ARIZONA MUNICIPAL POWER USERS' ASSOCIATION
POWER USERS'
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Honorable Commissioners of the
Arizona Corporation Commission
1200 West Washington
Phoenix, Arizona 85007

Re: Docket No. E-00000 J-14-0023/Distributed Generation - Unintended Consequences to Host Utility

Dear Commissioners:

The Arizona Municipal Power Users' Association ("AMPUA") is an association of consumer-owned and operated electrical systems and it consists of cities and towns, rural electric distribution and generation cooperatives, special districts, irrigation and electrical districts, and Indian utilities. Collectively the members deliver electricity in Arizona to approximately a million people. Most members are small transmission dependant utilities. These comments are directed to their unique issues.

DISTRIBUTED GENERATION AND TRANSMISSION IMPACTS

Distributed Generation ("DG") intends to place a resource close to load, most often within a Distribution Provider's ("DP") load bubble (a small municipality, district or distribution cooperative). The DG acts like negative load to the Bulk Electric System ("BES") as well as the Transmission Provider ("TP") upon which small municipalities, districts and distribution cooperatives rely.

The DG argument is made that DG reduces demand on the Transmission Systems ("TS"). In the case of small entities and distribution cooperatives which rely upon Transmission Providers, this is not always true.

Historically, DG had electric system implications of peak-shaving or peak-serving, which was often accomplished by installation of active, dispatchable DG generation sources using fuels such as natural gas, diesel or gasoline.

Since the operation of installed DG intended to provide DG for load during peaks, or for DP peak-shaving, the TP had concerns over the actual DG dispatch in the BP load bubble during the peak for a variety of reasons. Those reasons could be the price or availability of the fuel for the DG leading the DP to not run the DG, or the inoperability of the DG unit due to insufficient or improper maintenance (or from non-use during the major part of the year).

When the DP peak occurred and the DG resource was not available to be dispatched, the system required energy was then imported from the BES and on the lines of the TP to the load use of the small DP distribution cooperative entity under a TP transmission contract.

The question is where will the transmission come from and who pays?

The TP then had to consider the transmission made available for use of the DP during the non-operation of the DG to be actually reserved by the DP (or otherwise there was no transmission path). The TP would then charge the DP the cost of the reserved transmission, normally computed by metering the otherwise normal output of the DG and considering the maximum DG output to be the amount of transmission needed to be reserved to meet load and would then add the "metered" transmission to the actually used transmission on the DP bill. As such, the DP would not escape the cost of reserved transmission to meet load (or, in some cases, the cost for making transmission enhancements) for such a DG installation.

With the penetration of non-dispatchable (fuel cells) or passive (solar arrays or even groups of rooftop solar panels) DG installations, the equity or fairness of the above treatment for transmission costs is called into question.

If the DG is truly not dispatchable within a DP load bubble and is merely a continuous running generator (or "negative" load), then the question of economic curtailment by the DG owner is removed. Maintenance non-operation issues are also reduced as the system simply constantly runs until it needs to be replaced, or refueled and, normally in such instances, the system is designed for such to occur during non-peak seasons and/or non-peak periods. Metering this type of continuous DG output and adding it to the actual DP use transmission bill is unfair and questionable at best, and creates another barrier to DG deployment.

If the DG facility is "passive", such as solar arrays or a large penetration of rooftop panels, then the practice of charging for reserved transmissions could be considered even more than a barrier and could lead to doubling the cost to the DP for transmission in the like magnitude of the solar production.

These types of "passive" DG systems described above are not dispatchable and continue to produce day after day in a specific output profile.

The output of the passive continuously functioning DG system is not subject to differences in fuel costs. The DP cannot turn it on and off and, in fact, the investment required for such an installation makes the DP want the system continuously on and producing as much as possible. The DG produces and is only shut down if the feeder upon which it is located is opened for a fault, clouds or a storm rolls in. Losing the feeder and the solar DG is not a problem in some circumstances as you also lose the load on the feeder. Clouds do impact the solar production, but clouds also tend to reduce the temperature and suppress and lessen system loads, as do storms in a more dramatic way.

In many systems the solar production does not actually reduce the peak, or the demand on the transmission system, but merely moves the peak to a different hour requiring the same level of transmission. In this case, when the peak is not reduced by the DG, the metered output could be "added" to the DP transmission bill and the DG facility or customer actually could cause a rise in the cost of the DP entity transmission and would then provide an added disincentive to the DG installation. This is most probable if the treatment for the billing is not precise as to the metered data and the peak data and lining them up correctly in time. At best, the treatment of transmission reservation is a barrier to this type of DG within the DP load bubble and, at worst, it is an improper additional charge.

The advertisement of DG installations as "helping" the DP electric system by reducing the need to expand the transmission system is then simply false or grossly misleading. A relook at the practice and rules for such "protection" for the TP by way of this charge for the "reservation but non-use" of transmission should be reexamined in today's world.

Very truly yours,

ARIZONA MUNICIPAL POWER USERS' ASSOCIATION

By_____
Its Executive Secretary

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