019 wildfire season. Here we address investors' most frequently asked questions.

Frequently Asked Questions

Why did PG&E's bankruptcy filing require S&P Global Ratings to reexamine its assessment of California's regulatory construct for electric utilities?

Our view is that PG&E's management and board of directors filed for bankruptcy because of the potential for the company to incur significant liabilities stemming from the 2017 and 2018 wildfires and the uncertainties regarding the prospects for and timing of potential recoveries through the regulatory process. We believe that potential liability risks are significant in California and that the regulatory mechanisms to resolve these risks are unclear at best. Consequently, we believe California electric utilities face ongoing and unresolved risks related to future wildfires and, to the extent that this lack of clarity lingers, each of the other California electric utilities could potentially follow PG&E's lead if faced with a catastrophic wildfire in 2019 or beyond. Furthermore, the relatively short time line leading up to the board's determination that a voluntary bankruptcy was in the best interests of PG&E and its stakeholders, only about two months after the catastrophic Camp Fire, also led us to reexamine our assessment of California's regulatory construct for electric utilities.

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Could a second California electric utility potentially file for voluntary bankruptcy in 2019?

We think it is possible. Without any regulatory reform, we view it as entirely possible that another electric utility could face a devastating wildfire during the 2019 wildfire season and, depending on the magnitude and severity, its board of directors could similarly determine that the best course of action would be to file for a voluntary bankruptcy before year-end 2019. In our view, the rapid decline in creditworthiness--PG&E filed for Chapter 11 only two months after the Camp Fire--shows how quickly things can change in California, given the current regulatory construct.

Does S&P Global Ratings believe that there is still time for California to take constructive steps that support credit quality?

Yes. As we see it, there is a window of opportunity to bring clarity to the regulatory construct. However, that opening will start to close at the beginning of the 2019 wildfire season. From a ratings perspective, we would need to see clear evidence that concrete steps are being taken during this relatively short period to strengthen California's regulatory construct for electric utilities. Absent clear evidence of leadership to identify concrete and realistic steps to reduce wildfire liability risks, S&P Global Ratings would lower the ratings on Edison, SCE, and SDG&E by one or more notches.

When does S&P Global Ratings believe the California wildfire season begins?

While the start of California's wildfire season generally varies throughout the state, we believe that the wildfire season can start as early as June.

What specific concrete steps does S&P Global Ratings believe are necessary for California's electric utilities to maintain their credit quality?

Based on PG&E Corp.'s public disclosures, we believe that PG&E's board of directors determined to file for reorganization under Chapter 11 of the U.S. Bankruptcy Code because of the following underlying risks:

- Potentially significant liabilities from the recent wildfires;
- Uncertainties regarding the prospects for and timing of recovering such costs from ratepayers; and
- The need for an orderly, fair, and expeditious process to resolve the potential wildfire liabilities.

We believe the significant liabilities that PG&E potentially faces from wildfires are a direct result of climate change and the California courts' interpretation of the legal doctrine of inverse condemnation. Our ratings base case for California's electric utilities assumes that climate change will persist and that California will continue to face catastrophic wildfires. We do not expect that much can be accomplished in the near term to reduce the threat of catastrophic wildfires in the state, and we believe that inverse condemnation will compound the risks California's electric utilities currently face. Under the legal doctrine of inverse condemnation, if a California utility's facilities are determined to be the substantial cause of a wildfire, the utility could be liable for all of the wildfire's property damage and other associated costs without the

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utility being negligent.

In our view, California's interpretation of the legal doctrine of inverse condemnation effectively makes California's electric utilities the state's reinsurer, which creates new risks that were never envisioned when investor-owned utilities were established. We don't believe that an electric utility is large enough, sufficiently diversified, or adequately capitalized to be a reinsurer. Overall, in our view, the combination of climate change, frequent and severe wildfires, and California's interpretation of inverse condemnation, if unaddressed, significantly raises the risk for California's electric utilities to a level inconsistent with any other North American utility.

A second risk that PG&E cited was that it did not expect the California Public Utility Commission to permit the company to securitize its wildfire costs on an expedited or emergency basis. PG&E also believed that it would likely take years to obtain authorization to securitize the wildfire costs despite the company's assessment of the extraordinary challenges it faces. Under our methodology, investment-grade utility ratings require a regulatory framework that is transparent, consistent, predictable, and allows for timely cost recovery. In our view, a regulatory construct that lacks these foundational elements could subject the utility to financial instability and lead us to revise downward our assessment of the regulatory framework's relative credit supportiveness. California has been plagued with catastrophic wildfires for years. In our view, California's regulatory process to recover these material wildfire costs is still unpredictable, relatively untested, and lacks transparency and uncertainty regarding the timeliness of cost recovery.

Will any California investor-owned electric utility still have an investment-grade rating before the start of the 2019 wildfire season?

Possibly. We are actively monitoring what, if any, improvements will be implemented to the regulatory construct before the start of the 2019 wildfire season. Absent concrete steps taken by regulators and/or politicians to reduce the risks for California's electric utilities, S&P Global Ratings could lower the ratings on Edison, SCE, and SDG&E by one or more notches --indicative of the possibility that the ICR on these companies could be below investment grade before the start of the 2019 wildfire season.

Florida's utilities are also at risk for natural disasters--why does S&P Global Ratings have an investment-grade rating on all investor-owned electric utilities in Florida?

In our view, there are two key distinguishing factors between the regulatory construct in California and Florida. The first is inverse condemnation and the second is recovery.

As mentioned, the legal doctrine of inverse condemnation that developed under California's common law holds a utility strictly liable for damages arising from wildfires if its equipment is a substantial cause of the wildfire, regardless of the utility's negligence. In our view, this makes California's utilities the state's reinsurer every time a wildfire destroys part of its service territory. For example, assume a wildfire caused by a California utility without negligence had total damages of \$5 billion, which included damages to the utility's assets of just \$100 million. The California utility could be liable for the entire amount of damages from the catastrophic fire, or as much as \$5 billion. In that same situation, under Florida law, the Florida utility would seek to recover from ratepayers just the damage to its own assets or \$100 million.

The second key difference is the recovery process. In Florida, utilities follow what we would characterize as a predictable and reliable process to recover their costs following a catastrophic

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hurricane. Florida utilities can petition for the recovery of storm costs without being subject to an earnings test and the state has allowed for the securitization of these costs. These credit-supportive measures in Florida have been implemented many times and reduce the credit risks associated with the state's unpredictable weather conditions. In contrast, the California recovery process is untested and uncertain. PG&E identified this risk in its bankruptcy filing, citing the uncertainty surrounding the timing and amounts, if any, it could recover following the 2017 and 2018 wildfires. The lack of a well-defined and timely process to adequately quantify and recover wildfire costs, in our view, is a second material distinction for California's regulatory construct.

Would a loss of investor confidence in California electric utilities be significant?

We think so. Utilities are different from most industrial companies because they generally operate with negative discretionary cash flow, reflecting the high capital spending necessary to maintain and improve their electrical systems. To offset this risk, we think a utility's credit quality depends on its operating under a credit-supportive regulatory construct that is consistent and predictable. Also, because utilities have negative discretionary cash flow their creditworthiness is linked to reliable access to the capital markets to operate their businesses. If investor confidence in the California construct wanes, a utility's access to the capital markets may be limited and its cost of capital may increase. In our view, the lack of consistent access to the capital markets or lack of steady affordable capital can add considerable strain to a utility's business model.

Are the SCE and SDG&E service territories susceptible to wildfires?

Yes. In our view, both service territories face wildfire risks. SCE's operating territory has had major catastrophic wildfires in each of the past two seasons. Many wildfires have also occurred in San Diego County over this timeframe, but have either been insignificant or SDG&E has not been determined to be the cause of these wildfires. Therefore, SDG&E has not been financially responsible for a major devastating wildfire over the past decade. Although the topography differs greatly throughout California, and the management of this issue by a utility can mitigate some of the risks, given the increasing effects of climate change, S&P Global Ratings assumes that all of California's regulated electric utilities are susceptible to catastrophic wildfire-related risks.

Does S&P Global Ratings take into account SDG&E's state-of-the-art technological system?

Yes. In our view, SDG&E has one of the most sophisticated advanced wildfire warning systems in the world. The company has invested in hundreds of weather stations and fire cameras that have the capability to identify when specific areas could be most susceptible to a wildfire. Furthermore, after a wildfire starts, the utility's fire camera system is equipped with the technology to identify the wildfire's GPS coordinates. This information is relayed to the California Department of Forestry and Fire Protection, which determines the most appropriate course of action to extinguish the fire at its earliest stage.

The company's advance warning system has already prevented at least one wildfire that potentially could have been catastrophic. However, despite this advanced warning system, we don't think the utility is immune to the risk of a devastating wildfires. We believe that all California electric utilities are susceptible to potential liabilities from wildfires because of environmental

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changes and high winds that could spread the fire at a rate that outpaces the capabilities of the the first responders. While SDG&E is certainly not immune to wildfire risks, because of the company's advanced operations, S&P Global Ratings has consistently rated the company higher than its California electric utility peers.

If SDG&E is downgraded would S&P Global Ratings also downgrade Sempra Energy?

Probably. To date, we have lowered our rating on SDG&E by two notches due to the uncertainty regarding California's regulatory construct but have maintained our ICR on SDG&E's parent, Sempra Energy. Currently, our ICR on SDG&E is the same as our rating on Sempra Energy. Because SDG&E accounts for about 35% of consolidated Sempra, a further downgrade of SDG&E to below our Sempra ICR would likely result in a weaker credit assessment at the consolidated parent and would likely result in a downgrade to Sempra Energy.

Can senior secured first-mortgage bonds be rated above the issuer credit rating?

Yes. First-mortgage bonds (FMB) issue ratings can be notched above our ICR on a regulated utility depending on the rating category and our recovery rating, which is based on the extent of the collateral coverage. FMBs benefit from a first-priority lien on substantially all of the utility's real property owned or subsequently acquired. Collateral coverage of over 1.5x supports a recovery rating of '1+' and an issue rating of two notches above the ICR in the 'BBB' category, and three notches above the ICR in the speculative-grade category.

Can senior unsecured bonds be rated above the issuer credit rating?

Yes, but only in certain situations. If an ICR on a regulated utility is investment grade ('BBB-' or higher), the senior unsecured bonds cannot be rated above the ICR. If the ICR on a utility is speculative grade ('BB+' or lower), then notching will depend on the recovery rating and the ICR level.

If the utility ICR is in the 'BB' category, we could rate the senior unsecured bonds one notch above the ICR if we determine that under a hypothetical default scenario, we assess substantial recovery for the unsecured bondholders (recovery of 70% or greater), consistent with a recovery rating of '2'. If we rate the ICR on a utility 'B+' or lower, we could rate the senior unsecured bonds two notches above the ICR if we assign the unsecured debt a '1' recovery rating (recovery of greater than 90%) or one notch above the ICR if we assign the unsecured debt a '2' recovery rating (recovery of 70%-90%) in a simulated default scenario. For unsecured holding company debt, we cap the recovery ratings at '3' (recovery of 50%-70%) for companies in the 'BB' category and at '2' for companies rated below 'B+'.

Related Criteria And Research

Related Research

- PG&E Corp. Downgraded To 'D' On Bankruptcy Filing; Subsidiary Debt Lowered To 'D', Jan. 29, 2019

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- Edison International And Subsidiary Southern California Edison Downgraded To 'BBB'; Ratings Placed On Watch Negative, Jan. 21, 2019
- San Diego Gas & Electric Co. Downgraded To 'BBB+', Outlook Remains Negative, Jan. 21, 2019
- What's Behind Our Multi-Notch Downgrade Of PG&E Corp.?, Jan. 11, 2019
- Sempra Energy And Southern California Gas Co. Ratings Affirmed; Outlook Remains Negative, Sept. 5, 2018

This report does not constitute a rating action.

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