

## Climate Change and Credit Risk: A Current Illustration by Clem Dinsmore, JD

The recent forest fires in Paradise and elsewhere in California have confirmed the casualty risk contribution by the electric transmission grid infrastructure of Pacific Gas & Electric Company [PG&E]. The resulting devastation has been so significant that PG&E faces a potential liability of \$30 BILLION to homeowners, school districts, local governments and others adversely affected by the fires. This potential liability is prompting PG&E to file for voluntary bankruptcy.

Such a filing places at risk companies that financed the construction in California and Nevada of massive solar arrays by alternative energy developers that sold their power to PG&E. These financial companies include so-called yieldco's, which are funded by institutional and other investors seeking high yields. One funder is controlled by Warren Buffett's Berkshire Hathaway, which, also, controls several of the largest, global property and casualty reinsurance companies. Reinsurance companies are among business entities with the most sophisticated knowledge of climate change risk.

PG&E bankruptcy protection filing, creates a situation where the investors that financed the solar arrays that provide power to PG&E face the risk of loss, as PG&E may seek to reduce the prices at which it purchases power under its agreements with the solar array project developers. Solar power prices today are substantially lower than they were, when PG&E signed the agreements.

The State of California has a strong self-interest in this matter, as it is relying upon the continued availability of capital to alternative energy project developers to realize the State's aggressive goal of weaning its constituents from fossil energy. The State, of course, has competing interests in the recovery of Paradise and other communities devastated by the recent forest fires.

A factor contributing to the fire risk at the root of this controversy is the land use permitting decisions of local governments that have allowed community development to extend near and within forested areas. The development has created demand for electricity transmission that PG&E provides.

Only within the last week have the credit rating agencies downgraded the credit rating of PG&E debt from investment grade to junk.

So, prospectively what are you to do as a potential investor in the yieldco's or other entities that finance alternative energy projects?

One may normally assume that regulated utilities present investment grade credit risk. The managers of the involved yieldco's presumably did. However, as illustrated by the California fires, climate change introduces new sources of risk that need to be carefully considered by utility companies, their equity and bond investors, and creditors of third parties that finance alternative energy supplies purchased by utility companies. A resource that will need to be consulted going forward is the risk assessment by the property and casualty insurance and reinsurance companies. The recent California fires are prompting them to review their underwriting standards and portfolio risk in light of the risk aggravation associated with human settlement expanding into forested areas in California and elsewhere. In the future, if local land use regulators will not constrain such expansion, then private market entities like the property casualty insurers and reinsurers may need to provide a market constraint by requiring settlers to self-insure. Utility regulators may, also, need to allow utilities to refuse to provide grid connected electricity transmission. With such policy settlers may need to rely upon off-grid power provided by solar panels, wind turbines, fuel cells or other alternative energy sources.

The forest fire risk discussed here is merely one of the emerging casualty risks associated with climate change. Other risks include flooding, coastal earthquakes and tsunamis [associated with sea level rise], hurricanes with higher wind velocities, acute rainfall events, droughts, and species [including pollinating species] extinction.