

## C O M M E N T

# Electric Utility Wildfire Liability Reform in California

by Myanna Dellinger

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As climate change worsens,<sup>1</sup> so does the risk of wildfires.<sup>2</sup> This is especially so in already hot, dry areas such as the western United States.<sup>3</sup> Adding to this problem is the rapid growth of the wildland-urban interface (WUI).<sup>4</sup> As more and more houses are built in the WUI, wildfires will pose an even greater risk to lives and homes, they will be harder to fight, and letting natural fires burn will become impossible.<sup>5</sup> At the same time, equipment owned by California's three largest utilities ignited more than 2,000 fires in California in just 3.5 years.<sup>6</sup> The resulting financial liabilities caused electric power utility giant Pacific Gas and Electric (PG&E) to file for bankruptcy in 2019, leaving numerous homeowners stranded with massive losses.

Among other causes, this led to the rapid development and passage of Assembly Bill 1054 in California in late July 2019. Although the bill has been criticized for a number of reasons, analyzed below, its passage was also a Hobson's choice and better than the status quo. The bill establishes a \$21 billion Wildfire Fund to help utilities pay more quickly for claims from the victims of future cata-

strophic wildfires.<sup>7</sup> Before utilities can participate in the fund, they must spend a combined \$5 billion over three years to reduce wildfire risks.<sup>8</sup>

A new safety certification process allows pre-approved utilities to obtain help from a fund separate from those available to non-approved utilities.<sup>9</sup> To qualify for the fund, utilities must tie executive compensation to measurable safety metrics.<sup>10</sup> Costs and expenses to be paid out of the overall fund must be "just and reasonable, after consideration of the conduct of the utility."<sup>11</sup> The existing strict liability standard remains, but changing this to a fault-based standard has been discussed.<sup>12</sup> Instead, a new burden of proof regime was established in relation to certified utilities.<sup>13</sup>

This is good and much-needed news in relation to regulated, quasi-governmental utilities in California that, although sometimes not taking enough action on wildfire mitigation, are simply a necessity in today's society, which is still too dependent on traditional energy sources. However, there is a cost to be paid for A.B. 1054, as only some of the money for the fund will be paid by the utilities. The ratepayers will pay the rest. The costs will be distributed

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*Author's Note: This Comment is dedicated to all the firefighters who put their lives at risk to save the lives and property of others under increasingly challenging circumstances around the world.*

1. Ciara Nugent, *Carbon Dioxide Concentration in the Earth's Atmosphere Has Hit Levels Unseen for 3 Million Years*, TIME, May 14, 2019, <https://time.com/5588794/carbon-dioxide-earth-climate-change/>.
2. *Is Global Warming Fueling Increased Wildfire Risks?*, UNION CONCERNED SCIENTISTS, July 24, 2018, <https://www.ucsusa.org/global-warming/science-and-impacts/impacts/global-warming-and-wildfire.html>.
3. *Id.*
4. Volker C. Radeloff et al., *Rapid Growth of the US Wildland-Urban Interface Raises Wildfire Risk*, 115 PROC. NAT'L ACAD. SCI. 3314, 3314 (2018).
5. Anu Kramer et al., *Where Wildfires Destroy Buildings in the US Relative to the Wildland-Urban Interface and National Fire Outreach Programs*, 27 INT'L J. WILDLAND FIRE 329, 330 (2018).
6. Taryn Luna, *California Utility Equipment Sparked More Than 2,000 Fires in Over Three Years*, L.A. TIMES, Jan. 28, 2019, <https://www.latimes.com/politics/la-pol-ca-california-utilities-wildfires-regulators-20190128-story.html>.

7. Assemb. B. 1054, ch. 79, §§3288(a)-(b), 3291(a)-(b)(1) (Cal. 2019); Dale Kasler & Bryan Anderson, *Newsom's Wildfire Plan for PG&E, Other Utilities, Needs Two-Thirds Vote in Legislature*, SACRAMENTO BEE, June 28, 2019, <https://www.sacbee.com/news/politics-government/capitol-alert/article232071582.html>; Becca Habegger, *Lawmakers Deciding Wildfire Bills' Fate Accepted \$141k From PG&E*, ABC10, July 10, 2019, <https://www.abc10.com/article/entertainment/television/programs/connect-the-dots/lawmakers-deciding-wildfire-bills-fate-accepted-141k-from-pge/103-9f909fdd-44f0-4c12-ab07-277e5d17c1a1>.
8. Assemb. B. 1054, ch. 79, §8386.3(e) (Cal. 2019); Kasler & Anderson, *supra* note 7; Times Editorial Board, *California Is Inexplicably Racing to Pass a Badly Vetted Wildfire Bill*, L.A. TIMES, July 10, 2019, <https://www.latimes.com/opinion/editorials/la-ed-wildfire-fund-rush-20190710-story.html>.
9. Assemb. B. 1054, ch. 79, §§3288(a), 3291 (Cal. 2019); Taryn Luna, *California Senate Approves Newsom Bill to Protect Utilities From Wildfire Costs*, L.A. TIMES, July 8, 2019, <https://www.latimes.com/politics/la-pol-ca-gavin-newsom-wildfire-damages-plan-20190708-story.html>.
10. Luna, *supra* note 9.
11. Assemb. B. 1054, ch. 79, Legislative Counsel's Digest p. 2 (Cal. 2019).
12. Times Editorial Board, *supra* note 8.
13. Assemb. B. 1054, ch. 79, Legislative Counsel's Digest p. 2 (Cal. 2019) (emphasis added).

evenly among all ratepayers and thus also people in already disadvantaged situations and neighborhoods. These people do not stand to benefit from the delivery of electricity to the numerous people who, with all the available knowledge of climate change and the many risks that are involved with living in the WUI, still choose to move to such areas. This is an issue of fairness and environmental justice.

This Comment argues that end-consumers who live in the WUI should, to a much greater extent than is currently the case, internalize the full costs of their choices and actions. In other words, they should be prepared to pay more for electricity delivery to areas that are already at high risk of wildfires. It is simply not fair to distribute that cost across a range of users who do *not* stand to benefit from choices made by some in marked ignorance of today's climate realities. Such action becomes an environmental justice issue where costs are distributed evenly among disadvantaged people in low fire-risk areas. People who move to the WUI should expect to pay for the greater risk of fires they willingly and readily accept. In fact, many more societal actors must start to face on-the-ground reality: climate change is real, dangerous, and costly. The costs have to be internalized in a fair and equitable manner under principles of environmental justice and other notions of fairness in law and policymaking.

Climate change is deadly.<sup>14</sup> It could cost the U.S. economy hundreds of billions of dollars per year by 2090.<sup>15</sup> The time has come to realize that at both the private level and the utility level. Electric utility companies have passed on wildfire mitigation for too long. It is positive to see that they will now have to change direction in this and other respects, but the cost distribution must be further considered than what is the case with A.B. 1054. This will also be the case in other parts of the nation and the world.

Finally, I argue that more private responsibility should be expected in the future from homeowners who must be legally required to harden their homes in risk-prone areas, so they become much more able to withstand fires. Currently, many wildfire and climate change policies exist, but on-the-ground reality shows that the problem is outgrowing the voluntary nature of such policies. More legal mandates are required. This, however, will also result in an environmental justice issue for people who may not be able to afford hardening existing homes. Thus, some grandfathering-in of certain low-income and other groups might be warranted in future electric pricing and liability compensation schemes.

The Comment proceeds as follows: Part I presents recent climate change facts and impacts by way of background. As one of the costliest, deadliest, and otherwise problematic

effects of climate change has proven to be wildfires in the WUI, especially in arid areas such as the American Southwest, the background to this particular subarea of climate change is highlighted. A dichotomy becomes clear: the WUI is becoming more and more densely populated, but at the same time, fighting wildfires in the WUI is becoming a problem beyond the capabilities of local firefighting resources. A series of out-of-control wildfires, such as California's Camp, Carr, and Mendocino Complex Fires, have amply demonstrated the severity of the situation and the new realities for which all of society must be prepared. This problem is not only an American problem; nations such as Argentina, Australia, France, Lebanon, South Africa, and Spain are also currently examining how best to address WUI and wildfire issues.

In addition to mere firefighting problems, the time has come to further develop liability schemes for wildfires in the WUI and elsewhere. Although PG&E is legally liable for some California fires, the question becomes whether the current legal scheme is appropriate under new climate change realities. Quite simply, society relies on electric utilities; neither modern organizational nor private life can function without these important infrastructure components. In California, however, utilities are subject to "inverse condemnation," which operates as a strict liability regime in the fire context.<sup>16</sup> In other words, a utility company must currently pay for damages even if not negligent. Virtually no other state in the United States allows for inverse condemnation with strict liability. The time has come to discuss the viability of this legal scheme.

Part II briefly sets forth the strict liability law governing electric utilities as it was until July 2019, before moving on in Part III to analyze A.B. 1054. Strict liability for utility-caused wildfires remained with the passage of A.B. 1054; however, the bill was groundbreaking in several other ways. Before it passed, the burden of proof remained on the utilities to prove that they had acted "prudently" in the case of a wildfire.<sup>17</sup> Under A.B. 1054, a new certification process allows utilities to be considered to have been per se reasonable unless serious doubt is raised otherwise. Only if serious doubt is raised does the burden of proof shift to the electrical corporation to dispel the doubt and prove that its conduct was reasonable. Further, this certification process is tied directly to chief executive officer (CEO) performance. The exact legal parameters for and ramifications of this remain to be seen, but it is undoubtedly a promising development in times of much-needed discussions about reasonable CEO compensation, especially when corporations ultimately fail as did PG&E.

Part IV analyzes significant, modern considerations in relation to the just development of the law. These include whether it is fair to expect *all* ratepayers to pay for the

14. David R. Boyd (Special Rapporteur on Human Rights and the Environment), *Statement on the Human Rights Obligations Related to Climate Change, With a Particular Focus on the Right to Life* (2018), <https://www.ohchr.org/Documents/Issues/Environment/FriendsIrishEnvironment25Oct2018.pdf>.

15. Dana Nuccitelli, *Climate Change Could Cost the U.S. Economy Hundreds of Billions a Year by 2090*, YALE CLIMATE CONNECTIONS, Apr. 29, 2019, <https://www.yaleclimateconnections.org/2019/04/climate-change-could-cost-u-s-economy-billions/>.

16. CAROLYN KOUSKY ET AL., UNIVERSITY OF PENNSYLVANIA WHARTON RISK MANAGEMENT AND DECISION PROCESSES CENTER, *WILDFIRE COSTS IN CALIFORNIA: THE ROLE OF ELECTRIC UTILITIES* (2018).

17. Dale Kasler & Bryan Anderson, *PG&E Says It Could Pay 2017, 2018 Wildfire Victims. Here's Why That Needs Legislature's OK*, SACRAMENTO BEE, July 2, 2019, <https://www.sacbee.com/news/business/article232196382.html>.

increased risk of delivering electricity to the WUI where only a minor percentage of the ratepayers live. It is not.

Finally, Part V argues that voluntary guidelines are not sufficiently effective in preventing the loss of homes to catastrophic wildfires. A new interface protection policy “Prepare: Go Early or Stay and Defend” (P/GE/SD) was developed in Australia, but provides promise for other arid parts of the world such as the American Southwest. This or similar programs should, however, be legally mandated. However, this may prove to be problematic with the American spirit of individualism and resistance toward government interference. Nonetheless, the time has come to stop denying reality and start adapting to climate change problems that already haunt many parts of the world. Mitigation in the form of energy provision services that do not further contribute to climate change should, of course, also be implemented urgently.

What was until recently mainly considered to be a future problem is now costing lives and billions of dollars in California and beyond. We can no longer stick our heads in the sand. There is a price to be paid for the problem that we have brought upon ourselves. This bill is now becoming due.

## I. Climate Change and the WUI

Climate change is the defining issue of our time and we are at a defining moment to address it.<sup>18</sup> In May 2019, scientists in Hawaii registered carbon dioxide (CO<sub>2</sub>) levels of 415 parts per million (ppm), a concentration of CO<sub>2</sub> in the atmosphere not seen for three million years.<sup>19</sup> The industrial activities that our modern civilization depends upon have raised atmospheric CO<sub>2</sub> levels from 280 ppm to more than 400 ppm in the past 150 years.<sup>20</sup> Even worse, the increase of CO<sub>2</sub> is turning exponential: the concentration of CO<sub>2</sub> rose by an average of 2.5 ppm over the past decade, but the increase from 2018 to 2019 will likely prove to be around 3 ppm.<sup>21</sup>

Ultimately, the planet’s temperature depends on the atmospheric level of CO<sub>2</sub>.<sup>22</sup> This connection between CO<sub>2</sub> and temperature is clear. For example, 18 of the 19 warmest years recorded have all occurred since 2001, with the exception of 1998.<sup>23</sup> 2016 was the warmest on record,<sup>24</sup> and 2017, 2015, and 2018 were the second-, third-, and fourth-warmest years, respectively.<sup>25</sup> In short, “[t]he speed

and extent of current global warming exceeds any similar event in the past 2,000 years.”<sup>26</sup>

This development is not sustainable.<sup>27</sup> Hundreds of millions of people are already exposed to climate change risks.<sup>28</sup> These include continually rising temperatures, longer frost-free seasons (but also longer growing seasons in some areas), changes in precipitation patterns, more droughts and heat waves, stronger and more intense hurricanes, an ice-free summer Arctic by 2050, and a sea-level rise of up to four feet by 2100.<sup>29</sup>

Regional effects in the United States include, for the Southwest, increased heat, drought, and insect outbreaks, all linked to climate change and increasing wildfires.<sup>30</sup> Further effects are declining water supplies, reduced agricultural yields, health impacts in cities due to heat, and flooding and erosion in coastal areas.<sup>31</sup> In the Midwest, residents should expect extreme heat, heavy downpours, and flooding to affect infrastructure, health, agriculture, forestry, transportation, air and water quality, and more.<sup>32</sup> Climate change will also exacerbate a range of risks to the Great Lakes.<sup>33</sup>

Not only are rising temperatures triggering more extreme weather events around the world, but “[c]limate change [also] poses a major threat to human health and is already having a global impact by spreading infectious diseases and exacerbating mental health problems.”<sup>34</sup> Even a small rise in temperatures can cause health problems such as cardiovascular and respiratory diseases.<sup>35</sup> The *New England Journal of Medicine* suggests that rising global temperatures could also lead to many more deaths than the 250,000 per year that the World Health Organization predicted just five years ago.<sup>36</sup> Even new mental problems such as “solastalgia”—the distress that is produced by environmental change impacting people while they are directly connected to their home environment<sup>37</sup>—and “climate

18. United Nations, *Climate Change*, <https://www.un.org/en/sections/issues-depth/climate-change/> (last visited Sept. 4, 2019).

19. Nugent, *supra* note 1.

20. National Aeronautics and Space Administration (NASA), *The Causes of Climate Change*, <https://climate.nasa.gov/causes/> (last updated Aug. 28, 2019).

21. Nugent, *supra* note 1.

22. Kathrynn Hansen, *Carbon Dioxide Controls Earth’s Temperature*, NASA, Oct. 14, 2010, <https://www.nasa.gov/topics/earth/features/co2-temperature.html>.

23. NASA, *Global Temperature*, <https://climate.nasa.gov/vital-signs/global-temperature/> (last updated Aug. 28, 2019).

24. *Id.*

25. Oliver Milman, *2018 Was World’s Fourth Hottest Year on Record, Scientists Confirm*, *GUARDIAN*, Feb. 6, 2019, <https://www.theguardian.com/environment/>

2019/feb/06/global-temperatures-2018-record-climate-change-global-warming.

26. Matt McGrath, *Climate Change: Current Warming “Unparalleled” in 2,000 Years*, *BBC*, July 24, 2019, <https://www.bbc.com/news/science-environment-49086783>.

27. Nugent, *supra* note 1.

28. Beate Antonich, *Why Adaptation Finance Matters: Hundreds of Millions of People Exposed to Climate Change Risks*, INT’L INST. FOR SUSTAINABLE DEV. SDG KNOWLEDGE HUB, Feb. 5, 2019, <http://sdg.iisd.org/news/why-adaptation-finance-matters-hundreds-of-millions-of-people-exposed-to-climate-change-risks/>.

29. NASA, *The Effects of Climate Change*, <https://climate.nasa.gov/effects/> (last updated Aug. 28, 2019).

30. *Id.*

31. *Id.*

32. *Id.*

33. *Id.*

34. Isabelle Gerretsen, *Climate Change Is Seriously Threatening Human Health*, *CNN*, June 4, 2019, <https://www.cnn.com/2019/06/04/health/climate-change-threatening-human-health-scli-intl/index.html>.

35. *Id.*

36. Jen Christensen, *250,000 Deaths a Year From Climate Change Is a “Conservative Estimate,” Research Says*, *CNN*, Jan. 16, 2019, <https://www.cnn.com/2019/01/16/health/climate-change-health-emergency-study/index.html>.

37. Glenn Albrecht et al., *Solastalgia: The Distress Caused by Environmental Change*, 15 *AUSTRALASIAN PSYCHIATRY* S95 (2007), <https://www.ncbi.nlm.nih.gov/pubmed/18027145>.

anxiety” or “eco-anxiety” have become such a concern that the American Psychological Association has created a 69-page climate change guide to help mental health care providers deal with patients experiencing problems coping with climate change reality.<sup>38</sup>

We have ourselves to blame for this problem since climate change is anthropogenic. In its Fifth Assessment Report, the Intergovernmental Panel on Climate Change (IPCC), a group of 1,300 independent scientific experts from countries all over the world under the auspices of the United Nations, concluded that the probability that human activities over the past 50 years have warmed our planet is above 95%.<sup>39</sup> This is as close to consensus as we can reasonably expect to be as that word is only used exceedingly rarely in the scientific community.<sup>40</sup>

In 2015, the world community adopted the Paris Agreement with an agreed-upon goal of limiting the global temperature increase to 1.5-2 degrees Celsius (°C) warmer than in pre-industrial times.<sup>41</sup> However, the world is already 1.2°C warmer than it was during pre-industrial times.<sup>42</sup> Whereas some climate scientists have warned that the window of opportunity for meeting this goal is closing very soon and that the world has only 12 years until carbon emissions reach “a point of no return,” others have clarified that the IPCC report in which the 12 years were mentioned did not state that we have only 12 years left to save the world.<sup>43</sup> Rather, “[t]he hotter it gets, the worse it gets, but there is no cliff edge.”<sup>44</sup> The IPCC scientists gave the world 12 years “to speed-up and scale-up the actions” to cut emissions before they start “spiraling out of control.”<sup>45</sup>

As the climate warms, moisture and precipitation levels are changing, with wet areas becoming wetter and dry areas becoming drier.<sup>46</sup> Rising temperatures and earlier spring snow melts cause soils to be drier for longer, increasing the likelihood of drought and a longer wildfire season, particularly in the western United States.<sup>47</sup> While fires are, of course, an integral part of many ecosystems and the

earth system as a whole, humans have changed fire regimes globally and throughout the United States.<sup>48</sup>

Wildfires in the western United States have been increasing in frequency and duration since the mid-1980s.<sup>49</sup> In California, one in four residents already live in a “high-risk” wildfire area.<sup>50</sup> Between 1986 and 2003, wildfires occurred nearly four times as often, burned more than six times the land area, and lasted almost five times as long when compared to the period between 1970 and 1986.<sup>51</sup> On average, wildland fires annually burned a 70% greater area from 2000 to 2005 than in the 1990s.<sup>52</sup> Hot, dry conditions also increase the likelihood that wildfires will be more intense and long-burning.<sup>53</sup>

The costs of wildfires, in terms of risks to human life and health, property damage, and state and federal dollars, are devastating, and they are only likely to increase unless we better address the risks of wildfires and reduce our activities that lead to further climate change.<sup>54</sup> The average federal funding for suppression and wildland fuel treatments increased from \$1.3 billion annually during 1996 to 2000 to \$3.1 billion during 2001 to 2005.<sup>55</sup> Fires are not only becoming more destructive and more costly in the United States, but they are a global problem as well.<sup>56</sup>

Climate change will further increase fire frequency in the future, including in the WUI.<sup>57</sup> The basic distinction between land areas that are recognized as WUI in contrast to wildland areas is the presence of structures.<sup>58</sup> The WUI has been defined as the area where houses and wildland vegetation meet or intermingle, and where wildfire problems are most pronounced.<sup>59</sup> Experts further divide the WUI into areas where buildings are in close proximity to large contiguous patches of flammable vegetation (“interface”), and areas where buildings are interspersed with flammable vegetation (“intermix”).<sup>60</sup>

When houses are built close to forests or other types of natural vegetation, they pose two problems related to wildfires.<sup>61</sup> First, there will be more wildfires due to human ignitions. Second, wildfires that occur will pose a greater risk to lives and homes, they will be hard to fight, and letting natural fires burn becomes impossible. The WUI in the United States grew rapidly from 1990 to 2010 in terms of both the number of new houses (from 30.8 to 43.4 million; 41% growth) and land area (from 581,000 to 770,000 kilo-

38. Jen Christensen, *Climate Anxiety Is Real, but There's Something You Can Do About It*, CNN, May 7, 2019, <https://edition.cnn.com/2019/05/07/health/climate-anxiety-eprise/index.html>.

39. IPCC, *Summary for Policymakers*, in CLIMATE CHANGE 2014: MITIGATION OF CLIMATE CHANGE. CONTRIBUTION OF WORKING GROUP III TO THE FIFTH ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE v (Ottmar Edenhofer et al. eds., IPCC 2014).

40. Morris A. Ward, *The Scientific Evidence, With a 95% Level of Certainty, Points to Human Causes for Observed Warming Over Past Half Century*, NAT'L ENVTL. EDUC. FOUND., Oct. 12, 2015, <https://www.neefusa.org/weather-and-climate/climate-change/scientific-evidence-95-level-certainty-points-human-causes>.

41. Conference of the Parties to the United Nations Framework Convention on Climate Change, Adoption of the Paris Agreement, Annex, U.N. Doc. FCCC/CP/2015/L.9/Rev.1 (2015).

42. Laura Geggel, *How Would Just 2 Degrees of Warming Change the Planet?*, LIVE SCI., Apr. 29, 2017, <https://www.livescience.com/58891-why-2-degrees-celsius-increase-matters.html>.

43. Edith M. Lederer, *UN Climate Chief Warns Current Path Leads to “Catastrophe”*, ASSOCIATED PRESS, Apr. 25, 2019, <https://www.apnews.com/a0baaad17de744ca875711d92e173442>.

44. *Id.*

45. *Id.*

46. *Is Global Warming Fueling Increased Wildfire Risks?*, *supra* note 2.

47. *Id.*

48. Radeloff et al., *supra* note 4, at 3314.

49. *Is Global Warming Fueling Increased Wildfire Risks?*, *supra* note 2.

50. Louis Sahagun & Joseph Serna, *One in 4 Californians Live in a “High Risk” Wildfire Area. Is the State Ready for Another Fire Season?*, L.A. TIMES, June 14, 2019, <https://www.latimes.com/local/lanow/la-me-california-braces-for-new-wildfires-20190614-story.html>.

51. *Is Global Warming Fueling Increased Wildfire Risks?*, *supra* note 2.

52. William E. Mell et al., *The Wildland-Urban Interface Fire Problem—Current Approaches and Research Needs*, 19 INT'L J. WILDLAND FIRE 238 (2010).

53. *Is Global Warming Fueling Increased Wildfire Risks?*, *supra* note 2.

54. *Id.*

55. Mell et al., *supra* note 52.

56. Kramer et al., *supra* note 5, at 329.

57. Radeloff et al., *supra* note 4, at 3314.

58. Mell et al., *supra* note 52, at 239.

59. Radeloff et al., *supra* note 4, at 3314.

60. Kramer et al., *supra* note 5, at 329.

61. *See generally* Radeloff et al., *supra* note 4, at 3314.

meters squared (km<sup>2</sup>); 33% growth), making it the fastest-growing land use type in the conterminous United States. Housing within burned areas increased by 202% between 1990 and 2010.<sup>62</sup> The vast majority of new WUI areas were the result of new housing (97%) and thus not related to an increase in wildland vegetation.<sup>63</sup> New WUI area totaled 189,000 km<sup>2</sup>, an area larger than the state of Washington.<sup>64</sup>

In the United States, approximately one in three houses and one in 10 hectares are now located in the WUI.<sup>65</sup> California has the greatest number of threatened and destroyed buildings.<sup>66</sup> These WUI growth trends will exacerbate wildfire problems in the future.<sup>67</sup> The problem is not only an American one; the WUI wildfire issue has also been analyzed in, among other nations, Argentina, Australia, France, Lebanon, South Africa, and Spain.<sup>68</sup>

Rampant WUI growth demonstrates that the social and economic factors that together propel WUI growth are strong. WUI areas are attractive places to live because of affordability and ready access to natural settings and recreation. Since climate change projections indicate that conditions favorable for wildfires will occur more frequently in the future, increased wildfire ignition rates due to WUI expansion will initiate more wildfires in vegetation that is more susceptible to the spread of fire, leading to more widespread fires and possibly more severe fire behavior. This suggests that WUI growth and climate change together will compound the existing problems with wildfires in the WUI.<sup>69</sup>

This problem is particularly dire in California with its already existing heat and fire problems. Thirteen of the worst 20 fires in California's history burned since 2000.<sup>70</sup> In 2018 alone, more than 240,000 acres burned in California, killing several dozen people including six firefighters.<sup>71</sup> Equipment owned by California's three largest utilities ignited more than 2,000 fires in 3.5 years—a time span in which state regulators also cited and fined the companies nine times for electrical safety violations.<sup>72</sup> These fires are obviously extremely costly.

The 2018 Camp Fire, for example, was the most destructive wildfire ever and the costliest single natural disaster in the world for insurers, resulting in \$12.5 billion in covered losses.<sup>73</sup> It also killed 86 people and destroyed 14,000 homes along with 500 businesses and 4,300 other

buildings.<sup>74</sup> PG&E has been linked to this and a series of other wildfires in California and, because of the resulting liabilities amounting to the billions of dollars, filed for bankruptcy in January 2019.<sup>75</sup> Among other things, this led to the rapid drafting and adoption of A.B. 1054, which is changing the legal liability landscape for electric utilities in California, as will be analyzed next.

## II. Pre-A.B. 1054 Utility Liability

Under the California Constitution, private property may be “taken” or damaged for public use only when just compensation is provided.<sup>76</sup> If a public entity damages private property in pursuit of a public purpose without compensating the property owner, a property owner can bring an inverse condemnation suit to seek compensation.<sup>77</sup> As several courts have explained, the policy underlying inverse condemnation is “that individual property owners should not have to contribute disproportionately to the risks [or costs] from public improvements made to benefit the community as a whole.”<sup>78</sup> Rather, such costs should be “distribute[d] throughout the community . . . to socialize the burden . . . that should be assumed by society.”<sup>79</sup>

Although private utilities are not public entities, several courts in California have nonetheless held investor-owned utilities (IOUs) liable under this doctrine, arguing that they should be treated as public entities because they have a state-granted monopoly, provide a public service, and can raise rates to spread the costs associated with that service among all beneficiaries.<sup>80</sup> In California, inverse condemnation operates as a strict liability regime in the fire context: a utility pays for damages even if not negligent.<sup>81</sup> Accordingly, the utility company may also be held liable for costs related to a wildfire involving its equipment even when the company has followed all existing safety regulations.<sup>82</sup> With possibly one exception, no other state allows for inverse condemnation with strict liability.<sup>83</sup>

In short, property owners can seek compensation for property damage from wildfire through the application of inverse condemnation when it is determined that the utility's equipment was the cause of ignition, regardless of whether or not the utility has been negligent. Some have argued that, ideally, this provision would have been

62. Kramer et al., *supra* note 5, at 330.

63. Radeloff et al., *supra* note 4, at 3314.

64. *Id.* at 3316.

65. *Id.* at 3314.

66. Kramer et al., *supra* note 5, at 331.

67. Radeloff et al., *supra* note 4, at 3314.

68. Kramer et al., *supra* note 5, at 360; Radeloff et al., *supra* note 4, at 3314.

69. See generally Radeloff et al., *supra* note 4, at 3316-17.

70. Sara Chodosh, *See How Much of California Has Burned in the Last Five Years*, POPULAR SCI., Nov. 16, 2018, <https://www.popsci.com/california-five-year-wildfire/>.

71. *Id.*; Adam Brinklow, *Ongoing Wildfires Deadly for Firefighters*, CURBED S.F., Aug. 14, 2018, <https://sf.curbed.com/2018/8/14/17689034/firefighter-fatalities-wildfire-death-year-wildfire-california>; Rob McLean & Chris Isidore, *PG&E Files for Bankruptcy After California Wildfires*, CNN, Jan. 29, 2019, <https://www.cnn.com/2019/01/29/business/pg-e-bankruptcy-fires/index.html>.

72. Luna, *supra* note 6.

73. McLean & Isidore, *supra* note 71.

74. *Id.*

75. *Id.*

76. CAL. CONST. art. I, §19(a) (“Private property may be taken or damaged for a public use and only when just compensation . . . has first been paid to, or into the court for, the owner.”).

77. KOUSKY ET AL., *supra* note 16.

78. Pac. Bell Tel. Co. v. S. Cal. Edison Co., 208 Cal. App. 4th 1400, 1407 (Cal. Ct. App. 2012); KOUSKY ET AL., *supra* note 16.

79. Holtz v. Superior Court, 475 P.2d 441, 444 (Cal. 1970).

80. Pac. Bell Tel. Co., 208 Cal. App. 4th at 1406-07; Barham v. S. Cal. Edison Co., 74 Cal. App. 4th 744, 753-54 (Cal. Ct. App. 1999); see also Margaret Peloso & Kristen Miller, *Unnatural Disaster*, ENVTL. F., May-June 2018, at 27.

81. KOUSKY ET AL., *supra* note 16.

82. Shelley Ross Saxer, Draft—California Wildfires, SA007 ALI-CLE 553, American Law Institute Continuing Legal Education Course Materials (Jan. 24-26, 2019).

83. KOUSKY ET AL., *supra* note 16.

removed with A.B. 1054,<sup>84</sup> but that was not to happen, as will be analyzed next.

### III. A.B. 1054: Major Utility Reform, but Strict Liability Remains

On July 8, 2019, A.B. 1054 passed the California Senate with 31 yes votes, 7 no votes, and 2 no votes recorded (NVR) votes.<sup>85</sup> On July 11, 2019, it passed the California Assembly with the required supermajority of 63 yes votes, 10 no votes, and 6 NVR votes.<sup>86</sup> As an “urgency statute,” it took effect immediately.<sup>87</sup>

The bill establishes a \$21 billion Wildfire Fund to help utilities pay more quickly for claims from the victims of catastrophic wildfires occurring on or after January 1, 2019, in order to allow cost recovery if the costs and expenses are “just and reasonable after consideration of the conduct of the utility.”<sup>88</sup>

Under one provision in the bill, a cash loan of up to \$10.5 billion is available if the electrical corporation applying for funds has not been part of any insolvency proceeding, is not on criminal probation, and meets a number of other conditions.<sup>89</sup> A second option offers a cash loan of up to an additional \$10.5 billion from a new funding scheme if a non-insolvent utility has earned a safety certification before wildfire season and has contributed to the plan before the fire.<sup>90</sup> To qualify, companies must tie executive compensation to measurable safety metrics, and may even tie as much as 100% of incentive compensation to safety performance and deny all incentive compensation in the event the electrical corporation causes a catastrophic wildfire that results in one or more fatalities.<sup>91</sup>

Costs and expenses to be paid out of the fund must be “just and reasonable, after consideration of the conduct of the utility, including consideration of specified factors.”<sup>92</sup> Half of the money for the fund will come from ratepayers and half from the utility companies.<sup>93</sup>

Before utilities can participate in the fund, the utilities must spend a combined \$5 billion over three years to reduce wildfire risks, a figure that is much higher than what the utilities are already spending.<sup>94</sup> This requirement adds to Senate Bill 901 of 1998, which provides for funds

of \$1 billion over a five-year period for fire-protection efforts and regulatory relief to reduce financial exposure for utility companies.<sup>95</sup> Gov. Gavin Newsom’s administration had been criticized as recently as June 2019 for failing to address wildfire prevention sufficiently.<sup>96</sup>

Under A.B. 1054, the utilities can bill ratepayers for the mitigation expenditures, but unlike most utility costs, the utilities will not be able to earn profits on the spending.<sup>97</sup> Comprehensive mitigation plans must be submitted at least once every three years.<sup>98</sup> The bill also requires PG&E to find a way to pay for previous wildfires and exit bankruptcy by June 2020.<sup>99</sup> The utility is still working on a bankruptcy plan, although a group of its bondholders just submitted a plan that would pay \$18 billion to fire victims for their existing claims.<sup>100</sup>

The funding will, in large part, come from ratepayers and shareholders of the three major utilities, but only to a limited extent from the utilities themselves.<sup>101</sup> Utility rates as such will not go up to help pay for the fund.<sup>102</sup> However, a \$2.50 per month charge paid by ratepayers since the 2001 energy crisis will be extended for another 15 years.<sup>103</sup>

Smaller regional utilities would be allowed to contribute to and pull money from the wildfire fund along with the big investor-owned companies.<sup>104</sup> The fund is allowed to purchase reinsurance to allow it to pay claims exceeding the \$21 billion in the fund itself.<sup>105</sup>

The administrator of the fund operates under the oversight of the California Catastrophe Response Council pursuant to §8899.70 of the California Government Code.<sup>106</sup> The bill also establishes the California Wildfire Safety Advisory Board, which advises and makes recommendations related to wildfire safety to the Wildfire Safety Division.<sup>107</sup> As for the oversight of the utility companies, the California Constitution establishes the California Public Utilities Commission (CPUC) and authorizes that commission to exercise ratemaking and rulemaking authority

84. Times Editorial Board, *supra* note 8.

85. Assemb. B. 1054, ch. 79 (Cal. 2019).

86. *Id.* Legislative Counsel’s Digest p. 8; Kasler & Anderson, *supra* note 7.

87. *Id.* Legislative Counsel’s Digest p. 1; Kasler & Anderson, *supra* note 7.

88. Assemb. B. 1054, ch. 79, §§3288(a)-(b), 3291(a)-(b)(1), Legislative Counsel’s Digest (Cal. 2019); Kasler & Anderson, *supra* note 7; Habegger, *supra* note 7.

89. Assemb. B. 1054, ch. 79, §§3288(a), 3291-92 (Cal. 2019); Luna, *supra* note 9.

90. Assemb. B. 1054, ch. 79, §§3288(a), 3291 (Cal. 2019); Luna, *supra* note 9.

91. Assemb. B. 1054, ch. 79, §8384(e)(4) (Cal. 2019).

92. *Id.* Legislative Counsel’s Digest p. 2.

93. Becca Habegger, *\$21B “Wildfire Fund” Bill Advances, Heading to California Assembly*, ABC10, July 11, 2019, <https://www.abc10.com/article/news/local/sacramento/21b-wildfire-fund-bill-advances-heading-to-california-assembly/103-1e76987-d47f-44a4-a749-5e197d39af2b>.

94. Assemb. B. 1054, ch. 79, §8386(c) (Cal. 2019); Kasler & Anderson, *supra* note 7; Times Editorial Board, *supra* note 8.

95. S.B. 901, ch. 626. (Cal. 2019).

96. Luna, *supra* note 9.

97. Assemb. B. 1054, ch. 79, §8386.3(e) (Cal. 2019); Kasler & Anderson, *supra* note 7.

98. Assemb. B. 1054, ch. 79, Legislative Counsel’s Digest p. 5 (Cal. 2019).

99. *Id.* §3292(b); Kasler & Anderson, *supra* note 7 (several wildfire liabilities amounting to approximately \$30 billion prompted PG&E Corp. to file for bankruptcy in January 2019); Luna, *supra* note 9. PG&E Corp. is floating a plan in the California Legislature to repay victims of the 2017 and 2018 wildfires by having the state issue billions of dollars in new bonds. The bankrupt utility’s shareholders would repay the bond out of future profits. Kasler & Anderson, *supra* note 17. The plan is designed to augment A.B. 1054, which, notably, is meant to raise funds for victims of only future wildfires caused by equipment owned by PG&E and California’s other major utilities. *Id.*

100. Kasler & Anderson, *supra* note 17.

101. *Id.*

102. *Id.*

103. *Id.*

104. Dale Kasler & Bryan Anderson, *Newsom’s Wildfire Plan for PG&E, Other Utilities, Needs Two-Thirds Vote in Legislature*, SACRAMENTO BEE, June 28, 2019.

105. Assemb. B. 1054, ch. 79, §3280(o) (Cal. 2019).

106. *Id.* §3280(c).

107. *Id.* Legislative Counsel’s Digest.

over all public utilities, subject to control by the California Legislature.<sup>108</sup>

### A. Initial Reactions to A.B. 1054

As with any new legislation, A.B. 1054 presents both advantages and concerns. These will require further analysis over time as the bill matures and is litigated. This section is thus an initial look at some of the issues that were brought up in the immediate time frame after the adoption of the bill.

First, utilities are a necessity whether or not they could and should have acted differently in the past. They simply cannot be allowed to go under.<sup>109</sup> Ratepayers are not better off by having utilities in bankruptcy or near bankruptcy.<sup>110</sup> Fire victims are also not better off trying to recover their losses from bankrupt companies.<sup>111</sup> PG&E is already in bankruptcy and the other two major California utilities, Southern California Edison and San Diego Gas & Electric, border on junk-bond status.<sup>112</sup> That has a real cost to California ratepayers.<sup>113</sup> Addressing fire liability will go a long way in stabilizing the financial markets on which utility securities are traded and helping them get back on track.<sup>114</sup>

Further, victims of wildfires have been failed by the previous scheme, as have utility customers (who have not been able to get electricity for extended periods of time), workers, and the California clean energy agenda.<sup>115</sup> The bill will help rectify that situation. The \$5 billion fire risk mitigation program on which the utilities cannot earn a profit is a positive development, as is the new Wildfire Safety Advisory Board that will advise and make recommendations to the Wildfire Safety Division at the CPUC.<sup>116</sup>

Utility rates will, as mentioned, not go up to help pay for the Wildfire Fund, although utility customers for now will have to continue paying a flat fee of \$2.50 per month. Thus, ratepayers may be said to have been helped in the long run: if not for A.B. 1054, their rates would undoubtedly go up by an amount greater than \$2.50 per month.<sup>117</sup> Companies simply cannot pay for the costs involved in this context alone.<sup>118</sup>

Importantly, A.B. 1054 ties utilities' executive compensation to annual safety performance,<sup>119</sup> which will lead to greater and arguably much-needed accountability by

top corporate management. There will be on-the-ground audits; the CPUC's penalty authority is increased; the utilities will be required to hold a valid safety certification from the CPUC before earning a presumption of prudence in determining cost recovery, consistent with the standard employed by the Federal Energy Regulatory Commission; and conditions were placed on PG&E's bankruptcy reorganization plan, including resolving all of its liabilities to past fire victims and requiring consistency with California's climate and renewable energy standards.<sup>120</sup>

The issue of executive pay and liability signals yet another much-needed shift away from top corporate leaders being able to, in some cases, simultaneously allow their companies to implode while personally deriving unreasonably high amounts of personal gains.<sup>121</sup> For example, an analysis of federal data released by the American Federation of Labor and Congress of Industrial Organizations shows that America's CEOs earned a staggering average of \$14.5 million in 2018 compared to the average \$39,888 that rank-and-file workers made.<sup>122</sup> CEOs got a \$500,000 compensation increase compared to the previous year, while the average U.S. worker barely got more than \$1,000.<sup>123</sup> The average chief executive of an S&P 500 company earned 287 times more than his or her median employee in 2018.<sup>124</sup>

At the time of this writing, PG&E has not yet disclosed how much its newly appointed CEO, Bill Johnson, will earn, other than to say it will be made public later and will be subject to approval of the bankruptcy judge.<sup>125</sup> The utility added that it sets executive pay in line with other companies in its industry (which, in this context, is a circular argument), and that more than one-half of Johnson's incentive pay "will be directly tied to safety performances and metrics."<sup>126</sup> Former CEO Geisha Williams, who resigned just before PG&E filed for bankruptcy in Janu-

108. *Id.* §3280(c).

109. *Greater LA: California's Big Utilities Vow to Spend Billions on Wildfire Mitigation*, KCRW, July 8, 2019, <https://www.kcrw.com/news/shows/greater-la/socal-edison-works-to-mitigate-wildfires/californias-big-utilities-vow-to-spend-billions-on-wildfire-mitigation>.

110. Kasler & Anderson, *supra* note 17.

111. *Id.*

112. Habegger, *supra* note 93.

113. *Id.*

114. *Id.*

115. Alex Jackson, *California Enacts Major Utility Wildfire Reforms*, NAT. RESOURCES DEF. COUNCIL, July 11, 2019, <https://www.nrdc.org/experts/alex-jackson/california-enacts-major-utility-wildfire-reforms>.

116. *Id.*

117. Kasler & Anderson, *supra* note 17.

118. *Greater LA: California's Big Utilities Vow to Spend Billions on Wildfire Mitigation*, *supra* note 109.

119. Jackson, *supra* note 115.

120. *Id.*

121. Some call this gap "obscene" (Alexia Fernández Campbell, *CEOs Made 287 Times More Money Last Year Than Their Workers Did*, Vox, June 26, 2019, <https://www.vox.com/policy-and-politics/2019/6/26/18744304/ceo-pay-ratio-disclosure-2018>), or "insane," as in the words of Abigail Disney, granddaughter of Disney's co-founder, commenting on Disney CEO Bob Iger's \$65.6 million total compensation—1,424 times that of the median Disney employee (Lauren Feiner, *Disney Heiress Calls CEO Bob Iger's \$65.6 Million Total Compensation "Insane"*, CNBC, Apr. 22, 2019, <https://www.cnbc.com/2019/04/22/disney-heiress-calls-bob-igers-total-compensation-insane.html>). Disney also noted:

When [Iger] got his bonus last year, I did the math, and I figured out that he could have given personally, out of pocket, a 15% raise to everyone who worked at Disneyland, and still walked away with \$10 million. So there's a point at which there's just too much going around the top of the system into this class of people who—I'm sorry this is radical—have too much money. There is such a thing.

David Hundeyin, *Disney Heiress' Critique of Bob Iger's \$65 Million "Insane" Pay Rings Hollow*, CCN, Apr. 23, 2019, <https://www.ccn.com/disney-heiress-criticism-ceos-pay/>.

122. Campbell, *supra* note 121.

123. *Id.*

124. *Id.*

125. Dale Kasler, *PG&E's New Leader Is Nation's Highest-Paid Federal Employee*, SACRAMENTO BEE, Apr. 4, 2019, <https://www.sacbee.com/news/politics-government/capitol-alert/article228836074.html>.

126. *Id.*

ary 2019, made \$8.6 million in 2017.<sup>127</sup> During years of bailing out floundering companies, top management in those same companies earned vast amounts of money. That money could and should arguably have been spent on proactive rather than reactive measures in the electric utility and other contexts.

The following concerns have been raised as well. First, A.B. 1054 has been criticized for having been rushed through too fast.<sup>128</sup> Indeed, the complex, multibillion-dollar legislation emerged only two weeks before being passed. It went through two committee hearings and a Senate floor vote in just a few hours on a single day, despite concerns raised by wildfire victims, business lobbyists, and consumer advocates. Much is still unknown about the bill. On the other hand, the bill arguably had to pass quickly as peak California fire season was about to start before the legislature went on a one-month recess. Some senators admitted that they did not fully understand or like all the details of the 98-page bill, but felt that they had no choice but to meet the time line.<sup>129</sup>

Of course, passing legislation in very short amounts of time is nothing new in American history. Neither is passing legislation that the lawmakers themselves do not fully understand. That, of course, does not necessarily mean that the legislation is poor or cannot be improved upon by future legislatures or court interpretations.

More seriously, A.B. 1054 has been called a bail out,<sup>130</sup> with the ratepayers of the big three utilities contributing via the \$2.50 per month charge extension while, according to Assembly member Gómez Reyes, utilities should be held fully accountable for their own behavior and not pass on costs to ratepayers, even in part.<sup>131</sup> Assembly member Al Muratsuchi was concerned before the bill's passage that it would open the window for ratepayers to be further saddled by the ever-increasing wildfire cost.<sup>132</sup> It is now clear that the bill takes at least \$10.5 billion from California ratepayers to help utilities pay for wildfire costs, which critics say is an unfair burden for electricity customers with no guarantees that the corporations will operate their systems safely.<sup>133</sup> In short, too much of the financial burden arguably still falls on millions of utility customers.<sup>134</sup> To help California's largest utilities urgently stave off bankruptcy from the costs associated with wildfires, there was little, if any, focus on prevention efforts with the bill's passage.<sup>135</sup>

Some lawmakers wanted to see more in the deal by way of funding, prevention, and preparedness.<sup>136</sup> For example, nine lawmakers from both parties wrote a letter to Governor Newsom asking that the package incorporate even

more funding for wildfire prevention.<sup>137</sup> Further, “[w]e need to protect ratepayers, make sure victims of the 2017-18 fires are compensated and stabilize the utility market, but we cannot ignore the other side of the equation and that’s prevention and preparedness, which is not addressed,” Assemblyman Jim Wood said in a written statement.<sup>138</sup> Governor Newsom himself believes that

the state needs to spend more money to harden homes in fire-prone areas and educate residents about ways to manage their property to reduce the likelihood of burns—funding which was omitted from the budget signed by Newsom last month, a spending plan that dedicated nearly \$1 billion to emergency response, wildfire recovery and prevention projects such as forest thinning.<sup>139</sup>

Most importantly, however, the highly complex issue of exactly *who* should pay for the increasing costs of future wildfires that may be traceable to utilities has not yet been resolved. Long-term solutions must focus on reducing the underlying risk of wildfires. That will require a series of reforms to fire-harden homes, businesses, and other types of infrastructure to make structures more resilient; to responsibly manage vegetation and development in the WUI; and to deploy more clean, distributed energy resources that can help consumers keep the lights on when power lines are deenergized during high fire risk events.<sup>140</sup> Ultimately, the issue of climate change should, of course, be addressed from numerous angles including energy-efficiency programs that reduce energy consumption and the associated climate-warming pollution and fire dangers.<sup>141</sup>

## B. *Strict Liability Standard Remains, but Burdens of Proof Shift*

Under A.B. 1054, utilities in California remain subject to strict liability for the costs of wildfires started by utility equipment whether or not they were negligent.<sup>142</sup> Changing that liability standard was, as Governor Newsom made abundantly clear, not on the table during this year’s discussions although it had been suggested earlier.<sup>143</sup> Instead, the bill introduced a new burden of proof regime. Under it,

the commission [is required] to find that an electrical corporation’s conduct was reasonable if that conduct, related to the ignition, was consistent with actions that a reasonable utility would have undertaken in good faith under similar circumstances, at the relevant point in time, and

127. *Id.*

128. See generally Times Editorial Board, *supra* note 8.

129. *Id.*

130. Habegger, *supra* note 7.

131. Habegger, *supra* note 93.

132. *Id.*

133. Luna, *supra* note 9.

134. *Id.*

135. *Id.*

136. Kasler & Anderson, *supra* note 7.

137. *Id.*

138. *Id.*

139. Luna, *supra* note 9.

140. Jackson, *supra* note 115.

141. *Id.*

142. Times Editorial Board, *supra* note 8. Negligence is the failure to behave with the level of care that someone of ordinary prudence would have exercised under the same circumstances. The behavior usually consists of actions, but can also consist of omissions when there is some duty to act (e.g., a duty to help victims of one’s previous conduct). RESTATEMENT (SECOND) OF TORTS §282 (1965).

143. Times Editorial Board, *supra* note 8.



based on the information available to the electrical corporation at the time, as provided. The bill . . . provide[s] that an electrical corporation bears the burden to demonstrate, based on a preponderance of the evidence, that its conduct was reasonable, *unless it has a valid safety certification for the time period in which the covered wildfire that is the subject of the application ignited*. If the electrical corporation has that valid safety certification, . . . the electrical corporation's conduct w[ill] be deemed reasonable unless a party to the proceeding creates a serious doubt as to the reasonableness of the electrical corporation's conduct. Once serious doubt has been raised, the electrical corporation [has] the burden of dispelling the doubt and proving the conduct to have been reasonable.<sup>144</sup>

Before the bill, the burden of proof remained on the utilities to prove that they acted prudently.<sup>145</sup> Under A.B. 1054, the new certification process will now allow a utility to be considered to have been *per se* reasonable *unless* serious doubt is raised otherwise.<sup>146</sup> Only if serious doubt is raised does the burden of proof shift to the electrical corporation to dispel the doubt and prove that its conduct was reasonable.<sup>147</sup> The safety certification thus shifts the burden of proof away from the utilities, requiring outside groups to question whether the utilities operated their systems reasonably.<sup>148</sup>

The inclusion of a reasonability standard, albeit only in the context of the certification process, may be a hint at a future shift to a fault-based standard to come. Further, under the certification process, the fund acts as a second insurance policy for the utilities, which only have to pay back the money received if they acted unreasonably and thus caused a fire.<sup>149</sup> This is a major advantage for the utilities since they obtain greater certainty about the ability to charge ratepayers for wildfire liabilities.<sup>150</sup>

What is interesting in times of much-needed discussion about reasonable CEO compensation, especially when corporations fail despite high CEO earnings, is that the utilities' CEOs are responsible for the certification process.<sup>151</sup> The exact legal parameters for and ramifications of this remain to be seen, but this is a promising development.

Finally, even if the utilities have acted prudently, the amount that the utilities would have to pay back would be capped at 20% of their "base rate"—the total value of their electrical equipment.<sup>152</sup> In PG&E's case, it would effectively cap the troubled utility's reimbursement at about \$4.8 billion for future fires.<sup>153</sup>

The question has been raised, however, whether as the bill is currently framed, simply "presuming" utility reasonability is letting the utilities off the hook too easily, or whether the strict liability standard is becoming too unreasonable in times of increasing fire risks.<sup>154</sup> The S.B. 901 Commission on Catastrophic Wildfire Cost and Recovery concluded that to protect ratepayers, the legislature should replace California's uniquely dysfunctional strict liability rules for utilities with fault-based standards like those in almost every other state (and that California incidentally also applies to its flood control districts).<sup>155</sup> That would ensure that wildfire damages are shared more broadly (some will say equitably), as opposed to relying exclusively on utilities and their customers to compensate victims whenever utility-owned equipment is involved regardless of who and what else was responsible and to what degree.<sup>156</sup> What California is seeing is, in all likelihood, a slowly shifting liability standard in this area away from strict liability to negligence.

Strict liability is the imposition of liability on a party without a finding of fault (such as negligence or tortious intent).<sup>157</sup> The claimant need only prove that the tort occurred and that the defendant was at fault.<sup>158</sup> The law imputes strict liability to situations it considers to be inherently dangerous.<sup>159</sup> The two best-known instances of common-law strict liability are cases in which the defendant engages in some abnormally dangerous activity and those in which the defendant manufactures<sup>160</sup> a defective product.<sup>161</sup> In both of those cases, liability may be imposed as a matter of legal policy irrespective of the defendant's fault.<sup>162</sup>

However, comment k to the Restatement (Second) of Torts exempts from this strict liability rule "unavoidably unsafe products." An unavoidably unsafe product is defined by a hodgepodge of criteria and a few examples, such as the Pasteur rabies vaccine and experimental pharmaceuticals.<sup>163</sup> The comment also notes, however, that products, where properly prepared and accompanied by proper directions and warnings, are neither defective nor *unreasonably* dangerous.<sup>164</sup> Notably, where a seller has properly prepared and marketed its products and "where the situation calls for it, is not to be held to strict liability for unfortunate

144. Assemb. B. 1054, ch. 79, Legislative Counsel's Digest p. 2 (Cal. 2019) (emphasis added).

145. Kasler & Anderson, *supra* note 17.

146. *Id.*

147. Assemb. B. 1054, ch. 79, Legislative Counsel's Digest (Cal. 2019).

148. Luna, *supra* note 9.

149. *Id.*

150. Kasler & Anderson, *supra* note 17.

151. Luna, *supra* note 9.

152. Kasler & Anderson, *supra* note 17; Kasler & Anderson, *supra* note 7.

153. Kasler & Anderson, *supra* note 7.

154. Kasler & Anderson, *supra* note 17.

155. STATE OF CALIFORNIA GOVERNOR'S OFFICE OF PLANNING AND RESEARCH, FINAL REPORT OF THE COMMISSION ON CATASTROPHIC WILDFIRE COST AND RECOVERY (2019), available at [http://www.opr.ca.gov/docs/20190618-Commission\\_on\\_Catastrophic\\_Wildfire\\_Report\\_FINAL\\_for\\_transmittal.pdf](http://www.opr.ca.gov/docs/20190618-Commission_on_Catastrophic_Wildfire_Report_FINAL_for_transmittal.pdf).

156. Jackson, *supra* note 115.

157. DAN B. DOBBS ET AL., THE LAW OF TORTS §2 (2d ed., updated 2019).

158. *Id.*

159. *Id.*

160. This rule "applies to any person engaged in the business of selling products for use or consumption. It therefore applies to any manufacturer of such a product, to any wholesale or retail dealer or distributor" and thus to electric utilities as well. RESTATEMENT (SECOND) OF TORTS §402A cmt. f (1979).

161. DOBBS ET AL., *supra* note 157, §2; RESTATEMENT (SECOND) OF TORTS §402A(1) (1979); *Bruesewitz v. Wyeth LLC*, 562 U.S. 223, 234 (2011).

162. DOBBS ET AL., *supra* note 157, §2.

163. *Bruesewitz*, 562 U.S. at 234.

164. RESTATEMENT (SECOND) OF TORTS §402A(1) (1979); *Bruesewitz*, 562 U.S. at 234.

consequences attending their use, merely because he [or she] has undertaken to supply the public with an apparently useful and desirable product, attended with a known but apparently reasonable risk.”<sup>165</sup>

In contrast, negligence is the failure to behave with the level of care that someone of ordinary prudence would have exercised under the same circumstances.<sup>166</sup> The behavior usually consists of actions, but can also consist of omissions when there is some duty to act (e.g., a duty to help victims of one’s previous conduct).<sup>167</sup>

A.B. 1054 did not change the liability standard from strict to fault-based. Should it have? Arguably yes. The increased and still increasing risks of wildfires and climate change more broadly are clear. They should be carried by those continuing to act or *not* to take appropriate, urgent action in blatant disregard of such risks. Ultimately, those are the voters electing representatives seeking office on platforms of the stalling of much-needed climate change action, feigned or real climate change ignorance, irresponsible assertions of the causes of climate change, passing on blame to other nations or action to future generations, and in some cases even still outright denial. The connections between wildfires and climate change have been clearly established. Action on one front—fire mitigation and suppression—without the other—broader climate change action—is insufficient and irresponsible to everyone who is placed at risk whether locally, nationally, or internationally.

At a more localized and less political scale, however, people who chose to build homes and live in the WUI despite the now very well-known and publicized risks thereof should be better prepared to individually bear or insure the costs of wildfires caused by electric utilities in cases of non-negligence by the utilities. We all need and want electricity. This should, to a much greater extent than now, be produced by methods that do not contribute even further to climate change.

This shift is beginning to happen, albeit too slowly. In the meantime, the costs of wildfire should be internalized not only by utilities in strict liability schemes disregarding whether or not the utilities acted prudently, but to a greater extent by end-consumers who add to existing risks by demanding electricity to be delivered to an ever-increasing extent to the WUI in arid, hot areas. After all, such end-users are the ones that demand product delivery to areas that also results in increased costs for people *not* benefiting directly from anything but the delivery of electricity to areas not at increased risks of wildfires.

If a utility has taken all reasonable precautions to produce and deliver electricity (apart from using underground cabling that could alleviate much risk, but that is still too cost-prohibitive for utilities<sup>168</sup>), the number of reasons to hold utilities to any higher standard than simple negligence is diminishing. The negligence standard will still result in utility liability if reasonable, industrywide standards for

fire prevention have not been followed. A risk-sharing scheme that places more of the risk on consumers should not come as a surprise to anyone in the future. By now, society in general should be shifting and nudged by factors such as cost-sharing into accepting the true costs of climate change. Certainly, parties knowingly placing themselves in direct risk of wildfires should be better prepared to run the risks appurtenant to doing so in the future.

As mentioned, the policy underlying inverse condemnation in California is “that individual property owners should not have to contribute *disproportionately* to the risks [or costs] from public improvements made to benefit the community as a whole.”<sup>169</sup> These costs should, courts have found, “be distribute[d] throughout the community . . . to socialize the burden . . . that should be assumed by society.”<sup>170</sup> This concern is still relevant, but only to some extent. The converse is also highly relevant here: when we as a society keep ignoring climate change realities and keep moving into the WUI in this country and beyond, environmental justice concerns call for the heaviest burden in this context to be placed on the parties that most directly benefit from the services provided (i.e., inhabitants of the WUI) and all ratepayers as such.

Further, the Restatement exempts from the strict liability rule unavoidably unsafe products that are neither defective nor unreasonably dangerous. Electricity equipment failures caused by issues outside the reasonable control of a utility that has acted prudently within industry standards should arguably not place the utility at strict liability. Electricity delivery is a must; it is not “unreasonably dangerous” in today’s world. In particular, the Restatement points out that “where the situation calls for it, [a seller] is not to be held to strict liability for unfortunate consequences attending the [product] use, merely because he [or she] has undertaken to supply the public with an apparently useful and desirable product, attended with a known but apparently reasonable risk.”

As unfortunate as the costs of wildfires are, especially in the WUI, it could reasonably be argued that the utilities merely supply the public with a useful and desirable product that is not without risk, but for which the general public does not want to pay more. In fact, placing the burden of increasing firefighting costs on all end-customers is unfair, as will be demonstrated below. The end-consumers who demand electricity to risky locations should be willing to bear the risk thereof even though this will be a disproportionate financial risk. Importantly, no other state than California operates with an inverse condemnation scheme that includes strict liability.<sup>171</sup> It is becoming unreasonable to expect utilities to remain strictly liable for wildfires in California. That standard should be rethought as should utility liability standards in general in those parts of the world that already face severe wildfire problems.

On the other hand, lowering the risk from strict liability to negligence may be condoning utilities *not* sufficiently internal-

165. RESTATEMENT (SECOND) OF TORTS §402A(1) cmt. k (1979).

166. RESTATEMENT (SECOND) OF TORTS §282 (Am. Law Inst. 1965).

167. *Id.*

168. *Greater LA: California’s Big Utilities Vow to Spend Billions on Wildfire Mitigation*, *supra* note 109.

169. *Pac. Bell Tel. Co. v. S. Cal. Edison Co.*, 208 Cal. App. 4th 1400, 1407 (Cal. Ct. App. 2012); KOUSKY ET AL., *supra* note 16 (emphasis added).

170. *See, e.g., Holtz v. Superior Court*, 475 P.2d 441, 444 (Cal. 1970).

171. KOUSKY ET AL., *supra* note 16.

izing the costs of wildfires caused by their equipment and personnel, and ignoring climate change and wildfire knowledge available at its nascent stages through to the broadly available and extensive current pool of scientifically established information. Bailing out industries, as A.B. 1054 has been said to do, has pros and cons that are outside the scope of this Comment to examine in depth. Suffice it to say that industries beyond, but certainly including, energy and transportation providers have been on notice of changing trends and needs for both products and product delivery methods for decades. During those decades, top management in most bailed-out companies earned vast amounts of money. That money could and should have been spent on proactive rather than reactive measures. This holds true for electric utilities as well.

Some burden-sharing among the stakeholders may be desirable.<sup>172</sup> It is certainly seen as fair by Vice President Phil Harrington of Southern California Edison.<sup>173</sup> This, however, raises the issue of exactly who the stakeholders are in this context: the utilities only, taxpayers as well, and/or buyers of homes in risk-prone areas?<sup>174</sup> In other words, should ratepayers in low- or virtually zero-risk areas have to pay increased rates for people who deliberately choose to live in dangerous areas? That raises important issues of ethics and environmental justice.

#### IV. Ethics and Environmental Justice

Climate change has been described as a “perfect moral storm” because it brings together three major challenges to ethical action<sup>175</sup>:

The first challenge stems from the fact that climate change is a truly global phenomenon. Once emitted, greenhouse gas emissions can have climate effects anywhere on the planet, regardless of their source. This is often said to result in a prisoner’s dilemma or tragedy of the commons structure played out between nation states: although collectively all countries would prefer to limit global emissions so as to reduce the risk of severe or catastrophic impacts, when acting individually, each still prefers to continue emitting unimpeded. At the same time, there are skewed vulnerabilities: at least in the short- to medium-term, many of the most vulnerable countries and people are those who have emitted the least historically, and whose emissions levels continue to be relatively low. This appears to be seriously unfair and casts a notable shadow over both practical and theoretical efforts to secure global cooperation.

The second challenge is that current emissions have profoundly intergenerational effects. Emissions of the most prominent greenhouse gas, carbon dioxide, typically persist

in the atmosphere for a long time, contributing to negative climate impacts for centuries, or even millennia. This too seems unfair, especially if future negative impacts are severe and cumulative. In addition, the temporal diffusion of climate change gives rise to an ethical collective action problem that is even more challenging than the traditional tragedy of the commons both in its shape and because normal kinds of cooperation do not seem to be possible across generations.

The third challenge to ethical action is that our theoretical tools are underdeveloped in many of the relevant areas, such as international justice, intergenerational ethics, scientific uncertainty, and the appropriate relationship between humans and the rest of nature. For example, climate change raises questions about the (moral) value of nonhuman nature, such as whether we have obligations to protect non-human animals, unique places, or nature as a whole, and what form such obligations take if we do. In addition, the presence of scientific uncertainty and the potential for catastrophic outcomes put internal pressure on the standard economic approach to environmental problems and play a role in arguments for a precautionary approach in environmental law and policy that some see as an alternative.<sup>176</sup>

The climate change problem often gets passed on to future generations or from people who contribute heavily to climate change to people in other parts of the world where people do not, at least not per capita. However, the problem is also, at a more localized scale, one of environmental justice. In the context of wildfires and their resulting costs, this has become an issue of some people imposing lifestyle costs—in this context, life in the WUI—on people who do not have the means, ability, or desire to live in parts of the country that present very well-known wildfire risks and costs. Further research should be performed into the exact demographics of the WUI. In discussions, I often heard mentioned that wealthy, Caucasian people are often the ones moving to the WUI expecting cost-sharing by more disadvantaged people. However, my admittedly limited research does point out that:

WUI residents come from many different social strata. Some live in modest homes located where land is least expensive, typically far from high-priced urban areas . . . At the other end of the scale, spectacular homes are set in or within sight of the most scenic natural settings. Where enclaves of such homes exist, these, too, are in the WUI. In between these extremes, many suburbs and exurbs, whether exclusive neighborhoods within reach of the city or affordable developments just beyond the expensive urban market, are also WUI areas. There are so many people living in the WUI—approximately a third of the U.S. population—that few generalizations are useful or valid. Instead, wide variation in home construction, neighborhood characteristics, and the residents themselves characterize the WUI.<sup>177</sup>

172. Kasler & Anderson, *supra* note 17.

173. *Greater LA: California’s Big Utilities Vow to Spend Billions on Wildfire Mitigation*, *supra* note 109.

174. Kasler & Anderson, *supra* note 17.

175. Stephen M. Gardiner & Lauren Hartzell-Nichols, *Ethics and Global Climate Change*, 3 NATURE EDUC. KNOWLEDGE 5 (2012), available at <https://www.nature.com/scitable/knowledge/library/ethics-and-global-climate-change-84226631>.

176. *Id.*

177. SEBASTIÁN MARTINUZZI ET AL., U.S. DEPARTMENT OF AGRICULTURE, THE 2010 WILDLAND-URBAN INTERFACE OF THE CONTERMINOUS UNITED STATES (2015), available at [https://www.fs.fed.us/nrs/pubs/rmap/rmap\\_nrs8.pdf](https://www.fs.fed.us/nrs/pubs/rmap/rmap_nrs8.pdf).

The demographic issue is interesting, but it still remains true that the costs are not currently born equitably. More and more people are moving into areas subject to greater risk of fire,<sup>178</sup>

[b]ut the full costs of these actions are not borne by these local actors. The federal government picks up between one-half and two-thirds of the cost of protecting people and property in the WUI by providing financial and technical assistance to states and volunteer firefighters. In effect, the federal government, the US taxpayer, picks up the tab. It is classic case of the free rider and a good example of moral hazard. Free riders are those who get something for nothing—in this case the underwriting of fire costs . . . We are effectively socializing the costs of fires by having the federal government bear much of the fire protection costs. The benefits, meanwhile, occur at the local level for private individuals and developers.<sup>179</sup>

Environmental justice concerns necessitate rethinking the inequitableness of the current distribution of the costs of utility-caused wildfires across all end-consumers and even private individuals who are not customers of utilities in fire-prone areas as just described.

By way of background, the environmental justice movement grew out of the civil rights movement.<sup>180</sup> Thus, environmental justice legal challenges are founded on civil rights authorities, including Title VI of the Civil Rights Act of 1964. However, claims of environmental injustice can rarely be attributed to purposeful intent to discriminate against an affected racial or economic group, which is a requirement in order to be able to support a claim under the Equal Protection Clause of the Fourteenth Amendment to the U.S. Constitution. Accordingly, few environmental justice cases predicated on this constitutional theory prevail. Environmental justice advocates thus commonly rely on other legal theories that do not require proof of intentional discrimination.

The U.S. Environmental Protection agency defines “environmental justice” as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. This goal will be achieved when everyone enjoys . . . the same degree of protection from environmental and health hazards, and equal access to the decision-making process to have a healthy environment in which to live, learn, and work.<sup>181</sup>

California was one of the first states in the nation to codify environmental justice in statute.<sup>182</sup> Its S.B. 115 enacts an environmental justice policy defining “environmental justice” as “the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies.”<sup>183</sup> Environmental justice “represents an aspiration towards a state where the racial composition and relative income of community members are no longer indicators of the environmental pollution burdens in their community.”<sup>184</sup> In separate statutes, the California Environmental Protection Agency is required to conduct its activities in a manner that ensures that environmental justice goals are attained.<sup>185</sup>

Examples of state-run environmental justice programs in California follow. Attempts have been made to alleviate extremely high pollution burdens in southeastern Pomona where a significant number of residents live adjacent to, or within, a particular industrial corridor.<sup>186</sup> Forty-six percent of the residents in this area have less than a high-school diploma as their highest form of educational attainment. Sixty percent of the households are linguistically isolated, which means that everyone in the household over the age of 14 speaks English “less than well.” Additionally, one out of every three households in the area has an income of less than \$25,000 per year—well below the median household income in California.

In Los Angeles, the Boyle Heights neighborhood is very heavily polluted by vehicle emissions.<sup>187</sup> The neighborhood is divided by Interstate 5, Highway 101, Highway 10, and Highway 60, and the so-called East Los Angeles Interchange connecting these freeways is one of the busiest in the United States. More than 500,000 automobiles and trucks pass through Boyle Heights each day on the freeways alone. As a result, Boyle Heights residents experience disproportionate burdens of pollutants. Boyle Heights residents are predominantly Mexican and Mexican American, with pockets of Japanese American and Jewish residents. Many of the older residents have less than a high-school education, and much of the population is employed in the service and manufacturing sectors. Thirty-seven percent lack access to health insurance, and the median household income of \$33,250 is much lower than the city’s median income of \$49,745.

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178. John Rennie Short, *The West Is on Fire—And the U.S. Taxpayer Is Subsidizing It*, CONVERSATION, Sept. 23, 2015, <http://theconversation.com/the-west-is-on-fire-and-the-us-taxpayer-is-subsidizing-it-47900>.

179. *Id.*

180. See generally Ellen M. Peter, *Implementing Environmental Justice: The New Agenda for California State Agencies*, 31 GOLDEN GATE U. L. REV. 529, 531 (2001).

181. U.S. Environmental Protection Agency, *Environmental Justice*, <https://www.epa.gov/environmentaljustice> (last updated Aug. 19, 2019).

182. California Environmental Protection Agency, *Environmental Justice Program*, <https://calepa.ca.gov/envjustice/> (last visited Sept. 4, 2019).

183. CAL. GOV'T CODE §65040.12(e) (West 2019).

184. ENVIRONMENTAL JUSTICE TASK FORCE, CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY, POMONA INITIATIVE REPORT 5 (2018), available at [https://calepa.ca.gov/wp-content/uploads/sites/6/2018/09/Pomona\\_EJ\\_Initiative\\_FINALweb.pdf](https://calepa.ca.gov/wp-content/uploads/sites/6/2018/09/Pomona_EJ_Initiative_FINALweb.pdf).

185. CAL. PUB. RES. CODE §72000 (West 2001).

186. See, e.g., ENVIRONMENTAL JUSTICE TASK FORCE, *supra* note 184.

187. See, e.g., ENVIRONMENTAL JUSTICE COMPLIANCE AND ENFORCEMENT WORKING GROUP, CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY, LOS ANGELES INITIATIVE REPORT (2017), available at <https://calepa.ca.gov/wp-content/uploads/sites/6/2017/02/LAReport.pdf>.

Environmental Justice Alliance features 16 bills that further address energy, climate, air quality, transportation, and drinking water and infrastructure improvements.<sup>188</sup> “From anti-displacement protections in energy efficiency programs to increasing zero emissions vehicles, these bills keep equity at the center of California’s environmental policies by bringing much needed benefits directly to disadvantaged communities.”<sup>189</sup>

With A.B. 1054 and the continuation of the \$2.50 per month charge placed on all ratepayers regardless of their location, the issue arises whether it is, indeed, fair for all ratepayers, and thus also those in neighborhoods that are not at great, if any, risk of wildfires to have to pay such a fee for those people who choose to live in the WUI even with the knowledge of the worsening effects of climate change and the resulting fire risks. It is not. “Newcomers to the interface tend to be more educated, wealthy, and politically connected and hence are a force that can make a lasting effect on how resources are to be managed.”<sup>190</sup> Poorer people, less educated people, and often people of color in urban areas will have to pay the fee although they do not gain anything from doing so other than, at best, the continuation of electric services by an electric utility that might otherwise have gone out of business. Because the same people are also less politically connected, a significant risk of environmental injustice exists here.

At first blush, \$2.50 per month does not seem like much. It is, however, important to recall that people in densely built areas, which often included already disadvantaged neighborhoods, *already* do not have incomes on par with most other people in California, and even a small fee or many small fees here and there make a difference. A wide income discrepancy exists. Any fee imposed broadly on all electric utility ratepayers places a disproportionate burden on disadvantaged people as well as people of color (often, those are overlapping groups thus presenting a compounded problem). That violates notions of environmental justice and ethical legislative development in times of climate change.

Instead, higher fees for electricity delivery should be imposed on those people who live and build in the WUI. They voluntarily accept known and worsening risks. They should be willing to internalize the true costs of their lifestyle choices. Granted, some people move away from more expensive urban areas to what at first blush appear to be cheaper WUI areas for cost-saving reasons.

However, the notion of saved expenses often appears to be false. This is the case where, for example, people end up commuting to jobs in faraway urban areas instead and having to spend less visible costs in the form of, for example, increased vehicle maintenance and replacement costs, expanded child care, or health care costs from extended

periods of stress and commuter dissatisfaction. Certainly, to the extent increased firefighting costs and wildfires stem from overdevelopment of the WUI, the time has come to consider imposing the true costs of such development on the users who benefit directly from it. It is not fair to impose that burden on others who do derive little, if any, benefit from such development.

Further, in addition to the \$2.50 per month surcharge and other likely or actual service increases, regulations and enforcement schemes should make sure that utilities source a certain and increasing percentage from renewable sources. As mentioned above, under A.B. 1054, utilities are currently required to adhere to California’s climate and renewable energy standards.<sup>191</sup> There is, however, nothing saying that they could not, as a matter of sound public policy and law, be required to go even further, especially if they are receiving taxpayer funds which, in effect, bail them out from their prior poor positions in this area.

Climate change has known costs; in fact, we have known about the onset of those costs for years, yet many have chosen to ignore that and even the existence of climate change itself. Now the time has come to start paying the unfortunate costs in this connection. We know there will be many more in the future. The costs of fighting wildfires and destruction are external costs and benefits related relatively directly to life in the WUI. Granted, some WUI residents may not have been fully aware of the risks when moving into the WUI, as much climate change science has been established fairly recently and/or has been suppressed by industry forces for a long time, but today, it is unreasonable to claim ignorance.

Some grandfathering-in of some residents who have lived in the WUI for a long time could be examined and implemented in regulated utility payment schemes. People willingly taking on the risks of living in the WUI should be willing to pay a disproportionately higher burden for the costs resulting from their choices with today’s knowledge of such costs. They should also be required to do more to avoid their homes burning to begin with. This will be examined in the next section.

## V. Mandate for Homeowners: P/GE/SD

Not all required or desirable legal developments concern quasi-governmental entities such as electric utilities. Private-sphere action and inaction remain hugely important to fire prevention. According to experts, policymakers and land managers have focused too much on alleviating the threat of fire in the WUI and not enough on structure protection.<sup>192</sup> Few comprehensive laws or statutes exist in the

188. California Environmental Justice Alliance, *2019 Environmental Justice Legislative Agenda*, <https://caleja.org/2019/08/2019-environmental-justice-legislative-agenda/> (last visited Sept. 4, 2019).

189. *Id.*

190. Hermansen-Baez et al., *Wildland-Urban Interface: Key Issues*, University of Florida, IFAS Extension, FOR 202 (2013), available at <https://edis.ifas.ufl.edu/fr264>.

191. *Id.*

192. Robert W. Mutch et al., *Protecting Lives and Property in the Wildland-Urban Interface: Communities in Montana and Southern California Adopt Australian Paradigm*, FIRE TECH., Apr. 2011, at 359. Even a report containing California wildfire priority policy solutions for Governor Newsom issued by the University of California Berkeley Law Center for Law, Energy, and the Environment and the Resources Legacy Fund did not focus on the hardening of structures, but rather the traditional solutions relating only to

United States addressing the threat of external ignitions on structures.<sup>193</sup> “One of the reasons for this lack of regulation governing the private side of the WUI is the American spirit of individualism, which resents government interference in closely guarded personal rights.”<sup>194</sup> However, reality shows that the law in this area could and should be changed to better reflect the challenges of combating wildfires in the WUI and beyond.

In the United States, the prevailing interface model is to evacuate people away from fire areas to get them out of harm’s way.<sup>195</sup> In California, for example, the usual practice is to require evacuations well ahead of the arrival of the wildfire. However:

The problem with this model is that evacuation warnings are often late to non-existent, leading to the deaths of interface residents entrapped by fires on highways as they try to escape . . . Many of our streets and freeways in the United States are already beyond carrying capacity and when an emergency evacuation is added to the situation, fleeing residents, in the case of wildfire, will be stuck in gridlock, thereby exposing evacuees to being burned while sitting in their vehicles.<sup>196</sup>

Fires also overrun evacuating people. There may simply not be enough space on roads for both a large number of private vehicles with people attempting to evacuate as well as for fire engines. As the risk of wildfires increases in the WUI and beyond, the stark reality is that there never will be enough fire engines, trained and equipped firefighters, or law enforcement personnel to be in every threatened and evacuated neighborhood. Thus,

[w]ildfires that start during periods of very high to extreme fire danger will quickly overwhelm Fire Services, because they will not be able to keep up with all the new ignitions in the interface. It must be understood that there are hundreds or thousands of engines . . . and tens of thousands to hundreds of thousands of homes in the interface. There will not be an engine at every home. The good news is that if people prepare well for defensible space around their home and have a fire-resistant home in a well-prepared neighborhood, their property may survive a wildfire even when the Fire Services are not available.<sup>197</sup>

From the standpoint of traffic congestion during wildfire emergencies alone, “residents can be much safer staying in

their ignition resistant homes, if their homes and yards are indeed ignition resistant, and off the roads that are needed for emergency vehicle ingress and egress.”<sup>198</sup> Many people are losing their lives trying to flee structures in which firefighters are trained to seek shelter if trapped by a firestorm. When the firefront passes, usually within several minutes, able-bodied, properly dressed, and aware residents can emerge from their homes with mops, buckets of water, and garden hoses, and continue defending their homes. That frees up important firefighting resources and ingress/egress. The removal of able-bodied residents can often be detrimental to structure survival and public safety.

In fact, studies show that there is no difference in the survival rates of structures protected by either homeowners or firefighters. This of course does not mean that firefighters would not suppress fires on prepared structures; quite the opposite is true. “Firefighters are more likely to suppress fires on these prepared properties where owners have demonstrated an investment in their own protection.”<sup>199</sup> These properties are also safer for firefighters to enter.

Currently, the role of residents in several U.S. locations in the case of wildfires tends to be passive, not active.<sup>200</sup> The new interface protection policy “Prepare: Go Early or Stay and Defend” (P/GE/SD) was developed in Australia. The strategic title implies that every resident in a certain fire district prepares their property in advance to be fire-resistant, regardless of whether they are going to leave early or stay. Both Montana and California have adopted versions of this model. Voluntary programs in these locations employ a range of steps to be taken, such as voluntary home inspections, spring wildland fire training courses, and, notably, P/GE/SD training with resulting photo identification cards that certify the training and allow cardholders passage through law enforcement roadblocks to get back to their homes when fires occur.

However, guidelines regarding both building characteristics and the vegetation around homes are rarely mandatory.<sup>201</sup> My research demonstrated no outright legal requirements in the United States that homeowners make their homes safe enough for sheltering during a wildfire. “Instead, voluntary efforts are promoted through fire outreach programs, including national programs (Firewise, Fire Adapted Communities . . . and Fire Learning Networks. . . ), state programs (e.g. California Fire Safe Council and Nevada’s Living with Fire program), and local government and fire department outreach efforts.”<sup>202</sup> Further,

it is unclear how, where and when the different wildfire outreach programs are active and if those patterns match those of wildfire losses and residential development. Residential development in fire-prone vegetation is widespread and continues even after destructive wildfire. Thus, regula-

vegetation such as forest, woodland, and chaparral management, fuel reduction and risk management for different types of vegetation, fuels treatment, surface and ladder fuels, and prescribed burning. RESOURCES LEGACY FUND & UNIVERSITY OF CALIFORNIA BERKELEY LAW SCHOOL, PRIORITY POLICY SOLUTIONS FOR CALIFORNIA’S NEXT GOVERNOR: WATER, CLIMATE, AND WILDFIRE 5 (2018), available at <https://www.law.berkeley.edu/wp-content/uploads/2018/12/CLEE-RLF-Solutions-for-Californias-Next-Governor.pdf>.

193. Mutch et al., *supra* note 192, at 358.

194. Sarah McCaffrey, *Thinking of Wildfire as a Natural Hazard*, 17 SOC’Y & NAT. RESOURCES 509 (2004); DENNIS S. MILETI, DISASTERS BY DESIGN: A REASSESSMENT OF NATURAL HAZARDS IN THE UNITED STATES (1999).

195. See generally Mutch et al., *supra* note 192, at 357-75.

196. *Id.* at 360.

197. *Id.* at 373.

198. *Id.* at 360.

199. *Id.* at 357.

200. See generally *id.* at 357-65.

201. Kramer et al., *supra* note 5, at 330.

202. *Id.*

tions pertaining to WUI mitigation are often not adopted until after wildfires destroy homes and are thus reactive.<sup>203</sup>

Given the nature and extent of this known problem, proactivity would be preferable. To proactively address the lack of firefighting resources and the resulting costly loss of homes, local jurisdictions should consider the desirability of making P/GE/SD programs mandatory. While such programs place greater responsibility with homeowners, implementation studies demonstrate that there are clear advantages to private individuals in having choices when fast-moving wildfires threaten. By implementing and successfully testing alternatives to the “evacuation only” model, two fire districts in the United States have clearly demonstrated meaningful benefits in having options for interface survival—survival that includes the resident as an essential participant.<sup>204</sup> These programs should be broadened to other areas as well.

## VI. Other Policy Tools Needed

As climate change continues to increase the risk and severity of wildfires and “[a]s WUI growth continues, there are many management options and policy tools to consider for addressing both wildfire and other environmental problems. Just as WUI-related problems involve actors (e.g., homeowners, community leaders) at many levels, so too must their solutions involve actors at multiple levels (i.e., local, regional, state, and national).”<sup>205</sup> For example,

communities and local jurisdictions could anticipate wildfires and environmental impacts more explicitly when planning future land use to avoid housing expansion in high-risk wildfire areas and other environmentally sensitive areas. State and federal agencies typically do not regulate development directly, but can allocate resources to areas experiencing rapid WUI growth, support local and regional planning efforts, and provide important research data and information to help communities adapt to fire-prone environments. Agencies managing public lands could consider targeted purchases of private inholdings to limit future housing growth within the administrative boundaries of public lands, which has been particularly rapid. . . . Past federal fire policy has focused largely on fighting and preventing wildfires and on fuel reduction, public outreach campaigns, and other actions. Although laudable, such efforts are unlikely to be successful by themselves, because housing growth is clearly the dominant cause of WUI growth, as well as a major factor contributing to wildfire occurrence and cost. As long as WUI growth is unchecked, wildfire problems will likely worsen.<sup>206</sup>

WUI growth reflects an affinity for more closeness with nature. The consequences and costs of such growth can hope-

fully prompt discussions on how to sustain the highly valued ecosystems in which so many people choose to live modernly.<sup>207</sup>

In the United States, privatization has typically marked the delivery of electricity. At the same time, we are as a nation that often discusses energy independence from non-American fossil fuel sources. The time may well have come to discuss whether cities also need energy independence from private utility companies such as PG&E. For example, the city of San Francisco has recently offered to buy the electric distribution and transmission lines that serve San Francisco.<sup>208</sup>

In other words, public policy may shift away from the typically already accomplished privatization, toward once again making the delivery of energy a truly public matter. Of course, doing so has several advantages and disadvantages that are beyond the scope of this Comment, but one noteworthy advantage would be the potential for avoiding the payments of millions of dollars to private utility CEOs when such money really should be invested in the future of renewable energy, not lining the private pockets of already very wealthy individuals.

Insurance and reinsurance markets should also come to encompass notions of sustainable insurance as these develop. Regulators in California—the largest insurance market in the nation and one of the largest ones in the world—have teamed up with the United Nations to develop sustainable insurance guidelines that will help address climate change-related disasters such as extreme heat and large wildfires.<sup>209</sup> California Insurance Commissioner Ricardo Lara has announced that the California Department of Insurance will work with officials from the United Nations Principles for Sustainable Initiative over the next year to develop a plan to confront California’s many climate risks from an insurance point of view as well:

The California Sustainable Insurance Roadmap is envisioned to pave the way for innovative risk management, insurance and investment solutions that reduce climate risks and protect natural ecosystems. For example, new insurance products could be developed to promote cooler streets and renewable energy. In other countries, insurance solutions for coral reefs and mangroves are emerging as these natural ecosystems have been proven to significantly reduce wave energy and buffer storm surge, reducing flood risk and protecting communities. In this vein, insurance solutions for California’s protective, life-supporting natural infrastructure—such as wetlands and forests—could reduce climate and disaster risk and present new opportunities.<sup>210</sup>

This road map is the largest collaboration between the United Nations and the insurance industry, and is the first time that the United Nations has partnered with an

203. *Id.*

204. Mutch et al., *supra* note 192, at 357, 372.

205. Radeloff et al., *supra* note 4, at 3317.

206. *Id.*

207. *Id.*

208. Quintana, Sergio, *SF Offers to Buy PG&E Assets to Launch Municipal Power Company*, NBC BAY AREA, Sept. 8, 2019, <https://www.nbcbayarea.com/news/local/SF-Offers-to-Buy-PGE-Assets-to-Launch-Municipal-Power-Company--559791831.html>.

209. *See generally* Press Release, California Department of Insurance, Commissioner Lara and United Nations Announce Nation’s First Sustainable Insurance Roadmap to Reduce California’s Climate Risks (July 24, 2019), <http://www.insurance.ca.gov/0400-news/0100-press-releases/2019/release056-19.cfm>.

210. *Id.*

American state to create a sustainable insurance strategy and action plan that would tackle the growing risks of climate change. At a time when the U.S. federal government is still highly recalcitrant toward urgently needed climate change mitigation and adaptation action, it is promising to see that subnational developments such as this present promising and potentially viable alternative action. Much more of that is needed.

## VII. Conclusion

As climate change leads to increasingly frequent and severe on-the-ground effects in California and beyond, it is clear that society needs to conduct realistic risk assessments in relation to wildfires in the WUI. Most land conversion in the United States is for housing development. Fires are bound to happen everywhere, but the risk is especially severe in the WUI. Consumers want and need electricity. Somebody has to pay for wildfire liability, which, in California, is still placed squarely with the utilities in a strict liability scheme (inverse condemnation). After being linked to a series of wildfires, PG&E filed for bankruptcy, but utilities cannot simply cease to exist. A better legal liability and cost-sharing scheme has to be developed. Some steps toward this objective have been taken.

The first change has already taken place in the form of A.B. 1054. The bill was passed in a somewhat rushed manner in July 2019 and took effect immediately as an urgency statute. It was a necessary improvement of a situation that simply was not financially feasible. Of course, the bill has not yet been litigated and has thus not yet fully matured. More research into the issues analyzed here will thus be necessary over time for further law and policymaking.

It is, however, clear that the bill brought about major utility reform in some key areas: it includes a \$5 billion down payment on fire risk mitigation from IOUs on which they cannot profit; ties utilities' executive compensation to annual safety performance, backed by on-the-ground audits and increases the CPUC's penalty authority; requires the IOUs to hold a valid safety certification from the CPUC before earning a presumption of prudence in determining cost recovery; establishes a \$21 billion claims-paying insurance-like fund to provide fast relief to victims of catastrophic fires paid in half by the utilities and in half by all ratepayers; and shifted the burden of proof away from the IOUs unless serious doubt is raised about their prudence. But more is needed.

First, the strict liability scheme may have to be changed to a fault-based standard. The desirability of holding utilities responsible whether or not they have acted negligently may simply be too harsh. If a utility has acted prudently and responsibly within the parameters of what is to be expected in the industry, but an accident or other unforeseen event happens,

it is arguably unreasonable to still hold a utility liable for the then-extremely costly consequences of providing a product for which there is a strong demand.

Some of the cost-sharing burden in this context should, as it now does under the bill, fall on the end-consumers. However, imposing costs on all end-consumers as a flat fee across the board will result in ethical, environmental justice, and climate change responsibility issues that should be rethought. Most importantly, already disadvantaged people should not have to pay for the costs of as many better-off people voluntarily moving into risk-prone areas as is currently the case. On the other hand, we have *all* contributed historically to climate change, the costs of which now have to be borne by *somebody*. However, that somebody has to be identified in an equitable manner. Passing on the hot potato will not be possible much longer, if at all.

Consumers who continue demanding products and services that are well known to contribute to climate change—in this case energy derived from, for the most part, fossil fuels—simply have to face the reality that there are costs of doing so. Of course, in the case of energy providers, an urgent shift to renewable and sustainable energy sourcing must also happen soon. Consumers can help shift this by cognitively driven demand, but regulators must also step in urgently here. Often, they still fail to do so. This must change in California and beyond. Laws must be adopted that require yet higher percentages of renewable energy sources than what is often the case so that we can, as a state, nation, and indeed world, move away from fossil fuels in time to avoid catastrophic consequences. We cannot simply keep discussing this; we need to get to the end point soon.

Finally, more private responsibility in the form of mandated hardening of homes in fire-prone areas must be required. Voluntary fireproofing guidelines are, as we see, either ineffective or insufficiently effective. Society still reacts to climate change and wildfire risks. We must shift to be proactive, not reactive.

In the words of former chair of the World Business Council for Sustainable Development, Paul Polman, “[c]limate change is sometimes misunderstood as being about changes in the weather. In reality, it is about changes in our very way of life.”<sup>211</sup> Our current lifestyle choices are not sustainable and must be changed. It is already too late to avoid some of the costs of climate change, but we must act as a responsible, forward-looking society before matters get even worse. We have limited time in which to reach this goal. Urgent action is needed.

211. BrainyQuote, *Paul Polman Quotes*, <https://www.brainyquote.com/authors/paul-polman-quotes> (last visited Sept. 4, 2019).