

Arizona Corporation Commission
Regarding: UNS Electric Rate Case Docket # E-04204A-15-0142



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March 18, 2016

Arizona Corporation Commission

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AZ CORP COMMISSION
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Dear Chairman Little and Members of the Arizona Corporation Commission:

I am an Arizona electric utility customer. I am the senior accountant for a large social services non-profit agency with approximately 400 employees. I am also an energy analyst.

The supposition that rooftop solar energy installed by one family is the cause of increased costs to other families, has been presented by UNS. UNS has been throwing around this concept, without referring to the other options. Statements of costs of solar rooftop without comparing it to the other options are meaningless in the bigger picture. Energy costs for most other UNS options are much more expensive to these families without solar.

If for example, UNS purchases solar energy at a large centralized solar facility, the cost per kilowatt-hour is currently about 6¢ for production, and going down each year, plus 6¢ for transmission and distribution, totaling 12¢/kilowatt-hour. This is after taking out the subsidy of about 2¢ from subsidies. New gas plants are about 13¢/ kilowatt-hour, with a likelihood of increasing fuel costs. This gas plant price is also is after subsidies are subtracted. New coal plants are about the same cost per kilowatt-hour.

When UNS buys solar, or for that matter, gas or coal, the cost of principal for construction is entirely passed on to the ratepayers, families with and without solar. These families also pay for all the interest costs, which are at higher rates for utilities (about 7-8% blending bond interest with return on equity) than for rooftop solar families (about 5% for home equity loans). With utility solar, all ratepayers pay all the utility-solar-plant land acquisition costs, the environmental permit costs, the siting costs, equipment maintenance costs, increased transmission and distribution costs, grounds cost, insurance, switchyard costs and more.

This 12¢/kilowatt-hour cost for centralized utility solar is the system-wide cost that must be paid for by the ratepayers when the utilities expand with centralized solar, or 13¢ gas or coal for that matter.

When a family decides to go solar, there are also system costs. However, instead of passing on these costs, that family pays all the construction cost, all the interest costs, all of the other costs except a small portion of the normal transmission and distribution cost. The non-solar family will

only pay a small transmission and distribution cost. But this cost is very small compared to centralized plant T&D costs. The energy does not have to be transported on long-distance high voltage transmission lines. Rooftop solar largely uses existing lines. Under the UNS proposal, rooftop solar gets sold locally by UNS at a virtually 100% profit over a timespan that is in an instance, not even the normal measurement of a year for return – that is price-gauging.

The non-solar family pays much less for system expansion when the neighbor next door expands the system by 5 kilowatts, for example, compared to when the utility expands the system by that same 5 kilowatt of capacity. The ratepayers in general might pay .5¢ per kilowatt-hour for this extra T&D. This is all they pay, .5 for the extra system cost of adding rooftop solar, compared to 12¢ for centralized utility solar, or about 13¢ for new gas or coal energy.

UNS and other Arizona utilities are crafting a message of rooftop solar being costly, when the real costs are with the other options of utility power plant construction and acquisition.

Never mind about the substantial benefits of solar energy, also known as “value of solar.” We really should address those benefits. However, even without addressing these important advantages, solar rooftop costs less to all families, with and without rooftop solar energy, than the alternative utility power plant expansion.

Sincerely,

Russell J. Lowes