Renewable Energy Prop 127—In a Nutshell
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The citizen initiative that brought Prop 127 to the November ballot has drawn considerable attention and controversy. This article seeks to shed light where there has been mostly heat.

Arizonans of all political persuasions love solar energy. And for good reason. Solar radiation is the state’s single greatest domestic energy resource and a constant feature of our daily lives. Maricopa County aptly bills itself the Valley of the Sun. So it’s not surprising that supporters of Prop 127 easily gathered 328,908 valid signatures to put Prop 127 on the ballot—100,000 more than necessary to qualify for the ballot.

But is this citizen initiative good public policy? Let’s look at its features and evaluate the arguments pro and con.

Prop 127 amends Article XV of the Arizona Constitution to direct the AZ Corporation Commission (ACC) to require the state’s electric utilities to get at least half their energy from “renewable” resources by 2030. The renewable requirement steadily ramps up from 12% in 2020 to 50% in 2030. Moreover, it requires a fifth of that renewable energy to come from “distributed” resources such as solar panels sited on homes and businesses. This latter requirement was designed to ensure that the state’s utilities allow customer-sited generation and not entirely rely on large utility-scale solar and wind farms.

Prop 127 specifies which energy resources qualify as “renewable,” including solar, wind, biogas (e.g., landfill methane), biomass (e.g., slash from forest thinning), hydrogen fuel cells, and small hydropower units that don’t damage rivers or destroy habitat. It does not include fossil fuel generators (coal and gas), nuclear power, or large hydroelectric dams. However, these traditional resources can still provide up to 50% of Arizona’s energy after 2030. Interestingly, the ballot measure does allow utilities with large hydropower generators to count as “renewable” any additional power they produce at their dams due to efficiency improvements to the turbines.

The current renewable energy requirement adopted by the ACC in 2006 is 15% by 2025. In 2006 this was considered a stretch goal, but no longer. Virtually all the state’s electric utilities are on schedule or ahead of schedule in meeting this target, with no appreciable impact on electric rates. In fact, the cost of renewable energy has dropped so precipitously since 2007 that solar and wind power are now the least expensive sources of new energy generation in most markets in the U.S, as well as globally. We are in the midst of a renewable energy revolution driven by low cost wind and solar. Prop 127 aims to capitalize on this.

Proponents and opponents of Prop 127 each make a number of key arguments worth examining.
How the ballot measure would impact electric rates is the most common topic of discussion. Many people vote their pocketbook, so this is a crucial feature of the debate. APS, citing a study it commissioned from an ASU professor, has argued that a mandate of 50% renewables by 2030 will force it to prematurely close its coal plants plus the Palo Verde Nuclear Generating Station and build new gas plants to replace them. This, APS claims, could result in a doubling of electric rates by 2030. In contrast, the Clean Energy for a Healthy Arizona campaign commissioned their own expert economist, who disputed the claim that Palo Verde would have to shut down and projected $4 billion in energy savings between 2020 and 2040 if Prop 127 passes.

The difference in these two estimates comes from the assumptions used in the analyses. Importantly, the APS-backed study assumed all renewable energy would have to be taken on the grid exactly at the time it is produced; none of it could be curtailed or stored for later use. It also assumed that once renewable energy cut into Palo Verde’s baseload generation that the plant would have to shut down rather than modify or curtail portions of its daily production. Finally, the study assumed that for the most part expensive natural gas “peaking” plants would replace these baseload resources.

All three assumptions in this virtual worst case scenario are problematic. Solar and wind energy are fully capable of being curtailed instantaneously when needed. First Solar, in fact, does this regularly from their control center in Tempe while managing dozens of large solar arrays across North America. Renewables are also easily and cost-effectively paired with utility-scale batteries to allow, for example, peak solar production mid-day to be partially stored for discharge during peak demand periods in the evening. APS, SRP, and TEP all have recently contracted for solar plus storage projects at surprisingly attractive prices. Even if solar does impinge on Palo Verde’s baseload, the plant can simply run at a slightly lower capacity rather than shut down. Coal plants do not have to be replaced with expensive gas peaking plants, nor are gas “peakers” necessary to manage the intermittency of renewable energy. Plenty of alternative technologies and strategies are installed and functioning all over the United States.

The NRDC study commissioned by supporters of Prop 127 accepted that coal plants would shut down but not the Palo Verde nuclear plant. Then, the study compared the US Department of Energy’s current and projected fossil fuel electricity prices against renewable energy prices and ran the numbers out to 2040, resulting in a projected $4 billion less in electric generation costs with the 50% renewable energy mandate compared to the status quo.

It’s helpful to remember that these are predictions of what might happen as a result of the ballot initiative, not guarantees of what will happen. The energy sector is changing faster than anyone expected. Ideas deemed implausible just a few years ago are becoming mainstream now. Three years ago, no one would have predicted that SRP would announce the closure of the coal-fired Navajo Generating Station. Three years ago no one expected large solar arrays in Arizona to offer their electricity to utilities at less than the current wholesale rate of power. Three years ago no one predicted (except Elon Musk) that lithium-ion battery storage would be
financially feasible as an energy resource in 2018 and that the cost of solar paired with four hours of storage would be the same or less than electricity generated at coal-fired powerplants.

In the debate over Prop 127, opponents claim that 50% renewable energy by 2030 is a stretch goal and trying to get there too quickly will force up electricity rates. But recent developments don’t support this claim. A large traditional for-profit utility in Colorado called Xcel Energy announced this summer it will close two coal-fired plants and replace them with wind, solar, and storage, which they say will get them to 55% renewable energy by 2026 and save customers several hundred million dollars. Earlier this year, Pacific Gas and Electric announced it will close its Diablo Canyon Nuclear Power Plant soon and replace that power with renewables, conservation, and efficiency improvements. PG&E said this move will reduce the cost of service and save ratepayers money.

Another common argument against Prop 127 is that a constitutional amendment is not the proper tool for increasing the state’s renewable energy mandate. This is a reasonable position to hold. The normal legal venue for establishing renewable energy mandates is the ACC. But the ACC has not modified its renewable standards in twelve years, even though the cost of renewables has plummeted since then. Moreover, the current members of the ACC are all from one political party and all received substantial financial support for their campaigns from the corporate owners of APS. Whether warranted or not, there is a widespread perception that the ACC’s independence is compromised.

Because the ACC was established in 1912 by the Arizona Constitution, it requires a constitutional amendment to direct the ACC to take specific action. That is why Prop 127 is a constitutional amendment. Certainly, it would be preferable for the ACC to simply raise its currently modest renewable energy standard and tariff, but the lack of action by the ACC and lack of support by the state’s utilities led renewable energy proponents to go the citizen initiative route.

One other common complaint by opponents of Prop 127 is that it has been largely bankrolled by “liberal” California hedge fund billionaire and climate activist Tom Steyer. Steyer has in fact donated millions of dollars to the Prop 127 campaign and used his NextGen America organization to assist local activists. For their part, supporters of Prop 127 similarly complain that the anti-Prop 127 campaign has been funded largely by APS and its corporate allies. This is also true. In fact, campaign finance reports so far show APS and its parent company Pinnacle West have spent significantly more money trying to defeat the measure than Steyer has spent supporting it. Pick your favorite mega-donor. For better or for worse, this is the nature of political campaigns in the post Citizens’ United era. Unless we enact strong campaign finance reform, large wealthy donors will remain dominant in our political campaigns.

If you feel a sense of urgency about addressing climate change, improving air quality, and capitalizing on Arizona’s prodigious sunshine then this proposition may be your ticket. If you don’t feel that urgency and trust our existing regulatory institutions to get the job done in their own time, then a no vote may be your best choice. Either way, a goal of 50% renewable energy
for Arizona is reasonable, incremental, and eminently achievable. Whether we get there via Prop 127 or some other means, we will get there. The question is only how and when.

Three years ago, no one thought a goal of 100% renewable energy was practical or reasonable. Today, Hawaii, New York, and California have all adopted 100% renewable energy goals by 2045. The city of Tempe this year approved a 100% renewable energy goal by 2035 for municipal operations, joining 84 other U.S. cities that have adopted 100% renewable energy goals, according to the Sierra Club’s Ready for 100 campaign. More than 150 major international corporations have adopted 100% renewable energy goals, including Apple, Bank of America, ebay, Ikea, GM, Goldman Sachs, Google, Hewlett Packard, and many more. Pressure on utility companies to accommodate these corporate goals is helping drive the renewable energy revolution. Soon 50% will seem as modest as 15% seems today. Arizona may blow right past the 50% goal by 2030 if utilities in the state all accept that this is the direction Arizonans want to head and work together to achieve it.

Further reading:

Current Arizona renewable energy standard and tariff: https://www.azcc.gov/divisions/utilities/electric/environmental.asp
Tom Steyer’s NextGen America: https://nextgenamerica.org/
APS’s parent company Pinnacle West anti-Prop 127 website: http://www.pinnaclewest.com/newsroom/prop127/default.aspx#read-more
NRDC-funded study on economic impact of Prop 127: https://www.nrdc.org/experts/dylan-sullivan/new-study-50-renewables-would-save-az-more-4-billion
Campaign spending for and against Prop 127: https://tucson.com/news/local/clash-of-titans-millions-spent-by-both-sides-on-renewable/article_0a3f9ff0-54ec-5c6f-9ba2-a71e2f2d6652.html
News report on Xcel Energy replacing coal plants with renewables:
https://www.greentechmedia.com/articles/read/xcel-retire-coal-renewable-energy-storage#gs.zisZ39k

Links to 100% renewable energy organizations:
- https://environmentarizona.org/programs/aze/100-renewable-energy
- http://there100.org/companies
- http://www.go100percent.org/cms/
- https://www.sierraclub.org/ready-for-100