ORIGINAL

Grand Canyon State Electric Cooperative Association, Inc.

Your Touchstone Energy® Cooperative

April 23, 2018

Docket Control
Arizona Corporation Commission
1200 West Washington Street
Phoenix, Arizona 85007

Re: *Cooperatives' Comments in Energy Modernization Docket*
Docket No. E-00000Q-16-0289

Grand Canyon State Electric Cooperative Association, Inc. ("GCSECA"), on behalf of its electric cooperative members (the "Cooperatives"),[1] hereby submits these initial comments and responses to the Notice of Inquiry ("NOI") issued by the Commission's Utilities Division Staff ("Staff") on February 22, 2018. These comments provide the background and general overview of the Cooperatives' reactions to the proposed Energy Modernization Plan ("EMP"). It should be noted that the currently available information regarding some of the EMP proposals lack the specificity necessary for detailed analysis, and many of the questions in the NOI concern specific utilities or are otherwise not applicable to the Cooperatives. Further, the availability of some of the requested information, especially financial and cost analyses, is impacted by the fact that the Cooperatives are not vertically integrated and most of them conduct individualized resource planning. For these reasons, GCSECA is unable to and has not provided specific responses to all of the NOI questions.

[1] GCSECA's members include the following generation, transmission, and distribution cooperatives: Arizona Electric Power Cooperative, Inc. ("AEPCO"); Duncan Valley Electric Cooperative, Inc.; Graham County Electric Cooperative, Inc.; Mohave Electric Cooperative, Inc.; Navopache Electric Cooperative, Inc.; Sulphur Springs Valley Electric Cooperative, Inc.; and Trico Electric Cooperative, Inc.

BACKGROUND

The Cooperatives differ from other utilities regulated by the Commission in several important respects. First, they are not-for-profit entities, owned by their member-customers, and governed by boards that are elected by and held accountable to their members. Second, compared to other Arizona electric utilities, the Cooperatives operate under unique conditions including their smaller size, more limited resources, and the fact that they are not vertically integrated. Finally, the Cooperatives serve rural communities that are among the most economically challenged areas in the state.

The Cooperatives themselves also differ from one another. For example, some are all-requirements members of AEPCO, some are partial-requirements members of AEPCO and some are not members of AEPCO. The Cooperatives differ significantly in the number of customers they serve and the anticipated customer growth. They have different access to transmission capacity. All of these differences result in unique resource planning needs and perspectives for each of the distribution cooperatives in Arizona.

In light of these differences, over the years, the Commission has adopted modified rules and policies that afford the Cooperatives more flexibility to make resource and operational decisions based on the specific needs and circumstances of their members. Here are just a few examples of the Commission's approach to the Cooperatives:

- When the Commission drafted the original Renewable Energy Standard and Tariff ("REST") rules, it elected to exempt the Cooperatives from the mandatory percentage renewable requirements of R14-2-1804 (Annual Energy Renewable Requirements) and R14-2-1805 (Distributed Renewable Energy Requirements),

and instead included R14-2-1814, which authorizes the Cooperatives to set their own renewable energy goals and plans for Commission approval.

- In the Integrated Resource Plan ("IRP") context, the IRP Rules only apply to Load-Serving Entities with more than 50 MW of generation (thus excusing the distribution cooperatives). Further, the Commission has recognized the distinction between AEPCO and the other Load-Serving Entities by (1) relieving AEPCO of having its IRPs acknowledged by the Commission and (2) limiting AEPCO's filing obligation to just the information, data, criteria, and studies used in its 15-year planning study. *See* Decision No. 73884, p. 8, ll. 1–5; Decision No. 75068, p. 3, ll. 21–25; Decision No. 76632, p. 47, ll. 11–17 .
- In its recent investigation of the value and cost of distributed generation, the Commission adopted a more flexible methodology for establishing export rates for Cooperatives, finding that the Cooperatives "should not be required to comply with any one-size-fits-all requirements that would impose economic and operational hardships." Decision No. 75859, p. 176, ll. 3–21.

EMP QUESTIONS AND CONCERNS

Given this background, GCSECA previously submitted comments in this docket urging the Commission to remain mindful of the Cooperative's unique circumstances and incorporate flexibility into any REST revisions or other energy modernization efforts. *See* GCSECA Comments filed November 30, 2016 in response to Commissioner Little's September 14, 2016 letter. In addition to the issues raised in its prior comments, which are incorporated herein by

reference, GCSECA offers the following initial reactions to the EMP for the Commission's consideration.

Application and Impact on Cooperatives

It is unclear from the EMP documents filed in the docket whether the proposed revisions to the REST and IRP rules and policies will modify their current application to the Cooperatives. As explained above, the REST rules exempt the Cooperatives from mandatory percentage renewable requirements, and the IRP Rules and Decisions account for the distinctions between the Cooperatives and investor-owned, vertically integrated utilities. However, according to the discussion and vote at the March 13, 2018 Staff Meeting, it appears – at minimum – the Commission intends to require GCSECA's distribution cooperative members to procure a defined portion of the EMP's 60 MW biomass generation goal.

If the Cooperatives are subject to the mandates and targets relating to specific types of resources referenced in the EMP documents, the impact could be significant. Though their evaluation is on-going and difficult given the lack of specificity of some of the proposals, the Cooperatives anticipate that procuring the resources and implementing the programs at the levels identified in the EMP documents will create financial hardships for them and their members. As a result, under a one-size-fits-all approach to renewable energy policy, those who can least afford to pay for such resources will suffer a greater portion of the financial burden.

For example, one of the EMP programs of concern to the Cooperatives is the Clean Peak Target ("CPT"). First, the costs associated with those resources are considerable. Given the Cooperatives' comparatively smaller size, the quantities of resources required to meet the 1.5%-per-year target will make it more difficult to take advantage of the cost economies of scale available to the larger utilities. Finally, the fact that the Cooperatives are not vertically

integrated will make the CPT programs more complicated to implement and may reap fewer discernable benefits than those available to vertically integrated utilities. GCSECA's distribution cooperative members acquire a majority of their power through long-term, fixed-price contracts. Under those contracts, peak reduction does not necessarily provide a resource price reduction to the cooperative. As a result, peak reduction and storage do not necessarily provide the same level of benefits as realized by the vertically integrated utilities.

Additionally, it is likely that the EMP will require some of the Cooperatives to procure resources that exceed their current and anticipated future needs. Such procurement requirements increase the likelihood of stranding existing assets. However, the EMP documents do not address the ratemaking impacts on current assets that lose their "used and useful" status as a result of resources acquired pursuant to EMP mandates. While there are too many variables to provide a reliable estimate of rate impacts of stranded assets for the Cooperatives, GCSECA believes the EMP must provide a means of addressing the stranded asset issue.

GCSECA also notes that, to the extent the EMP seeks to reach statewide goals through rules and programs that are applicable solely to the utilities within the Commission's regulatory jurisdiction, the costs of the various programs will fall disproportionally and inequitably on the customers of the regulated utilities compared to those who receive service from entities outside the Commission's jurisdiction. Placing such a burden on regulated ratepayers is of particular concern to the Cooperatives given the limited financial means of their members.

For the foregoing reasons, GCSECA urges the Commission to continue to afford the Cooperatives the flexibility they require to assess their individual resource needs and evaluate resource options in light of the long-term interests of their members. Endorsement of an alternative process for the Cooperatives will not impede the Commission's energy modernization

goals; rather, a flexible approach will allow the Cooperatives to further those goals in ways that accommodate their distinct characteristics. Under the current REST rules, the Cooperatives' locally elected boards have evaluated various renewable projects in light of their service area and customer profiles, which process has resulted in construction of renewable resources that meet the REST standards. If the Commission incorporates the same level of flexibility in the revisions to its energy rules and policies, GCSECA anticipates similar positive results.

Biomass Generation Goal

Given the uniqueness of GCSECA's individual members, the financial impacts of the proposal to require the Cooperatives to procure a portion of the EMP's 60 MW biomass generation goal are particularly difficult to assess due to the logistical and jurisdictional issues, including:

- Who will construct, own, and operate the biomass facility?
- How much will it cost to construct the facility and who will provide the funding?
- Will the percentage procurement requirements be adjusted over time or will utilities be locked in to their mandated share for a 20-year period?
- Can the various siting, permitting, and environmental requirements associated with construction of the facility be met in time for an in-service date of December 31, 2021?

GCSECA notes that most of its members are not located near biomass sources (*i.e.*, forests), and others will not have transmission available to transport power from the proposed biomass facility (depending on where the facility is constructed). Accordingly, imposing a

mandate on the Cooperatives will likely result in additional economic hardships and rate increases beyond the actual procurement costs.

Finally, to the extent the Commission's approach to the EMP biomass goal takes the form of a mandate to each utility to procure a specific amount of generation from a specific generation source, the mandate likely extends beyond the Commission's authority. *See Phelps Dodge Corp. v. Ariz. Elec. Power Coop., Inc.*, 207 Ariz. 95, 112–113, ¶ 57–61 (App. 2004) (invalidating portion of Retail Electric Competition Rules that interfered with the utility management decisions).

CONCLUSION

GCSECA and its member cooperatives appreciate the opportunity to share these initial comments regarding the EMP. For more detailed information, please see the NOI responses attached hereto.

RESPECTFULLY SUBMITTED this 23rd day of April, 2018.

GRAND CANYON STATE ELECTRIC
COOPERATIVE ASSOCIATION

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ARIZONA CORPORATION COMMISSION STAFF
NOTICE OF INQUIRY
Docket No. E-00000Q-16-0289
Energy Modernization Plan
April 23, 2018

1. Public Interest/Cost Benefit

The Commission has responsibility, among other things, to set rates that are just, fair, and reasonable. In order to fulfill that obligation, the Commission has to take into consideration all relevant information such as the cost of providing safe and reliable utility services consistent with the public interest.

a. Please provide a thorough analysis of the prospective cost to ratepayers of the Energy Modernization Plan.

Response:

As explained in GCSECA's general comments, its member cooperatives include generation, transmission, and distribution cooperatives (the Cooperatives). Because each of these member cooperatives are in a unique position and not vertically integrated, analyzing prospective costs to the retail ratepayers of these entities is particularly challenging. Further, the long-term nature of some of the EMP goals present challenges in developing reliable assumptions regarding future costs and energy consumption. The Cooperatives do not generally engage in resource planning beyond 20 years in the future and forecasting fuel and energy markets beyond such a period is difficult, even without the consideration of the substantial market changes, which the EMP could produce. An accurate analysis of the proposed EMP would require an undertaking not unlike that of an Integrated Resource Plan, including a variety of potential resource alternatives, a forecast of generator dispatch, a consideration of electric reserve and regulation requirements, as well as an analysis of stranded debt, transmission, and other factors. Given the amount of time provided and the significant uncertainty around certain aspects of the EMP, such a detailed analysis was not possible for each Cooperative.

Notwithstanding the foregoing, a high level composite analysis was performed on the anticipated effects of the Energy Modernization Plan (EMP) for Cooperatives whose requisite data was readily available. Whereas the Clean Energy, Energy Storage, Biomass, and Dispatchable Clean Energy portions of the EMP would each have an independent impact on utility portfolios as well as a combined impact, these EMP elements have been analyzed in combination with one another to produce a combined rate impact from the intersection of these resource goals. **On a high-level and preliminary basis, the Cooperatives estimate that achievement of the goals set in the EMP, as written, will add roughly $50/month to the average customer bill by 2030. By 2050, the average Cooperative customer's bill will increase by approximately $162/month as a result of the investments required under the EMP. These estimates are given in 2018 "real" dollars, and are based on assumed resource capabilities and costs as observed today.**

In studying the EMP, the most costly provision appears to be the Clean Energy requirement of 80% by 2050. Achievement of this goal would require a significant renewable buildout, which the Cooperatives preliminary estimate at roughly 1400MW of solar and wind capacity by 2050, with roughly an equivalent amount of battery storage. The magnitude of this capacity expansion is well in excess of the Cooperatives' projected peak load, and results in a significant forecasted cost to cooperative customers. Because the Cooperatives do not have access to nuclear power or additional hydropower options, the clean energy penetration associated with renewable power trends upwards in the later years (2035-2050) to hit the 80% CREST target, which saturates the system with renewables. As a result of the limited window of time these intermittent resources generate, large amounts of both renewables and battery storage are required to shift that renewable energy toward hours when renewable resources are not directly generating. Advancement in technology will be necessary to operate the Cooperatives systems at these high levels of intermittent resources.

EMP Biomass Target

According to the fact sheet filed in the docket on February 7, 2018, the EMP suggests the following Cooperative biomass participation.

Graham County Electric Cooperative	0.18 MW
Navopache Electric Cooperative	0.54 MW
Mohave Electric Cooperative	0.9 MW
Sulphur Spring Valley Electric Cooperative	1.08 MW
Trico Electric Cooperative	0.9 MW

Although the biomass target is, by megawatts, a small portion of the EMP, the Cooperatives understand this element to be a focus for some stakeholders. As a result, a separate analysis of the biomass portion of the EMP was performed on behalf of the distribution Cooperatives with readily available resource information. The biomass analysis performed by the Cooperatives assumes the participation levels described above, as well as biomass project costs as developed by the National Renewable Energy Laboratory and Arizona Public Service. **The projected costs to cooperative consumers as a result of the estimated biomass additions ranged from $1.26/customer/month to $2.03/customer/month, depending on the project cost of the biomass facility.** These estimates do not consider costs or difficulties associated with the transmission of such power or challenges associated with fuel supply beyond those typical of such a facility.

c. What is the possibility of stranded investment?

Response:

The Cooperatives' initial analysis indicates that the EMP will require some of GCSECA's members to procure resources that exceed their current and anticipated future needs. Such procurement requirements increase the likelihood of stranding existing assets because they will lose their "used and useful" status.

f. What is the positive and/or negative impacts to reliability and resiliency?

Response:

Based on their initial analysis, the Cooperatives have identified several potential negative impacts of the EMP on reliability and resiliency.

For example, the renewable energy targets will require procurement of a substantial amount of intermittent generation resources, such as wind and solar. While energy storage has the potential to mitigate some impacts of intermittency in generation, the amount of batteries, the investment involved for those resources, and the ultimate effect of battery storage with regard to reliability has yet to be determined.

Moreover, it is likely that with a significant amount of intermittent renewables, additional ancillary services may be necessary and, some amount of traditional generation may need to be online in order to provide regulation and grid stability. These units may frequently need to run at their least efficient and least flexible operating points to account for the intermittency and ramping requirements associated with large amounts of renewables.

i. What is the magnitude of negative pricing to Arizona ratepayers as a result of the Energy Modernization Plan?

Response:

Negative pricing is a possible outcome of some of the EMP goals. However, there are too many unknown variables to accurately predict the magnitude of negative pricing.

j. How much of the utilities current energy portfolios would be classified as "clean?"

Response:

The amount of "clean" energy varies among the Cooperatives, ranging from 7.5% to 23% of their respective portfolios.

k. Can utilities project how their energy portfolios will appear by 2050 without the Energy Modernization Plan?

Response:

The Cooperatives' current forecasted energy portfolios do not extend to 2050. Therefore, the Cooperatives do not believe they can project their 2050 energy portfolios – either with or without the EMP – to a reasonable degree of certainty.

l. How would future energy planning change for utilities if the Energy Modernization Plan is adopted?

Response:

While the Cooperatives cannot accurately predict their long-term energy portfolios, they believe that the impact of the EMP on their planning process depends on market factors. If the resources required to comply with the EMP become cost-effective and meet the goals of reliability and resiliency, then the procurement of such resources would likely fit in the Cooperatives' planning process. However, if the same resources remain too expensive and do not adequately benefit the Cooperatives' members, then the EMP will dramatically change the planning process by requiring the Cooperatives to procure resources they would not otherwise procure to the detriment of their members.

m. If the Energy Modernization Plan is adopted, would utilities change their plans regarding the useful life of current coal plants?

Response:

Given the significant uncertainty of the future electric market under the EMP, it is difficult to ascertain the economic viability and usefulness of most existing generating assets, including those powered by coal.

p. How do utilities expect consumer prices to change with coal plant retirements?

Response:

The retirement of coal plants is concerning for multiple reasons.

Historically, these units have had lower energy production cost than most other generating units in utilities' portfolios. Further, because the fuel supply of coal facilities is typically procured through long-term contracts with coal mines located close to the generating facility, the cost of fuel is typically significantly more stable than natural gas, which is traded in a regional or national marketplace. Both of these facts have contributed to the historic stability and relative low cost of electric bills associated with coal-fired resources.

Another value of these assets is found in their characteristics and contributions to the grid. Large steam units, like those typically fueled by coal, have the ability to stabilize the electric grid at even low loads. This is due to the large spinning mass of the generator, which allows it to supply power, balance voltage and frequency, and regulate to instantaneous changes in load in ways which are both valuable and different from some alternatives. Accordingly, the retirement of coal assets creates concerns beyond just price impacts.

With regard to consumer prices, the Cooperatives anticipate the retirement of coal plants to be accompanied by price increases, especially if retirement results in stranded assets.

t. How much does it currently cost to build a utility scale solar project?

Response:

The rough capital cost of a utility-scale solar facility is between $1,100 and $1,300 per kilowatt.

u. How does that compare to the current cost to build a natural gas plant for the same electricity output?

Response:

The Cooperatives' latest information indicates that the new build capital cost of natural gas generating asset is between $700 per kilowatt and $1,700 per kilowatt (2016$), depending on the size and complexity of the generating unit.

v. What percentage of each utility's customers currently have residential solar panels?

Response:

The Cooperatives' current percentage of customers with installed residential rooftop solar ranges between 0.7% and 4.8%.

w. Please provide the trend over the last five years?

Response:

The installation of residential rooftop solar has varied widely among GCSECA's members over the last five years. Some have experienced explosive growth, some consistent increases, while others have fluctuated in response to program changes, economic forces, and other external variables. Accordingly, the Cooperatives' found no collective "trend."

x. **Please project how many new residential solar projects will be completed in the next ten and twenty years?**

Response:

The Cooperatives do not have accurate projections for residential solar installations over the next ten to twenty years. Among the various factors that could influence residential customers are the Commission's change in net metering policy, the expiration of federal tax credits, breakthroughs in battery technology, regulatory and legislative programs, and revised rate designs.

y. How much storage is currently being used by the utilities?

Response:

Some of the Cooperatives' members have installed batteries on their systems behind the meter. The Cooperative boards have evaluated various utility scale energy storage options and, to date, determined that investment in the technology is not yet in their members' best interest. However, the Cooperatives will continue to monitor energy storage as the technology advances, and invest when a cost-benefit analysis deems such investment prudent.

cc. How do the utilities expect to invest in storage without the Energy Modernization Plan?

Response:

The Cooperative boards will continue to monitor energy storage as the technology advances, and invest when a cost-benefit analysis deems such investment prudent.

dd. What energy storage projects are currently being contemplated?

Response:

The Cooperatives are committed to studying this technology for implementation in applications in which a cost-benefit analysis would show economic benefits to consumers. Some of GCSECA's members are also contemplating pilot projects to assess the qualitative benefits and capabilities of battery storage firsthand.

ee. Is a target of 3,000 MW of energy storage by 2030 an attainable goal?

Response:

While the target is potentially attainable depending upon continued advances in energy storage technologies, the Cooperatives have several concerns regarding the EMP's energy storage goal. First, achievement of the target will be very expensive, especially for rural utilities like the Cooperatives.

Next, a key anticipated benefit of storage – to reduce peak demand – is not as applicable to the Cooperatives. Specifically, GCSECA's distribution cooperative members acquire a majority of their power through long-term, fixed-price contracts. As a result, peak reduction and storage do not necessarily provide the same level of benefits realized by the vertically integrated utilities because peak reduction resulting from storage does not automatically result in a resource price reduction to the distribution cooperative.

Finally, the EMP's energy storage target is a statewide goal, but will not be enforced against unregulated utilities. Placing that burden of this goal on regulated ratepayers is of particular concern to the Cooperatives, given the comparatively limited financial means of their members as a whole.

Based on the foregoing, GCSECA respectfully submits that, while the energy storage target may be attainable, the costs associated with the goal significantly outweigh the benefits as applied to the Cooperatives.

ff. Is a mandate related to Arizona's forests a proper function of the Commission's mission to regulate utility rates?

Response:

GCSECA respectfully submits that mandating procurement of a specific resource – at levels that may exceed a particular utility's current and anticipated future needs – in order to address concerns regarding wildfires is attenuated from the Commission's core functions. A mandate of this nature would likely exceed the Commission's jurisdiction as an impermissible interference with utility management decision making. *See Phelps Dodge Corp. v. Ariz. Elec. Power Coop., Inc.*, 207 Ariz. 95, 112–113, ¶ 57–61 (App. 2004) (invalidating portion of Retail Electric Competition Rules that interfered with the utility management decisions).

gg. Is there a constitutional or statutory provision granting authority to the Commission to issue policy regarding Arizona's forests?

Response:

GCSECA is not aware of a constitutional or statutory provision extending the Commission's authority to develop policies regarding Arizona's forests.

hh. If the health of Arizona forests is a statewide issue, should that issue be debated and discussed at the Arizona Legislature?

Response:

The Cooperatives believe that the health of Arizona's forests and the prevention of future wildfires is an issue of statewide concern, which should be addressed at the Arizona Legislature. For example, the Arizona Department of Forestry and Fire Management is a state agency created by statute, and is charged with the responsibility to provide for land management and the prevention and suppression of wildland fires on state land and on private property located outside of cities and towns. See A.R.S. § 37-1301, et. seq.; https://dffm.az.gov/.

ss. Without any action from the Commission, would Arizona utilities continue to procure biomass energy?

Response:

The Cooperatives continue to monitor biomass generation options, and absent the EMP, would consider investing in the technology when a cost-benefit analysis deems such investment to be prudent and in the best interest of their members.

tt. Please explain how utilities currently meet peak demand?

Response:

Arizona's distribution Cooperatives acquire a majority of their power through long-term, fixed-price contracts. Accordingly, they – like other utilities – meet peak demand via a combination of resources available at the time of peak consumer demand. This is frequently through a combination of baseload assets, like coal and natural gas, which have traditionally operated in all hours of the day, intermediate gas assets, which may be turned on once or twice a day, and peaking assets, which start quickly and deliver additional power immediately when called upon. These assets are also used to regulate for any intermittent generation, which may be producing on the system.

uu. What is the cost of meeting peak demand for each generating source?

Response:

Arizona's distribution cooperatives each have different resource portfolios, typically comprised of one or more long-term wholesale power supply contracts, most of which are priced at a fixed monthly capacity cost derived from the actual fixed cost of the underlying resources (regardless of whether the resource is used at the time of the peak). Distribution cooperatives may also supplement their long-term wholesale power contracts with market purchases to meet peak demand. As a result, the distribution cooperatives do not have specific generating sources from which the cost of meeting peak demand can be derived.

ww. Are there clean energy projects already contemplated for use during peak demand?

Response:

Over the past several years, the Cooperatives have collectively installed more renewables than at any other time in their history. This expansion has been primarily in the form of solar installations, both in front of and behind the retail meter. This expansion of solar has the potential to shift the day or time of the peak demand. However as described in the response to 1(tt) and 1(uu), GCSECA's distribution cooperative members acquire the majority of their power through long-term, fixed-price contracts that may not provide for any cost savings by reducing the peak demand.

xx. Is it a proper function of the Commission to require ratepayers to pay for electric vehicle infrastructure?

Response:

GCSECA respectfully submits that a program aimed at the electrification of the Arizona transportation sector in order to improve air quality in the Phoenix Metropolitan area is too attenuated from the Commission's core functions.

Further, to the extent the EMP's electric vehicle infrastructure goal is a statewide goal that will be funded by ratepayers in the Commission's limited jurisdiction, the costs of such a program will fall disproportionally and inequitably on the customers of the regulated utilities compared to those who receive service from entities outside the Commission's jurisdiction. Placing such a burden on regulated ratepayers is of particular concern to the Cooperatives given the limited financial means of their members.

yy. What is the relationship between electric vehicle infrastructure and a utility's costs of providing electricity?

Response:

The relationship between electric vehicle infrastructure and a utility's costs of providing electricity will ultimately depend on whether the utility has the responsibility (or opportunity) to build and operate the infrastructure, the rates and revenue requirement associated with the use of the electric vehicle infrastructure, and the nature of incentives provided for the users of the infrastructure to do so in a way that produces short and long term reductions in the utility's cost of service.

zz. If electric vehicle infrastructure would benefit all Arizonans, should the issue be debated and discussed at the Arizona legislature?

Response:

The Cooperatives believe the electrification of the Arizona transportation sector is an issue of statewide concern, which should be addressed at the Arizona Legislature. Additionally, to the extent the EMP's goal focuses on specific geographic areas (such as the Phoenix Metropolitan area) or property within the jurisdiction of other state agencies (such as public highways), it may be more appropriate for other sectors of the government to address the infrastructure needs identified in the EMP.

ddd. Do Arizona utilities have any plans to be involved with electric car stations?

Response:

One of the GCSECA distribution Cooperative members is investigating possible construction of EV infrastructure for retail sales. The rest of GCSECA's members do not have current plans to be directly involved with electric car stations, but some have charging stations located in their service areas (which are owned and operated by the Cooperative's member/customer). It should be noted the each of the Cooperatives' service territories contain large rural areas, making electric vehicle stations impractical in those areas.

eee. If Arizona utilities built electric vehicle infrastructure, would the investments be included in rate base?

Response:

It is unclear whether the EMP anticipates utility construction and/or ownership of electric vehicle infrastructure. To the extent that utilities are required to build and maintain electric vehicle infrastructure, it should be included in rate base.

fff. Is it just, fair and reasonable to charge ratepayers for infrastructure that is only used by a certain population of Arizonans?

Response:

The question of what items should be recovered through rates is a fact intensive inquiry. To the extent the costs of the EMP's electric vehicle infrastructure goal would fall disproportionally and inequitably on the customers of the regulated utilities and specifically the Cooperatives' members (who will not benefit from the avoided air quality compliance costs referenced in the EMP), GCSECA does not believe such charges would be just, fair, or reasonable.

ggg. Should a utility customer have exclusive rights to an electric charging station built by that utility?

Response:

It is unclear whether the EMP anticipates utility construction and/or ownership of electric vehicle charging stations. To the extent utilities would own such infrastructure and the cost of constructing and maintaining the infrastructure would be recovered through rates, customers may assert an exclusive right to use. However, exclusive use of charging stations (especially those located on public highways) appears inconsistent with the intent of the EMP. Accordingly, additional analysis would be required in order to develop a fair and equitable plan for the funding and right to use infrastructure constructed pursuant to the EMP.

hhh. How will the customer be charged, at what rates, and who sets those rates?

Response:

The ratemaking associated with electric vehicle charging stations may fall within the Commission's constitutional jurisdiction. The logistics of what rate would be appropriate and how the rates would be assessed would require additional analysis.

2. Policy Framework

The Energy Modernization Plan proposes to use the Renewable Energy Standard and Tariff ("REST") policy framework for modernizing the state's energy policy to be renamed the Clean Resource Energy Standard and Tariff ("CREST").

a. Please describe the entities which would be required to participate in the state's energy policy.

Response:

Based on the information currently available, it appears the only electric utilities that would be required to participate in the EMP programs would be those regulated by the Commission.

b. Should the Energy Modernization Plan encompass entities not regulated by the Commission such as municipal corporations or quasi-federal entities?

Response:

Yes. In order to accomplish the statewide goals articulated in the EMP and do so in a manner that avoids a disproportionate or inequitable impact on regulated ratepayers, GCSECA believes participation by non-regulated utilities would be necessary.

c. Would legislation be necessary to include such entities as participants in the Energy Modernization Plan?

Response:

Yes. It is GCSECA's understanding that legislation would be necessary in order to legally require non-regulated electric utilities to participate in the EMP.

d. Should the Energy Modernization Plan apply to all utilities regardless of size or characteristics, or should certain utilities, for example small companies and/or cooperatives, be treated differently?

Response:

GCSECA urges the Commission to adopt a different approach for the Cooperatives.

The Cooperatives differ from other utilities regulated by the Commission in several important respects. First, they are not-for-profit entities, owned by their customers, and governed by boards that are elected by and held accountable to their members. Second, compared to other Arizona electric utilities, the Cooperatives operate under unique conditions including their smaller size, more limited resources, and the fact that they are not vertically integrated. Finally, the Cooperatives serve largely rural communities that are among the most economically challenged areas in the state.

In light of these differences, over the years, the Commission has adopted modified rules and policies that afford the Cooperatives more flexibility to make resource and operational decisions based on the specific needs and circumstances of their members. See R14-2-1814 (exempting the Cooperatives from mandatory percentage renewable requirements); Decision Nos. 73884, 75068, and 76632 (implementing a modified IRP process for AEPCO); Decision No. 75859 (finding that the Cooperatives "should not be required to comply with any one-size-fits-all requirements that would impose economic and operational hardships").

Accordingly, rather than subject the Cooperatives to the EMP mandates and targets, GCSECA urges the Commission to continue to afford the Cooperatives the flexibility they require to assess their individual resource needs and evaluate resource options in light of the long-term interests of their members. Endorsement of an alternative process for the Cooperatives will not impede the Commission's energy modernization goals; rather, a flexible approach will allow the Cooperatives to further those goals in ways that accommodate their distinct characteristics. For example, under the current REST rules, the Cooperatives' locally elected boards have evaluated various renewable projects in light of their service area and customer profiles, which process has resulted in construction of renewable resources that meet the REST standards. If the Commission incorporates the same level of flexibility in the revisions to its energy rules and policies, GCSECA anticipates similar positive results.

e. Please comment on any energy policy in Arizona you deem to be outdated, explain why, and identify proposed improvements to these policies.

Response:

Given the flexibility that the Commission has historically afforded the Cooperatives, GCSECA does not have any specific energy policy revisions to propose at this time.

f. Please explain the role of traditional regulated energy providers changing in the future as a result of market and technological changes.

Response:

The role of regulated energy providers is already changing as a result of market and technological changes. As is the case in any industry, the ability to adapt to and take advantage of market and technological changes is critical. Average energy use per customer is declining. New technologies and information provide the basis for customers to manage their energy usage in a more cost effective and efficient manner. As a result, utilities are becoming involved in providing expertise and assistance to their customers in the management and use of energy.

That being said, electric utilities will continue to provide safe, reliable and cost effective distribution service for the foreseeable future, while market and technological advances will continue to drive the industry toward higher levels of service at a lower cost.

g. Please comment regarding the Energy Modernization Plan's flexibility of allowing 20% of the energy mix to come from resources other than the clean resources described in the Energy Modernization Plan.

Response:

While the Cooperatives cannot accurately predict their energy portfolios for the time period addressed by the EMP, they believe the question of whether the EMP's 20% flexibility provision will be sufficient depends on market factors. If the resources required to comply with the EMP's 80% clean energy requirement become cost-effective and meet the goals of reliability and resiliency, then the flexibility to procure other resources to cover the remaining 20% will not be problematic. However, if the clean energy resources remain too expensive and do not adequately benefit the Cooperatives' members, then the 20% flexibility provision will be insufficient to allow the Cooperatives to make procurement decisions based on the needs and interests of their members.

l. Is this enough to ensure reliability of the bulk electric transmission system and local distribution systems?

Response:

Whether the EMP's 20% flexibility provision will be enough to ensure reliability depends on the specific characteristics of the clean energy resources comprising the other 80% of the portfolio. However, without significant improvements in technology and/or decreases in clean energy resource prices, the cost to ensure reliability under the EMP will be substantially higher than the cost to ensure reliability using "non-clean" resources.

m. Who would benefit, and in what manner, from the Energy Modernization Plan? Please include a consideration of costs associated with the benefits of the Energy Modernization Plan. Should the costs be borne by the beneficiaries?

Response:

Given the long-term nature of the EMP and its statewide goals, it is GCSECA's understanding that the intended beneficiaries of the plan include future electric utility customers, Arizona citizens who live in wildfire prone areas or are otherwise impacted by wildfires, current and future owners of electric vehicles, and residents of the Phoenix Metropolitan area. Additionally, GCSECA anticipates that, on both a short- and long-term basis, the EMP would benefit the non-regulated, non-utility companies that develop and sell the technologies necessary for compliance with the EMP.

The Cooperatives are unable to assess the financial impact (either positive or negative) associated with the external benefits articulated in the EMP, but anticipate that the EMP's constraints on electric resource procurement will hinder the Cooperatives' ability to make resource decisions aimed at minimizing costs to their member-consumers.

Finally, GCSECA believes the costs associated with the EMP should be allocated in a manner that avoids a disproportionate or inequitable impact on regulated ratepayers, especially those who will not participate in location-specific benefits.

o. Will the flexibility of natural gas-fired generation continue to play an important role in Arizona's energy future?

Response:

As providers of safe, reliable, and affordable energy, the Cooperatives support a balanced energy portfolio. The Cooperatives believe that natural gas-fired generation is an important element of a balanced energy portfolio, and will continue to be so in the future.

p. Given Arizona's expected reliance on natural gas generation in the coming decades, discuss the importance of continued efforts to develop market area natural gas storage and other tools to provide more flexible and reliable natural gas delivery in Arizona.

Response:

The potential interruption of natural gas supply is a significant issue for the resiliency of the power system, but one that can be addressed through certain mitigation strategies. Arizona's natural gas plants are supplied almost exclusively by the San Juan and Permian basins. Gas from these sources is transported into Arizona and California through a northern and southern pipeline system from New Mexico. If either of these pipeline systems were to be interrupted, Arizona's natural gas fired plants may be in competition with those in California and New Mexico for adequate transportation capacity. Construction of natural gas storage in Arizona is a possible mitigation strategy to address supply interruption as is the development of natural gas storage downstream of supply disruptions or pipeline constraints. However, it should be noted that the cost-effective development of natural gas storage is highly dependent on the physical geography of the area. Finally, the procurement of firm natural gas transportation is another option available to utilities to ensure the highest priority of transportation service in the event of a supply interruption.

r. Does the Energy Modernization Plan raise any concerns regarding the "management interference doctrine"? Can these concerns, if any, be addressed through flexibility in the plan implementation?

Response:

The EMP appears to include mandates requiring utilities to invest in and procure energy storage, biomass, and EV infrastructure. To the extent the EMP dictates specific resource obligations (including type and amount), such provisions likely exceed the Commission's jurisdiction by impermissibly interfering with utility management. *See Phelps Dodge Corp. v. Ariz. Elec. Power Coop., Inc.*, 207 Ariz. 95, 112–113, ¶ 57–61 (App. 2004) (invalidating portion of Retail Electric Competition Rules that interfered with the utility management decisions).

This problem could be addressed by making the provisions optional rather than mandatory.

3. Clean Energy

The Energy Modernization Plan proposes a target of 80% clean resources by 2050 including solar, hydro, wind, nuclear, energy efficiency, and other measures such as energy storage, with the ultimate goal of being 100% from clean resources.

a. Should the existing REST rule targets change and if so how should they change?

Response:

To the extent the EMP is implemented with provisions that are inconsistent with the REST rules (including targets), the REST rules should be modified to be consistent. If the REST rules are revised, GCSECA urges the Commission to retain the provisions that exempt the Cooperatives from the mandatory percentage renewable requirements and authorize the Cooperatives to set their own renewable energy goals and plans for Commission approval.

c. Should the Energy Efficiency ("EE") rules, both gas and electric, be revised, repealed, suspended, or integrated into the Energy Modernization Plan?

Response:

The Cooperatives believe the EE rules should be modified or integrated into the EMP in a manner that provides for cost-effective implementation of energy efficiency measures based on the specific needs and circumstances of individual Cooperatives and their members.

The Cooperatives generally support the concept of EE, but believe future policy should be evaluated based on economic factors. If the EE rules are extended or revised, GCSECA urges the Commission to incorporate provisions that afford the Cooperatives flexibility in developing EE goals and programs based on the specific needs and circumstances of their members.

d. Please provide suggestions regarding maximum allowable contributions from clean resources (i.e. targets for specific resources). For example, should there be a maximum percentage of nuclear or solar that contributes to the 80% target, or should the contributions be flexible?

Response:

GCSECA recommends providing utilities with the flexibility necessary to select resources based on each utility's specific needs and circumstances. With regard to the Cooperatives, rather than subject them to the EMP's 80% mandate, GCSECA urges the Commission to continue to afford the Cooperatives the flexibility they require to assess their individual resource needs and evaluate resource options in light of the long-term interests of their members.

e. Should distributed energy resources ("DER") be factored into the 80% target?

Response:

The Cooperatives recommend allowing utilities to include DER as part of the 80% target.

f. How should plans for customer-owned DER be factored into the 80% target?

Response:

See GCSECA's response to 3(e).

g. Please comment on the efficacy of current REST policies and provide suggestions for any specific improvements.

Response:

GCSECA believes the current REST provisions that exempt the Cooperatives from the mandatory percentage renewable requirements and authorize the Cooperatives to set their own renewable energy goals and plans for Commission approval are appropriate and should be retained.

j. Please comment whether, the renewable requirement in the REST rules could or should be increased, to help achieve the 80% clean resource target by 2050.

Response:

As the current REST mandatory energy renewable requirements to not apply to the Cooperatives, GCSCEA has no response to this inquiry.

k. With regard to CREST, should there be specific targets by clean energy type (i.e. renewable, biomass, nuclear, etc.)?

Response:

GCSECA recommends against including specific targets by clean energy type. Additionally, with regard to the Cooperatives, rather than subject them to any specific resource mandate, GCSECA urges the Commission to continue to afford the Cooperatives the flexibility they require to assess their individual resource needs and evaluate resource options in light of the long-term interests of their members.

aa. Please comment on the Energy Modernization Plan's suggestion of ultimately achieving a goal of 100% from clean energy sources.

Response:

The Cooperatives are supportive of a gradual approach to incorporating clean resources into Arizona utility energy portfolios, so long as the Commission continues to afford them the flexibility they require to assess their individual resource needs and evaluate resource options in light of the long-term interests of their members. Further, in order to avoid violation of the management interference doctrine, GCSECA recommends that the Commission not adopt specific resource mandates, but instead provide utilities with the flexibility necessary to select resources based on each utility's specific needs and circumstances.

4. Energy Storage

The Energy Modernization Plan proposes a target of 3,000 MW of storage by 2030.

d. Please describe how the obligation for meeting the storage target would be best allocated among utilities.

Response:

GCSECA recommends against mandating utilities to acquire a specific amount of energy storage because such a mandate may exceed the Commission's jurisdiction by impermissibly interfering with utility management. *See Phelps Dodge Corp. v. Ariz. Elec. Power Coop., Inc.*, 207 Ariz. 95, 112–113, ¶ 57–61 (App. 2004) (invalidating portion of Retail Electric Competition Rules that interfered with the utility management decisions).

With regard to the Cooperatives, GCSECA recommends that the Cooperatives be excluded from any such mandate or allocation. Instead, GCSECA urges the Commission to continue to afford the Cooperatives the flexibility they require to assess their individual resource needs and evaluate resource options (including storage technology) in light of the long-term interests of their members.

e. Please describe the most realistic timeline for achieving such a storage target and whether interim targets should be established. For example, what timeframe is the most reasonable for the majority of the 3,000 MW to come online?

Response:

The Cooperatives do not support interim targets for the EMP's energy storage goal. Any energy storage target should be a long-term goal to provide sufficient flexibility for the procurement of storage based on market conditions and retirement of existing assets.

i. Should there be any consideration and/or prioritization of different storage functions (e.g. peak shaving, grid support, etc.) within the 3,000 MW target?

Response:

The Cooperatives believe that resource selection should be based on an objective study of resource alternatives with a primary concern towards cost to the ratepayer. Accordingly, any prioritization of storage functions should be aligned with minimization of consumer cost, not based on carve-outs for particular applications.

5. Forest Health/Biomass-Related Energy

The Energy Modernization Plan proposes a target of procuring 60 MWs of biomass derived energy for state-regulated electric utilities that deliver more than 100,000 MWh annually.

a. Please provide comments regarding the respective roles and fiscal responsibilities of the Federal and State Land management agencies to address concerns regarding overgrown forests.

Response:

It is GCSECA's understanding that there are state and federal agencies responsible for management of portions of Arizona's forests, including the Arizona Department of Forestry and Fire Management and the United States Forest Service. However, GCSECA does not have information regarding the specific jurisdiction or fiscal directives of these agencies.

b. How will procurement of 60 MWs of biomass benefit individual ratepayers of regulated utilities (investor owned and/or nonprofits)? Will this require ratepayers to pay more for electric service?

Response:

It is GCSECA's understanding that the benefits associated with the proposed procurement of 60 MWs of biomass will be general statewide benefits, in the form of reduction of the risk of wildfires. Based on their initial analysis, the Cooperatives have not identified specific benefits flowing to their members. Instead, mandated procurement is anticipated to increase rates for the Cooperatives' members due to the higher cost of biomass energy plus additional transmission requirements.

c. Please provide comments regarding the length of time and expense of environmental processes required by state, local, and federal agencies for the siting and permitting of biomass facilities and any necessary transmission lines and roadways.

Response:

Based on the information presented during the Commission's First Workshop on Forest Bioenergy, it is GCSECA's understanding that the permitting process for a biomass facility can range from 12 to 18 months before construction can begin.

However, the Cooperatives do not have information regarding the anticipated costs associated with the environmental process. Additionally, the Cooperatives anticipate the need to purchase additional transmission service (if available), the details of which can only be determined after the location of the facility is known.

f. Please provide comments and data regarding the estimated cost to ratepayers if the 60 MW goal is mandated for regulated utilities.

Response:

The Cooperatives estimate a rate increase associated with the EMP's biomass procurement goal. The Cooperatives performed an independent analysis of the biomass portion of the EMP on behalf of the distribution Cooperatives with readily available resource information. The biomass analysis performed by the Cooperatives assumes the participation levels as described in the fact sheet filed in the docket on February 7, 2018, a well as publically available estimates for biomass project costs.

The projected costs to cooperative consumers as a result of the estimated biomass additions ranged from $1.26/customer/month to $2.03/customer/month, depending on the project cost of the biomass facility. These estimates do not consider costs or difficulties associated with the transmission of such power or challenges associated with fuel supply beyond those typical of such a facility.

g. Please provide comments regarding whether entities not regulated by the Commission should be subject to a biomass goal as it aims to resolve a statewide problem. If so, what is the best method to ensure these entities contribute to a biomass goal?

Response:

Because the goal of preventing wildfires is a statewide goal, the Cooperatives believe that any solution – including the EMP's biomass proposal – should be addressed on a statewide basis and in a manner that avoids a disproportionate or inequitable impact on regulated ratepayers. It is GCSECA's understanding that legislation would be necessary in order to legally require non-regulated electric utilities to participate in any of the EMP programs, including the biomass goal.

h. Please comment on the Energy Modernization Plan goal to generate a total of 60 MWs of electricity from biomass.

Response:

GCSECA respectfully submits that mandating procurement of a specific resource – at levels that may exceed a particular utility's current and anticipated future needs – in order to address concerns regarding wildfires is too attenuated from the Commission's core functions. Additionally, this type of mandate would likely exceed the Commission's jurisdiction by impermissibly interfering with utility management. *See Phelps Dodge Corp. v. Ariz. Elec. Power Coop., Inc.*, 207 Ariz. 95, 112–113, ¶ 57–61 (App. 2004) (invalidating portion of Retail Electric Competition Rules that interfered with the utility management decisions).

Further, because the goal of preventing wildfires is a statewide goal, the Cooperatives believe that any solution – including the EMP's biomass proposal – should be addressed on a statewide basis and in a manner that avoids a disproportionate or inequitable impact on regulated ratepayers.

GSCECA also believes that the Commission should take additional time to address a variety of logistical issues before moving forward with the biomass proposal. Such issues include:

- Who will construct, own, and operate the biomass facility?
- How much will it cost to construct the facility and who will provide the funding?
- Will the percentage procurement requirements be adjusted over time or will utilities be locked in to their mandated share for a 20-year period?
- Can the various siting, permitting, and environmental requirements associated with construction of the facility be met in time for an in-service date of December 31, 2021?
- How will the biomass generation be transmitted to the utility and at what cost?

Finally, if the Commission proceeds with the EMP's biomass proposal, GCSECA recommends that the Cooperatives be excluded. GCSECA urges the Commission to continue to afford the Cooperatives the flexibility they require to assess their individual resource needs and evaluate resource options (including biomass generation) in light of the long-term interests of their members.

j. Please comment on transmission costs to deliver biomass produced energy via non- owned transmission lines.

Response:

Delivery of biomass energy through lines owned by another entity or utility would require the purchasing utility to enter into a contract for transmission rights from the transmission owner. The cost of these rights may be significant to the purchasing utility and its retail ratepayers. Further, a requirement to enter into such a contract with a specific transmission owner would likely exceed the Commission's jurisdiction by impermissibly interfering with utility management. *See Phelps Dodge Corp. v. Ariz. Elec. Power Coop., Inc.*, 207 Ariz. 95, 112–113, ¶ 57–61 (App. 2004) (invalidating portion of Retail Electric Competition Rules that interfered with the utility management decisions).

6. Dispatchable Clean Energy

The Energy Modernization Plan would require regulated utilities to set a Clean Peak Target ("CPT") that incorporates existing and new clean energy sources to be deployed during peak hours and increases baseline by 1.5% per year on average until 2030.

d. Please comment regarding how the addition of dispatchable clean energy could provide room for baseload power to operate efficiently.

Response:

The ability to dispatch a generating unit is an important consideration in resource selection. Dispatchable resources can adjust to demand, as well as work in concert with other generating assets within a fleet to achieve a lowest cost of energy production. If dispatchable clean energy resources are utilized, their output could be scheduled to correspond with the highest value hours of the day and reduce the need for traditional resources to operate at less-efficient output levels to respond to their intermittency.

Nuclear, hydropower and biomass, are the only "clean energy" resources that the Cooperatives are aware of which operated as dispatchable resources; however, such resources have limited availability and often at a higher price. Similarly, in order to be dispatchable, wind and solar resources require energy storage, the procurement of which increases the overall cost to the retail ratepayer.

e. Please comment on the CPT proposed in the Energy Modernization Plan.

Response:

The Cooperatives have several concerns regarding the EMP's CPT goal.

As an initial matter, there are relatively few resource options that will qualify as "clean peak resources". Further, given the Cooperatives' smaller size, the quantities of resources required to meet the 1.5%-per-year target will not allow them to take advantage of the same cost economies of scale as the larger utilities.

In addition to the financial impact, the fact that the Cooperatives are not vertically integrated means implementation of CPT programs will be more complicated and may reap fewer discernable benefits than other clean energy options. Specifically, GCSECA's distribution cooperative members acquire a majority of their power through long-term,

fixed-price wholesale contracts. As a result, peak reduction and storage do not necessarily provide the same level of benefits realized by the vertically integrated utilities because peak reduction resulting from storage does not automatically result in a resource price reduction to the distribution cooperative.

Other potential issues related to the CPT include the potential for stranded assets as well as violation of the management interference doctrine (to the extent that the only viable option to comply with the CPT requires procurement of energy storage).

Based on the foregoing, GCSECA recommends that the Cooperatives be excluded from the CPT goal. Instead, GCSECA urges the Commission to continue to afford the Cooperatives the flexibility they require to assess their individual resource needs and evaluate resource options (including dispatchable clean energy) in light of the long-term interests of their members.

7. Energy Efficiency

The current Energy Efficiency ("EE") rules are scheduled to sunset in 2020 and the Energy Modernization Plan proposes to initiate a process to implement a new EE policy to complement the new 80% clean energy resource target.

a. Please provide detailed comments regarding appropriate EE initiatives, including percentages of EE and/or demand-side management ("DSM") reduction costs together with a proposed timeline (which includes milestones), and any recommended EE rule changes.

Response:

The Cooperatives believe the EE rules should be modified or integrated into the EMP in a manner that provides for cost-effective implementation of energy efficiency measures.

The Cooperatives generally support the concept of EE, but believe future policy should be evaluated based on economic factors to ensure that the costs associated with continued EE programs do not exceed the cost of the energy saved. Based on the Cooperatives' historic EE successes, continued programs may have diminishing returns.

If the EE rules are extended or revised, GCSECA urges the Commission to incorporate provisions that afford the Cooperatives flexibility in developing EE goals and programs based on the specific needs and circumstances of their members.

b. Please comment regarding how EE should be addressed in any resource planning process.

Response:

The Commission's current IRP rules address energy efficiency. See R14-2-703. If the IRP rules or process are revised, GCSECA urges the Commission to account for the distinctions between Cooperative and investor-owned, vertically integrated utilities, and preserve the current limited scope of the Cooperatives IRP obligations. See Decision Nos. 73884, 75068, and 76632.

8. Electric Vehicle

The Energy Modernization Plan includes a provision that regulated utilities propose plans to include electric vehicle ("EV") infrastructure.

a. Should the Commission consider these infrastructure plans as part of its Integrated Resource process?

Response:

Given that EV infrastructure is not a generating or load-serving resource, GCSECA recommends that it not be added to the IRP process. Energy use relating to EV infrastructure will be reflected in IRP filings under the current IRP process.

b. What impacts, if any, would Commission approval of utility-owned EV infrastructure plans have on future "prudency" determinations in rate cases?

Response:

The Cooperatives believe that any EV infrastructure investments required by the EMP should by definition qualify as "prudent" for the purposes of future ratemaking.

e. Please provide comments regarding the costs of implementing EV infrastructure, and a proposed means to recover those costs, including potential tax incentives, or utility incentives for customers using EV infrastructure.

Response:

In order to estimate the costs associated with the EV infrastructure goal, the Cooperatives need additional information regarding the scope and timeline of the goal as well as whether the program would be structured as an incentive program or would involve utility construction and/or ownership of the infrastructure.

To the extent the EV infrastructure goal is a statewide goal, GCSECA believes statewide funding sources (such as statewide taxes) would be a more appropriate mechanism than through rates assessed against electric utility customers within the Commission's limited jurisdiction. Further, to the extent the goal is aimed at preventing air quality compliance costs in the Phoenix Metropolitan area, GCSECA respectfully

submits that the costs of the program should be assessed against the ratepayers or taxpayers who will directly benefit, not against the Cooperatives' members who reside outside the Phoenix Metropolitan area.

Finally, if the program is anticipated to involve utility incentives for customers using EV infrastructure, the Cooperatives are concerned that such a funding mechanism will result in another cost shift to non-EV members (similar to the DG cost shift recognized by the Commission in Decision No. 75859).

g. Please provide comments regarding how to plan EV infrastructure on major highways and interstates, and what collaboration with other agencies would be necessary or advisable.

Response:

The Cooperatives believe the electrification of the Arizona transportation sector is an issue of statewide concern, which should be addressed at the Arizona Legislature. Additionally, to the extent the EMP's goal focuses on specific geographic areas (such as the Phoenix Metropolitan area) or property within the jurisdiction of other state agencies (such as public highways), it may be more appropriate for other sectors of the government to address the EV infrastructure needs identified in the EMP.

j. When considering development of EV infrastructure, which cost-effectiveness test, or tests, should be utilized to determine the appropriateness of such infrastructure investments?

Response:

From the Cooperatives' perspective, EV infrastructure investments should be evaluated based on the needs and interests of their member-consumers.

m. Please comment on the Arizona Department of Environmental Quality ("ADEQ") estimate that the cost to Arizona for developing and implementing a more stringent air quality plan to reduce emissions would range from $76 million to $380 million. How would these costs be paid, and by whom?

Response:

According to materials filed in this docket, the EMP's EV infrastructure goal is aimed in part at avoiding or reducing air quality compliance costs as estimated by ADEQ. However, it is GCSECA's understanding that ADEQ's cost estimate relates to air quality in Maricopa County. Accordingly, GCSECA respectfully submits that the costs of the EMP's EV infrastructure program should be assessed against the ratepayers or taxpayers who will directly benefit, not against the Cooperatives' members who reside outside of Maricopa County. Further, to the extent the cost would be a statewide cost, such that the EV infrastructure goal is intended to address a statewide problem, GCSECA believes statewide funding sources (such as statewide taxes) would be a more appropriate mechanism than through rates assessed against electric utility customers within the Commission's limited jurisdiction.

9. Resource and Transmission Planning

The Energy Modernization Plan proposes to amend the Integrated Resource Plans ("IRP") process to support and promote its policies.

a. Should the IRP process be modified? If so, please explain how it should be modified.

Response:

The Commission has limited applicability of the IRP Rules to Load Serving Entities with more than 50 MW of generation (thus excusing the distribution Cooperatives) and has recognized the distinction between AEPCO and the other Load-Serving Entities by (1) relieving AEPCO's of having its IRPs acknowledged by the Commission and (2) limiting the AEPCO's filing obligation to just the information, data, criteria, and studies used in its 15-year planning study. See Decision No. 73884, p. 8, ll. 1–5; Decision No. 75068, p. 3, ll. 21–25; Decision No. 76632, p. 47, ll. 11–17.

The Cooperative's believe these exemptions and limitations should continue for the reasons they were originally provided. Additionally, the Cooperatives support the extension of the IRP process to a three-year cycle.

b. The Commission conducts a Biennial Transmission Assessment ("BTA") as required by ARS 40-360.02 (G). The purpose of the BTA is to examine the adequacy of existing and planned transmission facilities to meet Arizona's energy needs in a reliable manner.

i. How does the Energy Modernization Plan impact the BTA?
ii. Should the IRP process and BTA be evaluated jointly?

Response:

The EMP will significantly impact Arizona's resource requirements, thereby requiring careful study of existing and planned transmission facilities through the BTA or similar process to maintain adequate transmission availability. Therefore, while GCSECA recommends that the IRP and BTA remain separate, the BTA should be informed by and evaluated after the IRP in order to ensure that resource changes are adequately addressed in transmission planning.

c. The current IRP process applies only to specific regulated utilities. How does that fact impact the Energy Modernization Plan?

Response:

Many of the goals articulated in the EMP are statewide goals, which means the Commission's ability to implement the EMP programs to accomplish statewide change is hindered by the Commission's jurisdictional limitations. Likewise, because the IRP process is limited to regulated utilities, it will not provide the Commission with the information necessary to implement or accurately measure the achievement of the EMP goals.

d. Please comment regarding the current IRP process, and how it should be modified to effectuate the Energy Modernization Plan.

Response:

The Cooperatives do not have any proposed changes to the current IRP rules or process, other than support for the extension of the process to a three-year cycle. If the IRP rules or process are revised, GCSECA urges the Commission to retain the current limited scope of Cooperative's IRP obligations.

e. Please comment regarding the 5-year action plans of the utilities and whether the plans should include greater Commission involvement? (For example, explicit approval and or denial of the plans, direction on procuring specific resources to achieve the goals of the Energy Modernization Plan, etc.)

Response:

The Cooperatives do not support explicit approval or denial of the utility IRP action plans, which are submitted in accordance with R14-2-703(H). Further, in order to avoid violation of the management interference doctrine, GCSECA recommends against providing direction to utilities to procure specific resources.

f. Please comment regarding the 5-year action plans of the utilities and whether it would be beneficial to have more stakeholder engagement in the development of the plans.

Response:

The Cooperatives believe the current IRP rules and process, including the increased opportunities for stakeholder input approved by the Commission in the most

recent IRP docket (E00000V-15-0094), provide sufficient opportunity for stakeholder engagement. Accordingly, GCSECA does not support any additional changes to the Commission's process for reviewing utility action plans submitted pursuant to R14-2-703(H).

ARIZONA CORPORATION COMMISSION STAFF
NOTICE OF INQUIRY
Docket No. E-00000Q-16-0289
Energy Modernization Plan
April __, 2018

10. Process-Related Issues

a. Please comment on whether consolidating open dockets would aid in efficiently analyzing proposed rule changes.

Response:

The Cooperatives do not oppose docket consolidation.

b. Should the dockets listed below be part of such consolidation?

i. REST Rule Revisions (Docket No. E-00000R-16-0084)
ii. EE Rule Revisions (Docket No. E-00000Q-16-0289)
iii. Role of Forest Bioenergy in Arizona (Docket No. E-00000Q-17-0138)
iv. Future of Navajo Generating Station (Docket No. E-00000C-17-0039)
v. Evaluating Arizona's Current and Future Baseload Security (Docket No. E-00000Q-17-0293)
vi. Innovations and Technological Developments in Generation and Delivery of Energy (Docket No. E-00000J-13-0375)

Response:

The Cooperatives are concerned that consolidation of the above-referenced dockets could lead to confusion and distraction from the focus of the EMP. Information collected in the other dockets can be utilized as needed, but for a broad energy policy reform as suggested in the EMP, the Cooperatives suggest a stand-alone docket is more appropriate. That stand alone docket could include a clear direction to open one or more rule making processes.

c. Are there other dockets that should be included in this list?

Response:

The Cooperatives are not aware of any other dockets that should be included in the potential consolidation.

d. Should the implementation of the Energy Modernization Plan be accomplished in a single or multiple rulemaking docket(s)?

Response:

The Cooperatives defer to the Commission's Hearing Division regarding the propriety of single versus multiple dockets.

e. What Parties (regulated and non-regulated entities) should participate in the docket?

Response:

The Cooperatives believe the rulemaking process should be open to all affected utilities as well as the public.

f. What other process issues are raised and how can those issues best be addressed?

Response:

The issues raised and the proposals contained in the EMP are complicated and, if not thoroughly vetted, have the potential to cause significant, permanent harm to the Arizona electric utility industry and Arizona ratepayers. Accordingly, GCSECA urges the Commission to take the necessary time to conduct a careful and complete evaluation of the EMP before taking action.

11. Security and Reliability/Resiliency

a. Discuss any operational and reliability issues associated with implementation of the Energy Modernization Plan.

Response:

Compliance with the EMP has the potential to necessitate a substantial amount of intermittent generation resources such as wind and solar in order to achieve the required targets. Such a large amount of intermittent generation has not been attempted on any generation system before. While energy storage has the potential to mitigate some of impacts of intermittency in generation, the extent to which such reliability issues could be resolved, and the cost of doing so, have yet to be determined.

It is likely that with amount of intermittent renewables, some amount of traditional generation will need to be online in order to provide regulation and grid stability. Further, with the potential for regionalized structured markets in Arizona's future, the Cooperatives believe that some traditional generation may also be required to provide for the generation-related ancillary services, such as fast ramping and local regulation.

b. Are there measures that should be taken to increase overall grid reliability and resiliency in Arizona?

Response:

The Cooperatives do not have any suggested measures beyond those already in place to address overall grid reliability.

Regarding grid resiliency, the Cooperatives believe that fuel and power supply diversity is important. Switching between supply sources is a valuable tool in a utility's ability to control costs and reduce rate volatility to its customers. The greater a utility's dependency on a single fuel, the greater a direct correlation will exist between the price of that fuel and electric rates. Further, a supply interruption in one fuel or source can be mitigated by the presence of alternatives.