

Insurance Industry Response to CDI Investigatory Hearing on Homeowners' Insurance Availability and Affordability

October 19, 2020



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October 16, 2020

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RE: REG-2020-00016

Dear Ms. Landsman-Smith,

The above-listed groups write with respect to Insurance Commissioner Lara's October 19, 2020 investigatory hearing on homeowners' insurance availability and affordability. While representatives and members of several of these groups will be participating live at the virtual hearing, we offer the following responses to the CDI's five questions in greater detail than the hearing may permit. We hope this additional information aids in deliberations by the California Department of Insurance (CDI). As insurers, we value the opportunity to work together to achieve our shared goal of ensuring affordable homeowners' insurance is broadly available to Californians from admitted market carriers in a stable and competitive market.

QUESTION 1:

"Why are insurers declaring their own rates to be 'inadequate' and refusing to renew many homes in the wildland-urban interface, while at the same time these same insurers seek rate increases that are lower than California's law permits?"

Extreme fire risk near people and property is growing. Problems have been exacerbated by long-standing fire over-suppression, which allowed excess fuel growth and unnaturally high tree density, which made trees more vulnerable to insect infestation following California's lengthy drought, which resulted in massive tree die-off (163 million trees). While this process has unfolded, development into high risk areas has continued unabated.

Many of these risk factors have evolved slowly over decades, but it is only recently that the true magnitude of the fire-threat became apparent with historic wildfire damage and losses in 2017 and 2018, as well as the fires this year. Meanwhile, the "6.9% filing" process has been in place for a long

time. The dynamics that have driven its usage continue to prevent most insurers, particularly large ones, from seeking rate increases higher than 6.9%, despite obvious need.

Rate Hearing Risk

Insurance Code Section 1861.05(c)(3) is at the heart of the matter. This law allows a member of the public to require the Insurance Commissioner to commence administrative hearings against an insurer that is seeking a rate increase in excess of 7% – even if the CDI believes that the rate increase is justified under the regulatory formula and does not wish to go to hearing. Once the hearing process begins, the time and cost attendant to review of the filing increases significantly. During the previous administration, the only two rate filings that went to hearing became widely-discussed cautionary tales, with one filing taking three years to resolve and the other still being litigated more than five years after the original filing. And, neither of these filings even involved a rate increase request of 7% or more.

Experience has demonstrated that the probable consequences of going to a rate hearing are inconsistent with the basic purpose of making a rate filing – approval of a warranted rate increase within a reasonable period of time to allow for appropriate implementation. As a result, insurers file for partial rate relief in a timely manner to begin addressing a premium deficit rather than risk the time and expense associated with an administrative hearing (e.g., months if not years in litigation, employee costs, lawyer, and consulting expert costs, costly and time-consuming discovery process). We respectfully submit that there are two potential means of addressing this problem.

The first would involve reforming the administrative rate hearing process to simplify and expedite the administrative review of rate filings that are limited to base rate changes, including those that exceed 7%. These reforms could include the following:

- An informal resolution process;
- Pre-hearing limitations on the scope of issues;
- Expedited written testimony requirements;
- The use of hearing officers with ratemaking expertise; and
- Strict time requirements applicable to the conclusion of a hearing and the acceptance or rejection of the decision of the hearing officer.

It is our hope that such reforms would enable insurers to move forward with rate increases that are within the range of rates deemed reasonable under the regulatory formula, even where those rates exceed 7%. By doing so it would improve the availability of homeowners' coverage throughout the state. We would welcome the opportunity to partner with the CDI in arriving at an agreed to set of reforms that achieve this key goal.

The second would involve working together to address the urgent need to process 6.9% filings quickly. We recognize the pressure and workload applicable to the rate review process, and that in many cases review and approval of 6.9% filings will take more time than that allotted under section 1861.05(c). However, excessive delays can place insurers under financial stress, especially when a 6.9% filing is fully supported by the regulatory formula. We believe several potential reforms could address this concern, including:

- Applying additional resources to and otherwise prioritizing the review of homeowners' rate applications;
- Providing an expedited review track for homeowners' rate applications that impact base rates only; and

- The adoption of standardized default factors that, if adopted, would be exempt from further review.

Again, this list is not exhaustive, and we would welcome the chance to work with the CDI to develop a set of reforms that would provide timely rate relief as a means of increasing the availability of homeowners' insurance.

The immense wildfire-related losses are colliding with decades of institutional history among CDI, intervenors and insurers, resulting in a profound difference between approved rate levels and the much higher indicated rates that are needed to allow insurer to maintain solvency while serving the growing number of homeowners living in high fire-threat communities. We hope the above suggestions are helpful as you consider how best to restore the vibrancy of the admitted market in high risk areas and help Californians avoid the need for a California Fair Access to Insurance Requirements (FAIR) Plan policy.

QUESTION 2:

“Why are insurance companies reluctant to take homeowner wildfire mitigation efforts into account when pricing residential property insurance?”

When mitigation discounts can be accurately estimated, insurers are often enthusiastic about offering them, provided they can be applied to actuarially sound rates. However, if accurate discounts cannot be calculated, if insufficient data exists, or if the underlying rates to which discounts would be applied are too low, insurers may be reluctant to offer discounts because doing so could further distort a rate that does not provide a good match to insured risk.

The current and increasing wildfire threat to residential property in California presents a complex series of risks. Homeowners insurance premium rates are based on measurable risk, and while mitigation efforts presumptively serve to decrease that risk, the scientific measurement of catastrophe risk and mitigation efforts is still maturing.

Why Insurers Want Risk Classification

In general, it is both sound business practice and sound actuarial practice for insurance companies to reflect differences in risk (“risk classification”) when pricing insurance policies. With respect to business practice, insurers continuously seek to improve their ability to understand and measure differences in risk by finding and enhancing reliable data sources for policy characteristics. Accurate risk classification systems help insurers to compete for better risks, defend against adverse selection, protect the financial soundness of their companies, enhance fairness by reflecting differences in expected cost, and create economic signals and incentives for policyholders to reduce risk.

Actuaries performing ratemaking are guided by relevant Actuarial Standards of Practice (ASOPs), Statement of Principles (SOPs) and other guidance promulgated by the Actuarial Standards Board (ASB), the American Academy of Actuaries (AAA) and the Casualty Actuarial Society (CAS). In particular, ASOP 12: *Risk Classification (for All Practice Areas)* instructs actuaries designing a risk classification system to:

- Select risk characteristics that are related to expected outcomes;
- Select risk characteristics that are capable of being objectively determined;

- Reflect practical considerations underlying the data capture needed to determine risk characteristics;
- Show that the variation in actual experience correlates to the risk characteristic; and
- Consider the interdependence of risk characteristics.

In concept, reflecting wildfire mitigation efforts in setting homeowners premiums would be desirable to insurance companies, as long as the underlying data can be obtained in a cost-effective manner and that the resulting premiums before and after application of mitigation discounts and/or classification variables are actuarially sound.

Quantifying the Value of Mitigation is Problematic

The Insurance Institute for Business & Home Safety (IBHS) is at the forefront of building safety research and community resiliency. IBHS and its significant research efforts are a reflection of the property insurance industry's investment in developing real-world solutions to the risks presented by catastrophes and mitigating them. IBHS's research¹ is based on real world data gathering as well as full-scale laboratory work. This research has produced observations and conclusions that illustrate the need for additional data about the efficacy of mitigation efforts for them to be actuarially reliable.

IBHS's research indicates that there are no easy answers to the question of wildfire mitigation. Wildfire risk to homes, businesses, and communities can be reduced but it cannot be eliminated. Therefore, all analysis of premium pricing related to mitigation efforts is a question of scale, and not removal of risk from the policy.

IBHS research indicates that, simple building attributes (such as vegetative clearance, roof and siding material, window type, and local topography) offer little predictive value in terms of the outcome from real-world fires. Currently, the industry does not collect or have an affordable means to collect mitigation data on its policyholders and their surrounding communities. At the home level, vegetation assessment often requires an onsite visit from a company representative. For the largest carriers, such an effort could cost millions of dollars given the size of their portfolios.

In addition, a residential property's vulnerability to wildfire damage is not static. Many wildfire mitigation efforts involve fuel load management, which requires consistent and regular maintenance. Defensible space clearance cannot be measured only at initial sale of insurance, and such maintenance actions may need to be undertaken on a community-wide basis before risk is meaningfully reduced. As a result, the risk can change significantly if homes and their communities fail to keep up with risk reduction efforts. Obtaining data that is current, comprehensive, consistent and accurate will require a collective statewide effort.

Finally, the scope of risk to suburban communities, which is a significant portion of the residential property market, is not fully understood. This is illustrated by the fact that such communities are often outside the traditional wildland-urban interface (WUI) yet have suffered devastating losses in recent wildfires. This discrepancy illustrates that current classification of risk areas do not accurately reflect the full scope of risk that wildfires present.

While research and scientific evaluation continue, it is clear that the complexity of this evolving systemic risk makes quantifying the risks to individual residential properties, or even whole communities, with

¹ <https://ibhs.org/wildfire/suburban-wildfire-adaptation-roadmaps/>

the degree of accuracy needed to implement policy level pricing changes an extraordinarily difficult challenge. Until these issues are resolved, insurers offering significant mitigation discounts would run too great a risk of post-mitigation premiums being actuarially unsound to commit to such an approach.

Regulatory Constraints

The current regulatory framework related to rate filings is often restrictive and works against accurate premium price determinations, making pricing adjustments for mitigation efforts difficult.

While the current catastrophe load methodology for homeowner's insurance ratemaking found in California Code of Regulation CCR 2644.5 is covered in greater detail in our response to Question 4, it is necessary to note here that the requirements for insurers to replace historical catastrophe loss data with long-term (20 years minimum) load based data, has resulted in an artificial evaluation of wildfire risk in rate making.

According to The California Department of Forestry and Fire Protection (CAL FIRE), 7 of the 10 most destructive fires in California's history² have taken place in the last five years, with the 2018 Campfire and 2017 Tubbs fire accounting for 24,440 lost structures, more than the other 8 most destructive fires combined. The recent losses of homes and property in California to wildfire are unprecedented when compared to losses experienced in previous decades. The application of CCR 2644.5 has created a restrictive rate filing framework which does not properly reflect the degree of damage, and scope of losses recently incurred.

Long-term averaging of catastrophe claims in ratemaking is intended to reduce the impact of single, or even in some cases multiple, large-scale catastrophes on rates. However, recent years' experience have seen drastic increases in the rate indications attributable to individual events. Further, when the long-term average fails to accurately reflect the risk in the market, rates become misaligned, and pricing models become less reliable. In an environment where pricing models are not reliable, applying discounts for mitigation efforts is equally uncertain for insurers. A reevaluation of the current catastrophe landscape will be needed for premium prices to accurately reflect the current risk, and accurate risk evaluation is an essential component of mitigation discount calculation.

Other States' Experience with Mitigation Discounts

Past examples of mitigation discounts have not always produced beneficial results, but rather have presented significant instances of fraud, undercutting viable premium rates and damaging insurance markets.

Florida provides a case study in the unanticipated and disastrous results for the insurance industry and consumers when insurers are required to adopt mitigation discounts that do not adequately reflect the actual risk they are insuring.

In the mid 2000's Florida passed legislation that provided insurance windstorm mitigation credits to homeowners who took steps to fortify against windstorm damage. A system was developed where credits were granted on initially inadequate rates (perceived at the time to be adequate); further, due to ineffective monitoring, credits were granted on the basis of fraudulent information on a massive scale, further compounding the problem.

² https://www.fire.ca.gov/media/11417/top20_destruction.pdf

By 2009 the Florida Association of Insurance Agents (FAIA) was sounding the alarm³ that “homeowners are being led to believe they are safer, when they are not, and the system is contributing to woes in the state’s property insurance market.” And, that the “... faulty implementation by the state’s insurance regulator — including a misplaced emphasis on granting insurance credits over making sure mitigation efforts are effective—and apparent fraud in the inspection process are largely to blame.”

In a report prepared for the Florida Legislature in 2010⁴ by the State’s Department of Financial Resources it was found that a premium credit system designed to incentivize homeowners to adopt mitigation efforts had caused premiums to fall without any alteration of the risk. The result was an imbalance in the relationship between premiums and claims which threatened the stability of the residential property insurance market. The report stated the following:

“While reductions to premiums have been mandated, there has been no corresponding reduction in expected loss or related expenses, based on the assumptions and analyses in this study. The premium alignments needed to maintain rate level arising from this mismatch have not been considered for immediate implementation. This has led to an approximate 24% change in overall premium level being currently necessary to restore the pre-WMC [Windstorm Mitigation Credits] rate level.”

California’s challenges in implementation of mitigation measures are more complex than those of Florida, as wildfire mitigation measures—at both the home and community levels—are difficult to quantify and subject to change over time. Further, home-level mitigation measures are relatively less effective for reducing wildfire risk than they would be for hurricane, so significant mitigation discounts will require measurement of areas far beyond the singular home. Wildfires are also inherently difficult to model, as wildfire ignition and spread are heavily influenced by human activity (e.g. arson, smoking, electrical equipment breakdown, to list a few).

The imbalance created in Florida by the insurance credit system designed to incentivize homeowner mitigation efforts predictably devastated the Florida insurance market. As a result, insurers and many regulators have been hesitant to apply mitigation discounts to situations in markets where systemic risk is capable of driving insurers to insolvency.

However, experience also shows that insurers are more inclined to incorporate mitigation efforts into residential property insurance pricing when there is a well-structured certification process based on informed risk assessment methods.

Colorado provides an example of effective efforts to incorporate mitigation into residential property insurance pricing. Colorado has seen the emergence of small scale programs designed to work with home and property owners to mitigate damage by wildfires, such as Wildfire Partners.⁵ This program, funded through Boulder County, the Colorado Department of Natural Resources, and FEMA, provides funding to support mitigation assessments of private property. These assessments allow homeowners to take informed steps to improve the safety of their homes. Some insurers, in turn, voluntarily accept certification as proof of mitigation and use it as a basis for being able to write the policy or to adjust premiums accordingly.

³ <https://www.insurancejournal.com/news/southeast/2009/08/13/102978.htm>

⁴ https://forms2.rms.com/rs/729-DJX-565/images/tc_2010_rms_study_florida_windstorm_mitigation_credits.pdf

⁵ <https://www.wildfirepartners.org/our-program/>

Colorado's public-private partnership approach to wildfire mitigation allows for educated assessment of mitigation efforts improving the safety of homes, while providing adequate information for insurers to assess the risk related to policy writing. While no individual approach can ever eliminate the risk of wildfire, avoiding mandated policy terms or discounts allows for improved mitigation efforts without putting insurance markets at risk of collapse when disaster strikes.

In California there are varying anecdotal examples emerging of insurers willing to embrace mitigation programs to help protect against wildfires.

- Homeowners who have a California FAIR Access to Insurance Requirements (FAIR) Plan policy are now able to strengthen their protection with Difference-In-Conditions endorsements (DIC), which a number of carriers are offering to help fill gaps in their FAIR Plan coverage.
- Some carriers are in the early stages of offering discounts to homeowners who take one or more steps to harden their homes against wildfires or live in a community recognized by the National Fire Protection Association (NFPA) as a Firewise USA^{®6} site.
- Other carriers have taken the approach of offering via endorsement wildfire mitigation services, which contracts services with an external vendor, to help provide loss prevention services such as reducing potential fuel sources, taping vents and applying fire retardants based on various threat assessments, including weather forecasts and imminent wildfire exposure.

It remains to be seen if other companies have an appetite for such risk when the residential property insurance market has been made so volatile by the recent wildfires. It is probable the science will mature faster for a community-based mitigation program like Firewise USA[®], and with independent and ongoing oversight to verify communities remain in good standing, these efforts will likely be more acceptable to carriers for basis of a premium discount. While highly encouraged, individual efforts as previously noted are more difficult to actuarially support as there are multiple approaches to hardening a home and other factors to consider when measuring their effectiveness.

While there are various approaches beginning to emerge supporting mitigation, insurance companies will be more amenable to incorporate homeowner wildfire mitigation efforts into pricing residential property insurance when they have well developed data that allows them to accurately price the risk presented by wildfires. With better information to quantify the value of specific mitigation efforts, and confidence that approved rates properly reflect the true risk, insurers will be in a reasonable position to offer discounts or adjust prices accordingly. Lastly, it is important to note that greater confidence will be achieved when all public and private stakeholders have demonstrated a commitment and plan to mitigate risk, including federal and state authorities responsible for reducing fuel loads via clearance and controlled burns, as well as hardening and ongoing maintenance of utility infrastructure.

QUESTION 3:

“How will climate change, including extreme heat events, continue to affect future homeowners’ insurance rates, availability of insurance and the financial health of our insurance market?”

⁶ <https://www.nfpa.org/Public-Education/Fire-causes-and-risks/Wildfire/Firewise-USA>

Climate change presents numerous complex challenges for the insurance industry. Reports and studies consistently suggest that the effects of climate change will result in higher homeowners' insurance claims (and, ultimately, higher rates), and decreased availability of insurance.

Frequent extreme weather events are leading to mounting economic losses for insurers, particularly in California where average annual wildfire losses trailed well below \$5 billion even within this millennium, until 2017 and 2018, when they leapt to more than \$26 billion. These historic financial losses place tremendous upward pressure on homeowners' insurance rates, and have forced many insurers to safeguard their solvency (and their ability to pay claims in the event of another disaster) by limiting the amount of insurance they sell in high fire-risk areas of the state until they are financially prepared. Global reinsurer Munich Re has indicated global warming made a "significant contribution" to this peril, and that increases in the intensity and frequency of California's wildfire season are predicted by climate models.

Absent corrective action, the financial health of California's insurance market could be profoundly impacted. Insurance Australia Group (IAG) Executive Jacki Johnson suggests that the insurance industry will be unable to operate effectively if the current trajectory of climate change proves accurate, and that a failure to reduce greenhouse gas (GHG) emissions could result in a world that is "pretty much uninsurable."

Availability

California wildfires are expected to grow increasingly extreme due to: (1) forest "fuel loads"; (2) climate change contributing to droughts leading to more dead and combustible vegetation; and (3) more people living in fire-threatened communities. In 2018, the State of California's Fourth Climate Change Assessment found that, if greenhouse gas emissions continue to rise, the frequency of extreme wildfires will increase, and the average area burned statewide would grow by 77 percent by 2100.

This report also highlighted the following impacts of changing wildfire risk on California's residential insurance market:

- Given current insurance regulations and the behavior of insurers and policyholders, our findings indicate that climate change could have a substantial impact on the residential insurance market in some parts of the Sierra Foothills Study Area (SFGSA). In the ZIP codes that currently face the highest fire risk, the market share of the admitted insurers is expected to drop by 5 percentage points on average by 2055.
- Efforts to reduce GHG emissions will not make a great deal of difference through midcentury because of the inertia of the climate system. However, reducing emissions will substantially reduce additional impacts between 2055 and 2095.
- Insurance regulations significantly impact how climate change will affect the residential insurance market. Insurance regulatory issues include the extent to which rates reflect the full difference in fire risk across structures, whether probabilistic models of wildfire risk are allowed in the rate-approval process, and whether the net reinsurance margin is allowed as an expense in rate filings. The extent to which rates offered by the California Fair Access to Insurance Requirements (FAIR) Plan keep up with the increase in risk will also be an

important factor in how insurance markets respond to climate-induced changes in wildfire risk.”

Rates

An August 2020 study in Environmental Research Letters indicates that since 1979, a combination of rising temperatures and falling average precipitation has increased the likelihood of extreme autumn wildfire conditions across California. The researchers report trends for the months of September, October, and November in both temperatures (up about 1° Celsius) and precipitation (down an average of 30 percent), making fire weather conditions about twice as worse statewide.

In the context of changing climate, premiums may rise to the point where they will be uneconomic or unaffordable for the customer. A single event that changes the perception of climate risk could disproportionately affect premium levels. Where there is an inability to properly model and price the risk, this can also mean that insurers decide to be more cautious, adding a risk margin to the premium or withdrawing capacity. Further complicating the problem, the customer may underestimate the level of risk and consider the price to be excessive, rendering the risk uninsurable.

The number of homeowners in the FAIR Plan is rising in high fire risk areas, reaching 200,000 policies as of July 2020. This growth signals a problem in the regular, admitted market. For residents not able to find an admitted market policy, most likely those in the wildland urban interface (WUI), they will pay much higher premiums if forced to obtain coverage through the FAIR Plan, which is the expensive “market of last resort.” California’s Fourth Climate Change Assessment found the average insurance premium for high-risk areas had increased by 15 percent between 2007 and 2014 in some locations (with largely offsetting reductions in low risk areas), and that the higher prices were associated with policyholders purchasing less coverage.

While rates have been increasing slowly in California, they are still far below other state’s experiencing climate change-related catastrophes. According to the most recent National Association of Insurance Commissioners data, California’s average homeowners’ insurance premium (\$1,008) is 17% below the national average, and almost one-half of the average price in hurricane states, like Louisiana (\$1,968) and Florida (\$1,951) – even though it is significantly less expensive to rebuild a home in those lower cost Gulf States.

These low average rates are unsustainable in this “new normal” of climate change. Any feasible solution to the “availability” issue in high-risk areas must recognize the economic reality of low average rates and the \$26 billion of losses incurred by home insurers as a result of 2017 and 2018 wildfires, which (as noted by Moody’s Investor Service) “drove California homeowners insurance loss ratios to the highest in the nation.”

Insurance Market Health

Warmer and drier conditions driven by climate change are expected to lead to more frequent and intense wildfires in California, particularly near or within populated areas that have long been considered low risk. A January 2019 report by the Chief Risk Officer (CRO) Forum - Insurability and Resilience in a Changing Climate Emerging Risk Initiative - advises, for a risk to be insurable, the insurer must be able to meet the following conditions:



Climate change is undermining many of these conditions, and in extreme cases, this could challenge insurability as pricing depends on the accurate assessment of risk.

The ability to manage risk is fundamental to the existence of insurance. California homeowners’ insurers are concerned that a mismatch of pricing expectations could prompt policymakers/regulators to limit the prices that can be charged to a level that is not sustainable for insurers. If insurers cannot manage price or exercise caution and decline to underwrite risks in certain areas, the combination of inadequate rates and unmanageable risk would put California insurers in jeopardy of financial collapse.

The CRO Forum report suggests that “(i)nsurers can help fortify society’s resilience to climate change by continuing to invest in hazard models, promoting their use and advising on building codes and resilient engineering. This is urgent now to minimize a future insurability gap. Such is the scale of the threat, however, that insurability and affordability are likely to become an increasing concern:

- As hazard modelling becomes ever more precise, certain local peak risks may exceed capacity or become unaffordable to insure. Certain coastal or forest-fringe properties in the USA are already on the edge of insurability.
- However, in the more extreme warming scenario of >5°C, severe damage and disruption could become so frequent later in the century that many risks may be uninsurable, with a profound impact on the economy and on society.”

It is evident that climate change is affecting the severity and frequency of natural catastrophes on a global basis. In California, these risks manifest in different ways, such as prolonged drought and severe wildfires. Population growth in areas of high exposure, particularly in the WUI, are putting many more people and assets in harm’s way. In the long term it may be possible to change the trajectory of climate change, but in the near term we must adapt to the mounting risks and make our communities more resilient. The dramatic increases in risk and loss will necessarily impact rates, and the adequacy of those rates (i.e., do the rates reflect the actual risk) will impact availability of insurance in high-risk areas. If insurers are not allowed to manage their risk, and rates are not adequate to cover the real risk, the financial health of California’s homeowner’s insurance market will be threatened.

QUESTION 4:

“How – if at all – would the use of catastrophe modeling in ratemaking help to make homeowners’ insurance more affordable and more widely available to homeowners?”

Availability, affordability and reliability of insurance coverage are interrelated concepts that combine to form a sustainable homeowners insurance market, as follows:

- Availability signifies that there are enough private insurers and reinsurers willing to accept the risk of insuring homeowners in a market.
- Affordability signifies that the homeowners are willing and able to pay the premiums charged in order to transfer their risk.
- Reliability signifies that the insurers manage their risk properly in order to be solvent and are able to pay claims in case of an event.

We believe that replacing the current catastrophe load methodology promulgated for homeowners’ insurance ratemaking in California with modern catastrophe models would increase insurance availability and reliability and could increase affordability over the longer term as well.

Current Catastrophe Load Methodology Promulgated for Homeowners Insurance Ratemaking

Currently, the California Code of Regulations (CCR 2644.5) requires insurers, in the context of a rate filing, to replace all historical catastrophe losses with an average, long-term load based on a minimum 20 years of data for homeowners’ insurance. As applied in practice, this methodology is based on answering the following questions:

- What significant events (wildfire, rainstorms, etc.) were classified as catastrophes?
- What were the insured loss payments for these catastrophic events each year?
- What were the insured loss payments for ordinary non-catastrophe events (kitchen fires, water leaks, liability claims, etc.) each year?

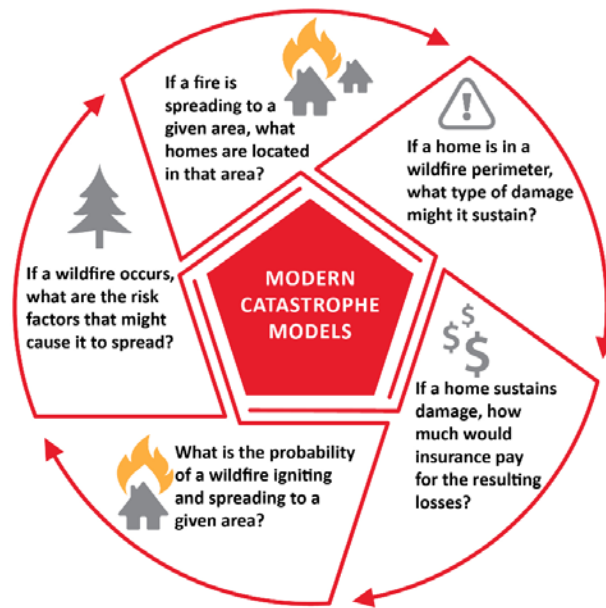
With respect to measuring wildfire risk, this catastrophe load methodology can be viewed as a very simple catastrophe model that could be actuarially sound in the unlikely event that certain conditions were met. In reality, wildfire risk in California has been demonstrated to fail many of the above conditions materially.

Issue	Challenge
Wildfire risk is consistent over the long term.	<p>Wildfire risk is NOT consistent over the long term:</p> <ul style="list-style-type: none"> ✘ Average summer temperature is increasing, and the number of days with high fire danger has doubled since the early 1980s. ✘ Wildfire risk is somewhat cyclical, with increases in risk often following years of drought. The years of drought would manifest as a decrease in catastrophe losses from severe rain events, as occurred from about 2012 to 2016, which would decrease the indicated catastrophe risk load in the California formula. ✘ The number of homes built in the WUI and subject to being damaged by severe wildfires has significantly increased in the past three decades. ✘ Given that 95% of wildfires are attributable to human causes as opposed to natural causes, the opportunity to spark wildfires in risky areas has also increased.
Increases in wildfire risk correspond to increases in non-catastrophe risk.	<ul style="list-style-type: none"> ✘ The forces noted above have combined to significantly increase wildfire risk over the past 20 years, and those forces likely have no corresponding relationship to the risk associated with non-catastrophe losses.
Wildfires are a higher frequency, lower severity event such that 20 years of data would be sufficient to capture the range of outcomes.	<p>Wildfire risk cannot be adequately captured with 20 years of data:</p> <ul style="list-style-type: none"> ✘ The wildfire risk is so material that the California homeowners' insurance industry experienced \$20 billion in underwriting losses due to wildfires in two years, 2017 and 2018, representing twice the cumulative underwriting profits for the prior 26 years. ✘ As demonstrated by that example, a 20-year average ending in 2016 would have indicated nothing close to the actual losses experienced in 2017 and 2018, which clearly shows how this experience period is not sufficient to represent the range of all potential events.
Wildfire risk is sufficiently measured by insured losses from wildfire events.	<p>Using insured losses as the sole measurement statistic is not sufficient to measure wildfire risk.</p> <ul style="list-style-type: none"> ✘ In some years, extremely severe wildfire events may not burn many houses. In 2020 to date, California has seen over 4 million acres burned, with over 9,000 structures lost. The previous record year was 2018, with 2 million acres burned and over 24,000 structures lost. ✘ Further, insured losses may be materially reduced by recoveries such as subrogation from PG&E for the 2017 wildfires, with no corresponding decrease in the underlying risk.
Changes in historical and prospective exposure to catastrophes due to changes in mix of business can be reasonably quantified and applied to the data components considered in the model, i.e. catastrophe and non-catastrophe losses.	
To the extent that the previous conditions are not met, wildfire risk is not a material component of the total risk covered by the insurance policy.	

Although CCR 2644.5 requires that the catastrophe adjustment reflect any changes between the insurer's historical and prospective exposure to catastrophe due to a change in the mix of business, such an adjustment cannot be reasonably quantified and applied to the data components considered in the simple catastrophe load methodology. In practice, it would be impossible to estimate how to adjust historical loss dollars for a wildfire that occurred in the experience period and did not cause any losses at the time, but could cause significant losses today due to new construction within the historical fire perimeter. Further, the regulation does not require or allow an adjustment to reflect changes in the underlying nature of the peril insured, such as we have seen with drought-dried vegetation and increased temperatures.

Modern Catastrophe Models

The best way to make such adjustments would be to employ a modern catastrophe model that incorporates not only historical insurance experience but also scientific knowledge about the underlying hazard, engineering knowledge about the impact of the hazard on buildings, statistical techniques to measure the range of potential outcomes, and a current view of properties exposed to risk. There are a variety of approaches to building catastrophe models, but a typical wildfire catastrophe model provides tools to assess questions such as:



Catastrophe models have been commonly used since the mid-1990s for measurement of hurricane and earthquake risk in many applications, including pricing insurance and reinsurance products, and managing insurer solvency. They are generally accepted as the basis for primary insurance ratemaking for catastrophic perils in most states. While the CDI has permitted the use of these models for deriving rate relativities, CCR 2644.5 has been applied so as not to permit their use for the calculation of base rates at the portfolio level.

Insurance Availability

Well-calibrated catastrophe models help insurers understand risk and price it more accurately. With such models, insurers can more accurately charge consumers for the cost of risk transfer, which promotes insurance availability. If insurers are unable to charge the appropriate costs of risk transfer,

they have limited recourse, typically to “de-risk” their portfolios via non-renewals and reductions in new business volumes.

The simple catastrophe load methodology promulgated by the California regulations has failed to capture the dynamically changing wildfire risk in California, and insurers have had no acceptable way to demonstrate the premiums needed to insure a portfolio of homes that includes those in the areas where the greatest uncertainty exists. As a result, many insurers have sought to achieve portfolios that are adequately priced as a whole by reducing their exposure in high-risk areas. This is the dynamic that causes availability to be limited in high-risk areas to an extent beyond what would be ordinarily expected in such areas.

Insurance Affordability

A policy question for the CDI is how to manage two contradictory goals: 1) employing tools, such as catastrophe models, that place insurance rates closer to the true cost to insure properties vs. 2) concern that accurate prices are costlier than some homeowners can comfortably afford. An overlay on that tension is the sentiment that it is important for the public to understand the true impact of climate change and take action to address it. Insurance is one of the few systems that can directly connect consumers with the financial impact of climate change.

If the CDI is interested in departing from cost-based pricing for lower income residents, there are numerous strategies it could explore. However, attempting to build cross-subsidies into insurance pricing would likely face significant challenge under Proposition 103’s prohibition against “unfairly discriminatory” rates. Attempting to provide subsidies to lower income residents would likely face significant headwinds due to the severe budget pressure that the state government already faces – and the predictable worry that subsidies would serve as an implicit incentive to build new homes in high-risk areas in the face of concerns about climate change.

Strategies involving catastrophe models could promote insurance affordability in ways that are more sustainable over the long term, including:

1. *Avoid big swings in insurance premiums:* Since catastrophe models represent a long-term view of the risk, their results are not subject to substantial year to year fluctuations. Thus, using them to set premium levels would increase affordability by enabling homeowners to reasonably anticipate their total cost of ownership before making a home-buying decision.

Under today’s methodology, homeowners are subject to enormous rate swings and, as a result, homeownership for some could become increasingly unaffordable relative to initial expectations. The following example, based on real data from California rate filings of major insurers, shows the dramatic increase in indicated catastrophic rate need over a two-year period using the simple catastrophe load methodology prescribed in California:

YEAR	NON-CAT LOSS	CAT LOSS	NON-CAT RATIO	SELECTED CATASTROPHE LOAD (20-YEAR EXPERIENCE PERIOD)
1997	101	5	5%	
1998	123	14	11%	
1999	131	7	5%	
2000	179	(0)	0%	
2001	216	1	1%	
2002	236	8	3%	
2003	159	78	49%	
2004	183	5	3%	
2005	197	12	6%	
2006	230	7	3%	
2007	251	120	48%	
2008	230	75	23%	
2009	334	3	1%	
2010	332	3	1%	
2011	386	17	4%	
2012	345	2	1%	
2013	386	0	0%	
2014	350	22	6%	
2015	349	145	37%	
2016	403	14	4%	
2017	478	1,243	260%	
2018	390	2,395	614%	

1997-2016 CAT Load: 11%
1998-2017 CAT Load: 23%
1999-2018 CAT Load: 53%

Actual average based on filings from three large California insurers

Using data from these major insurers, the indicated catastrophe load increased from 11% using data through 2016 to 53% using data through 2018. The bulk of the indicated premium increase associated with the increased catastrophe load would logically be borne by high-risk homes, potentially generating enormous premium increases at the policy level.

Catastrophe models would generally create more stable estimates of catastrophe losses from year to year compared to estimates using the 20-year average. The underlying catastrophe model estimates do not change significantly every year, and insurer business portfolios are unlikely to undergo drastic shifts year to year as well. As a result, using models would result in more stable insurer rate indications over time, and more stable premiums for consumers.

2. *Discourage home-building in high-risk areas:* This would increase affordability by reducing the number of homes whose owners would need to purchase high-cost insurance.

If homes in high-risk areas are priced accurately using catastrophe models, their premiums will likely be much higher than if they were buying in lower-risk areas. Offering property insurance coverage that is underpriced implicitly encourages building in high-risk areas. In California this is especially important, as the increase of homes in the WUI actually serves to increase the risk of fires starting from power lines and other human activity. It also places more people’s lives and livelihoods at greater risk from wildfires and drives up the cost of wildfire defense in the state.

3. *Reduce risk through mitigation measures, especially in high-risk areas:* This would increase affordability by driving down the expected cost of wildfire risk and reducing premiums, while preserving availability by allowing insurers to charge actuarially sound rates.

If they were able to start with actuarially sound rates, many California insurers would be more likely to explore mitigation discounts based upon today's incomplete, but developing, science. Catastrophe models could be used not only in insurance pricing but also in state and local planning to evaluate the cost-benefit analysis of alternative mitigation activities. On a larger scale, catastrophe models are an essential component of creative risk reduction measures such as resilience-linked insurance products and nature-based solutions that both provide protection as well as benefits for local communities. A good example is the Swiss Re partnership with The Nature Conservancy using parametric insurance to protect coral reefs in Quintana Roo, Mexico and provide resiliency against hurricanes.

4. *Increase availability and reliability, especially in high-risk areas:* In general, greater availability of insurance promotes pricing and product competition, resulting in more options to consumers and competition in the marketplace, which could improve affordability for many.

As an example, the state of Florida passed SB 542 in 2014, exempting private flood insurers from fairly onerous requirements regarding catastrophe model vetting and prior approval of rates for residential property insurance. This freedom to experiment, subsequently extended to 2025, has resulted in rapid growth in the private flood market, increased consumer choice, better coverage options and lower premiums than were currently available from the federal National Flood Insurance Program. Recently a Florida Office of Insurance Regulation representative reported that 35 insurers were offering private flood in the state, with about 90,000 policies written. According to the representative, not a single consumer had complained about any lack of diligence on the part of state regulators in relaxing their traditional controls in order to stimulate the market.

Allowing use of catastrophe models in formulating homeowners' insurance rates would empower state policymakers to better understand insurance risk and, ultimately, prioritize actions that promote affordability.

Insurance Reliability

Availability and affordability on a sustainable, long term basis cannot be achieved without insurance reliability. Insurance reliability requires that companies are able to maintain healthy risk appetites by implementing appropriate risk management techniques. For a reliable insurance market to exist, insurers must be able to remain solvent so that they can pay claims when events occur. In catastrophe exposed areas, insurers must collect enough profit in years where no catastrophes occur to be able to sustain underwriting losses when events do occur. Additionally, because insurers may be exposed to catastrophic claims that could cost many times their annual revenues, they typically purchase reinsurance protection that transfers some portion of the catastrophic risk into global reinsurance markets. Rating agencies evaluate the risk management strategies and reinsurance protection of insurers in the face of extreme events. Catastrophe models are used to measure and manage the risk in all stages of this process.

Just like claims expenses, overhead costs, and taxes, reinsurance costs are real and necessary expenses for catastrophe-exposed insurers, and according to actuarial principles and standards of practice, premiums charged should account for all expenses and expected losses associated with the transfer of risk. However, California's current regulations do not permit insurers to include the net cost of reinsurance expenses in their rates, and as a result premiums do not align with the expected cost of risk

transfer. This effectively creates a penalty for insurers who engage in the risk management practices that promote insurance reliability over the long term. For example, an insurer with significant wildfire exposure could ensure that claims would be paid with a higher probability by purchasing extra catastrophe protection, effectively selling a better and more reliable policy. However, an insurer would have reduced ability to write risky policies in California as the additional cost of obtaining the reinsurance coverage could not be reflected in the rate, and the improved risk management would result in diminished profitability. By allowing insurers to use catastrophe models to accurately load their rates for net reinsurance costs, California could improve insurance reliability.

Challenges for Regulators

Catastrophe models, as with many complex models, have often been criticized as being “black boxes.” This typically reflects a lack of understanding of the models, or dissatisfaction with the amount of access to the underlying intellectual property of the modeler, or both. This seeming lack of transparency has been effectively addressed by other regulators and can be addressed in California.

With respect to understanding the models, there are many actuaries and experts in the insurance industry who are familiar with catastrophe models and have developed rigorous protocols for testing model input and output in order to assess the reasonableness, consistency and reliability of results. Insurers often test model results against their actual catastrophic claims in order to better understand their strengths and weaknesses. There is extensive guidance on this subject in ASOP No. 38, *Using Models Outside the Actuary’s Area of Expertise (Property and Casualty)*, issued in 2000, and the newly issued ASOP No. 56, *Modeling*, effective October 1, 2020.

Many state regulators hire experts to assess the suitability of catastrophe models for the purpose of ratemaking and rely on these expert reviews in the course of fulfilling their regulatory duties. In some instances, regulators may wish to have access to information that model vendors may be reluctant to disclose publicly, in order to protect their intellectual property from competitors and preserve the value of the extensive and costly research supporting the models. This can be dealt with by rigorous protection of confidential or trade secret information, so that only the regulators and expert reviewers have access to modelers’ intellectual property. A reasonable interpretation of Insurance Code Section 1861.07 will be essential to any system that permits the use of catastrophe models.

Many states have figured out the proper balance of the above issues. And, the National Association of Insurance Commissioners Catastrophe Working Group has recently heard a proposal on a collective approach that could be adopted by California and other states through an interstate regulatory Catastrophe Model Clearinghouse (CMC). Many details lie ahead on the ultimate solution for allowing catastrophe modeling in California ratemaking. As catastrophic models become more complex and robust, they will become even more needed to achieve a sustainable homeowners’ insurance market in California.

QUESTION 5

“What other rules should the Commissioner adopt to obligate insurers to spread risk and sell more policies to those homeowners in the wildland-urban interface who seek to purchase and maintain homeowners’ insurance?”

Risk Spreading

With respect to spreading risk, the Commissioner could require companies to actively manage and measure their wildfire exposure using catastrophe simulation models, purchase sufficient reinsurance to sustain events of a certain magnitude and pass reinsurance costs along as part of the premium calculation. This would promote solvency of individual companies, lessen the strain on the state guaranty fund and spread California's wildfire risk to the global reinsurance market – all beneficial to long-term insurance reliability.

Current California ratemaking regulations do not allow insurers to fully reflect the full costs of risk transfer as defined within the Casualty Actuarial Society *Statement of Principles Regarding Property & Casualty Insurance Ratemaking* (CAS SOPs). The CAS SOPs contains four principles applicable to property and casualty insurance ratemaking, as follows:

- *Principle 1: A rate is an estimate of the expected value of future costs.*
- *Principle 2: A rate provides for all costs associated with the transfer of risk.*
- *Principle 3: A rate provides for the costs associated with an individual risk transfer.*
- *Principle 4: A rate is reasonable and not excessive, inadequate, or unfairly discriminatory if it is an actuarially sound estimate of the expected value of all future costs associated with an individual risk transfer.*

Costs associated with reinsuring homeowners' insurance risks are disallowed from being reflected in premiums consumers pay through the California premium calculation formula; this is inconsistent with the CASSOPs, requires insurers to somehow absorb the costs, and deters companies who might otherwise be willing to insure riskier policies. The reinsurance cost pressures are expected to increase due to the heightened risk of wildfires.

When an insurer cannot afford the reinsurance premium needed to adequately distribute California wildfire risk throughout the world, then it will naturally be forced to reduce its exposure to California risk. Few, if any, insurers are able to go without reinsurance and expect their premiums to outgrow their direct losses and expenses over the long term. Without reinsurance, no insurer could keep its current number of policyholders. As reinsurance premiums rise with the increased risk of catastrophic fire loss in California, insurers will face the difficult choice of attempting to fund the higher reinsurance costs or, if their rates are inadequate to do so, reducing their policy count in high risk areas.

Yet, nothing in Proposition 103 demands this result. Proposition 103 contains no restriction on including the net cost of reinsurance in California insurance rates. CDI long ago rightly issued regulations allowing earthquake insurers to reflect actual reinsurance costs in their rates; the logic of expanding this allowance to fund catastrophic wildfire risk is evident.

Encouraging the Sale of Policies in the WUI

With respect to encouraging insurers to sell more policies in the WUI, the most effective actions would be to allow actuarially sound rates, facilitate data collection and promote effective mitigation measures to make the policies more affordable. These actions would, importantly, begin the process of reducing the FAIR Plan policy count. Allowing the FAIR Plan to grow too large can threaten the sustainability of the California admitted insurance market, which faces the risk of a market share-based capital call if the FAIR Plan's surplus and reinsurance are insufficient to pay claims after a major catastrophic event. The increasing risk of a FAIR Plan assessment will force admitted insurers to consider whether a further reduction in market share is prudent. Even if admitted carriers get to rate adequacy, an underpriced and undercapitalized FAIR Plan will distort the admitted market.

This situation with the FAIR Plan is similar to a situation faced by legislators and regulators in North Carolina in 2008, when the state’s coastal residual market – known as the Beach Plan – doubled in total insured value over a three-year period due to perceived inadequate rate by private insurers. Based on estimates from Milliman, Inc., the estimated deficit after exhaustion of the Beach Plan reinsurance and surplus ranged from \$343 million in a 1-in-10 year hurricane event scenario to \$6.2 billion in a 1-in-250 year scenario. The unfunded deficit would be the responsibility of insurance companies writing Personal and Commercial Property insurance in North Carolina totaling approximately \$3 billion of annual premium in 2008. The magnitude of the potential deficit relative to the total premium written was perceived by the industry as a threat to solvency, and several insurers began withdrawing from the state entirely. The situation was subsequently addressed by actions of the North Carolina legislature, but only when the state was on the verge of an insurance availability crisis.

Obligating the Sale of Policies in the WUI

We respectfully suggest it would be more productive to discuss reforms that increase the likelihood insurers voluntarily compete for customers in the WUI⁷.

Obligating insurers to sell policies in the WUI would drive up concentration risk and reinsurance costs for California insurers, and many companies may conclude that the associated threat to solvency is not worth the upside benefit of retaining policies in the WUI. This type of underwriting mandate runs a significant risk of triggering mass non-renewals prior to enactment and is unlikely to benefit high-risk homeowners. Prior to formation of the California Earthquake Authority, California experienced a similar reaction in the 1990s when homeowners’ insurers were required to offer earthquake protection to their policyholders. Many insurers slowed or reduced their market presence rather than subjecting themselves to forced acceptance of a misunderstood and underpriced catastrophic risk.

Insurers have long persisted despite the CDI’s decision not to allow reinsurance costs to be included in rates, but today’s new reality suggests another look is in order. California’s recent fire history has changed the perception of risk and dramatically altered the reinsurance market. What was once coverage that reinsurers would virtually “throw in” to a national reinsurance purchase, reinsurers today scrutinize an insurer’s exposure to California wildfire at a level of granularity previously unthinkable – an activity that can only be done by using probabilistic models to understand the risk on an insurer’s books.

If the CDI is considering mandating mitigation discounts, rather than guaranteed issuance, then we urge the CDI to acknowledge that mitigation discounts are much more problematic when an insurer’s base rate is inadequate.

As noted previously, if insurers are not allowed to manage their risk, and rates are not adequate to cover the real risk, the financial health of California’s homeowners’ insurance market will be threatened. We believe that ensuring rates properly reflect risk, allowing Californians to benefit from the science supporting climate change and catastrophe models, and encouraging insurers to use reinsurance as a mechanism to spread California wildfire risk will result in the best outcome for consumers facing insurance availability challenges in the admitted market.

⁷ The insurance industry and the Insurance Commissioner litigated the issue of whether the CDI can, by regulation, restrict homeowners’ insurance underwriting, with the 3rd Circuit rejecting CDI’s attempt to exercise such authority (“Absent any statutory indication, we decline to find that the Commissioner has an implied wide-reaching authority to regulate underwriting based on his authority to approve rates.”) See *American Insurance Association v. Garamendi*, 127 Cal.App.4th 228, (2005). While the appellate case was unpublished on grounds unrelated to the legal analysis, the result is still binding upon the CDI, and the underlying law has not changed.