

# PG&E, Climate Change and the Sustainable Path Forward



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## Key Findings

- The mismanagement at PG&E has created new momentum for a safer, greener era of power and distribution in California and elsewhere.
- A new governance model is critical to ensure that public utilities meet their obligation to communities.
- Renewable energy, new storage solutions and smart grid technology are in development and represent opportunities for impact investors.

For Californians – or anyone concerned about living beings, climate change, or simply turning on the lights – the failure of Pacific Gas & Electric (PG&E) has been a disaster.

Yet, as tragic as PG&E's actions have been, the debacle can also be the impetus for creating a safer, greener era of power generation and distribution in the Golden State.

In this Perspective, we recap the damage done from PG&E's mismanagement and then look forward, highlighting possible solutions that could have a very significant impact on climate change and California's communities.

## The Path Forward

In our view, the path forward is predicated on two key ideas inspired by innovation and technology:

- **Adopting new models for the ownership and governance of California's regulated electric utilities away from monopolies like PG&E, toward community-owned utilities, to deliver renewable power generation and transmission;**
- **Rapid deployment and technology breakthroughs of renewable energy and utility-scale storage technology to reduce reliance on the grid and promote the widespread adoption of solar energy.**

The good news is that both ideas can be committed to today and implemented step by step over the next 20 years – not sometime in the distant future. Thanks to existing technology, progressive thinking, and the billions of dollars ready to be deployed, we can create our own future and not be condemned to repeat the mistakes of the past.

## The Meltdown at PG&E

A new model is an urgent priority because PG&E's culture has led to major fires, gas explosions and multiple outages. To recap:

Over the past few years, fires ignited by PG&E transmission lines killed 100 people in Northern and Central California and resulted in \$25 billion in property damage. This past fall, the utility's inability to manage its equipment plunged Northern California into chaos. PG&E, which serves roughly two thirds of California, shut off power to millions of people on multiple occasions. In July 2020, the company emerged from bankruptcy after paying an initial \$5.4 billion fine and put 22% of its stock in a fund to compensate the victims of the firm stemming from its malfunctioning equipment.

The fires were a separate travesty from PG&E's 2010 gas line explosion in suburban San Francisco. Eight people were killed. Then, PG&E continued to commit pipeline safety violations for five years after the explosion – from 2012 to 2017, according to the [Los Angeles Times](#).

These catastrophes are the product of PG&E's inattention to safety, according to a series of [investigative reports](#) by The Wall Street Journal. [The Journal's](#) reporting found that PG&E's equipment has sparked an average of one fire a day since 2014.

As you may know, PG&E is a regulated [public California utility](#) whose mission is to serve a public good. In our view, it fails to meet the duty of service. Viewed through the lens of Impact/ESG investors, PG&E would have failed the test on all three components of ESG (Environmental, Social & Governance) investment criteria.

Environmentally, the fires were catastrophic to flora and fauna, and they produced nearly toxic air quality for living things on many days. From a Social perspective, the fires and blackouts destroyed property and businesses, disrupted local economies, and contributed to the loss of life. In terms of Governance, Board and C-Suite incompetence repeatedly failed to lead and manage the company and protect shareholders and communities.

State politicians and regulators are to blame for failing to hold PG&E accountable over the decades. In fact, lawmakers pressured the utility to overly focus on other issues, rather than safety, even when they knew PG&E had serious safety problems. Government officials also allowed PG&E to offload its failure to ratepayers, rather than investors. Or as Geoff Eisenberg, Partner, Ecosystem Integrity Fund, reminded me: "Socialize the risk, privatize the profits." Consider the big picture. Over the last 20 years PG&E has destroyed tens of billions of dollars of personal property and lost businesses while pushing all of these costs back on ratepayers. Imagine the renewable future and prosperous state we would have today with a wholly different approach.

## Where Do We Go From Here

The question is where we go from here? Do we need PG&E at all? Can we create an entirely new power system built for the next century?

The good news is that solutions exist today to redefine the existing paradigm if we embrace a new vision based on two innovative strategies.

The first is a new ownership and governance model to manage and oversee the generation and transmission of electricity more safely. The second is combining solar with “smart and microgrids” and cutting-edge storage technology.

### **Break-up PG&E: New Models**

To develop a new governance and ownership model, we can start by seriously considering breaking-up PG&E. This could mean selling parts of the company to local communities and municipalities to operate as locally controlled renewable utilities. A second option is selling off PG&E territories to more competent investor-owned utilities in Southern California, better able to serve their customers.

Gov. Gavin Newsom has said California plans on a state takeover unless PG&E fundamentally changes its operations. More than 20 cities want to dismantle PG&E and put it under some type of new ownership. San Francisco has already offered \$10 billion for PG&E assets in their service territory. San Jose is right behind.

### **Rural Electric Cooperatives**

Another solution is to employ the model used by much of the country.

Rural Electric Cooperatives now serve about 45 million American consumers. An electric distribution map of the U.S. shows that the vast majority of the country’s landmass is served by community-owned cooperatives. These co-ops tend to serve more rural and mountainous areas. These are places in Northern California where PG&E can’t make money.

Rural electric co-ops are an affordable, community-controlled source of power developed over the last 90 years by local communities abandoned or underserved by investor-owned utilities. There are 834 rural electric co-op stories around the nation.

Today, there are private and public entities investing in and seeking to invest billions into the expansion of electric co-ops. This seemingly revolutionary and yet traditional approach could dramatically expand Rural Electric Cooperatives serving rural areas of California. They can partner in development with existing California electric co-ops.

Ironically, powerful political interests have legislated against cooperative and municipal utilities in many places across the U.S, largely prohibiting cooperatives/municipal utilities in: California, New York, as well as states in New England. Not surprisingly these eight states tend to have the highest electric rates in the country. Meanwhile, their rural communities remain underserved. The stifling of innovation and competition are significant culprits.

It will take investment and subsidies from outside California’s rural communities to create a post-PG&E distribution system. That said, if rural California communities can be the stewards of their locally produced power, there is a real chance they will not neglect safety or their broader responsibilities.

As Bob Marshall, CEO of Plumas Sierra Rural Electric Coop (PSREC), Portola, CA told me recently, “If PG&E wanted to, or was forced to sell rural territories, there are community utilities and potential cooperatives with access to capital who can get it done. Yolo County

is thinking about it. Humboldt County should emerge as one cooperative serving both towns and rural communities in the county. There is some concern about splitting urban versus rural California for cost reasons, but that really isn't a major issue. Plumas Sierra has 6 customers per mile and is competitive. It's more important to keep contiguous towns and rural areas combined for economies of scale."

For perspective, PG&E has at least 40 customers per mile and is in bankruptcy. How can it really serve rural communities where the major problems are?

### **Resilience, Renewable, Sustainable**

No matter what type of governance and ownership structures evolve, California is perfectly positioned to advance a new renewable electric transmission paradigm – the "Renewable Distributed Power Model."

This has long been a dream of those concerned about climate change and the current distribution system's inability to deal with renewables and other "non-central station" power sources. Instead of just the "the Grid," we are going to see micro-grids serving communities and neighborhoods largely producing their own renewable power.

Micro-grids and locally produced energy are also a significant opportunity to expand [Clean Choice Aggregators](#) (CCAs). CCAs are non-profit entities that aggregate the buying power of individual customers to secure alternative energy supply contracts. The goal is to lower the energy costs for consumers and/or sell-back renewable energy, primarily solar.

CCAs are currently authorized in California, Illinois, Ohio, Massachusetts, New Jersey, New York, and Rhode Island. In 2016, community choice aggregations sold about 8.7 billion kilowatt-hours of green power to about 3.3 million customers, according to the EPA's latest data. These entities typically buy back power from renewable producers – homeowners and businesses with solar – and at more attractive rates than investor-owned utilities.

### **Storage is the Next Frontier**

New electric storage technology has made tremendous progress in recent years. In fact, storage is the lynchpin to clean energy because the sun does not shine, nor does the wind blow, 24-hours-a-day in the U.S. and most other places around the globe.

Advances in storage are already progressing in many communities. In California, for example, it's now possible to go "[net-zero](#)," meaning that a homeowner can generate all the energy they need at their own home. The combination of solar power, plus solar storage technology such as Tesla's PowerWall, make it possible to never draw any electricity from the grid, rather selling back into the grid. In fact, long-term, net-zero is much cheaper than getting energy from PG&E.

Southern California Edison (SCE), one of California's largest investor-owned utilities, recently approved a massive 770MW of new battery storage, greater than all of the battery storage projects commissioned in the US in 2019, according to [Inside Climate News](#). The energy in SCE's new lithium-ion battery storage project is enough to light up a small city. Construction is expected to be completed in August 2021.

Another storage innovation emerging is “bi-directional charging technology”, which is becoming available for EVs. My Chevy Bolt will roughly store a week’s worth of solar energy generated at my home. To date, I really couldn’t connect the two – my home and my car. As of 2021, with my next EV, my car and my home-solar can be part of my own integrated power system. That’s an example of the many small-technology breakthroughs emerging to transform power delivery.

New grid and storage technology will allow energy to be used with less reliance on the traditional grid. The development of local grids and local storage will have a synergistic impact that likely will dramatically accelerate the use of solar and other renewables. This meaningfully aids in the fight against climate change by moving us away from fossil fuel-based electricity.

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Geoff Eisenberg, Partner, Ecosystem Integrity Fund, San Francisco, which invests in cutting edge renewable technology, put the situation in California in perspective: “Fire season in California is now defined by whether or not my bags are packed, ready to evacuate if a fire blows through. Are my kids safe playing outside in the smoky air? PG&E has totally lost control, and is no longer trusted to keep us safe. It has put our families at risk, and demonstrated that climate change disaster is not 25 years away, but here today.”

With leadership and commitment, a new way forward is possible. The key is working together as energy experts, impact investors, business leaders, concerned citizens, and through the political process, to create a renewable and safe electric system for California that profoundly addresses climate change.

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## About Veris

Veris Wealth Partners, LLC is impact wealth management firm. Our team believes that superior investment performance and positive impact are complementary parts of a holistic investment strategy. Based in San Francisco, Veris has offices in New York, Portsmouth, and



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