

In 2007 Arizona passed its renewable portfolio standard, called the Renewable Energy Standard (RES), followed shortly by its net metering rule. These policies required utilities to produce and procure additional supplies of renewable energy, as well as compensate individual solar owners for the power they produced and placed back on the grid. At that time, the renewable industry was in its ascendancy, and despite early misgivings and protests, utilities were willing to go along with the push for renewables and distributed generation, largely supporting the implementation of the RES and net metering. Fast forward seven years and renewables, and in particular, distributed generation, have become a powerful player in the energy market spurred most notably by the widespread use of net metering. As the use of rooftop solar has grown, non-solar users and utilities have begun to cry fowl. Arizona Public Service Company (APS), Arizona's largest investor-owned utility, has argued that net metering allows customers installing rooftop solar to avoid paying for infrastructure they rely on and services they use, thus forcing non-solar customers to cross-subsidize the extra cost. This has led utilities and non-solar users to call for increased charges on solar in an effort to equalize the cost distribution. Inefficient management of this cost equalization may very well lead to either the death of distributed solar or the utility entering into what is now commonly being referred to as a "death spiral." Fortunately, there are ways of preventing or avoiding this scenario, through regulation, adaptation and technological advancements. However, should utilities disregard or underestimate the need for regulatory and business model reform to address distributed generation, they could quickly find themselves underwater and in uncharted territory. Bankruptcy courts, lacking sufficient precedent and adequate technical expertise, may very well find themselves responsible for the fate of utilities.

We begin by providing an analysis and comparison of the history of renewable power and net metering policies in Arizona and other states. Our paper then introduces ways in which utility companies could save themselves from a possible "death spiral" and what the utility of the future may look like in a world of increasing distributed generation, customer-sited energy storage, heightened energy efficiency and demand response, and the widespread deployment of electric vehicles. Finally, we consider the novel issue of what could happen when utility companies enter or threaten to enter bankruptcy, including the unprecedented clash that could occur between state Public Utility Commissions and bankruptcy courts, as each seeks to contend with a utility industry in financial peril.