# MEMORANDUM

To: Commissioners and Staff of the Missouri Air Conservation Commission
Gary Pendergrass, PE, RG (Chairman)
Kevin Rosenbohm (Vice Chairman)
Ron Boyer
Mark Fohey
Richard Rocha

From: Geoff Marke, Chief Economist
Office of the Public Counsel

Subject: Resolution Concerning Repeal of Section 393.135 of the Missouri Revised Statutes to Allow Cost Recovery during Construction of Nuclear Power Plants

Date: October 16th, 2019

## Missouri Office of Public Counsel Background:

The Missouri Office of Public Counsel ("OPC") is a statutorily-enabled, ratepayer advocate agency established in 1975 to represent the public and the interests of utility customers in proceedings before the Missouri Public Service Commission ("PSC"), and in the activities of investor-owned electric, natural gas, telephone, water, sewer and steam heat utilities, including safety issues, service adequacy and quality, complaints and disputes, connections and disconnections, and billing and collection practices. The OPC is independent from the PSC and has a separate budget and staff.

## Issue Background:

The Air Quality Commission currently has a resolution before it to consider a "Repeal of Section 393.135 Missouri Revised Statutes to Allow Cost Recovery during Construction of Nuclear Power Plants." The resolution gives the following three rationales for repeal:

- Our nation's rapidly growing energy demand will require a balanced portfolio of energy sources that includes nuclear power plants;
- Nuclear power plants promote clean air by providing continuous power with no greenhouse gas or traditional air pollutant emissions; and
- Section 393.135 has proven to be an intractable roadblock for financing and construction of new nuclear power plants in Missouri.

The OPC would like to take this opportunity to respond to each of these rationales, and to provide some context for our positions with respect to nuclear power and the Section 393.135, RSMo, passed by voter initiative (Proposition No. 1), November 2, 1976.

*"Our nation's rapidly growing energy demand will require a balanced portfolio of energy sources that includes nuclear power plants."*

Response:

The OPC agrees with the general sentiment of maintaining a balanced portfolio of electric resources. As an Office we have historically been fuel neutral and have not advocated for or against any generation-type in a vacuum. Rather, OPC's supply-side preferences are made in concert with a variety of stakeholders and in conjunction with the utility's Integrated Resource Planning ("IRP") modeling and Regional Transmission Organization ("RTO") market analysis.

Presently, Missouri's investor-owned utilities ("IOUs") are long on capacity. That is, the utilities control access to more energy than they need to serve their native loads (customers) and to satisfy their resource adequacy requirements (backup generation). Moreover, each of Missouri's IOUs has added or is in the process of adding copious amounts of wind and solar generation to their existing portfolios. Today, current RTO market prices are relatively low, due in part to an abundant amount of available generation, driven, in part, by excess natural gas exploration and a proliferation of new wind and solar generation driven in large part by expiring tax credits. Additionally, the load growth of each of Missouri's IOUs is projected to be relatively flat over the next 20 years.[1]

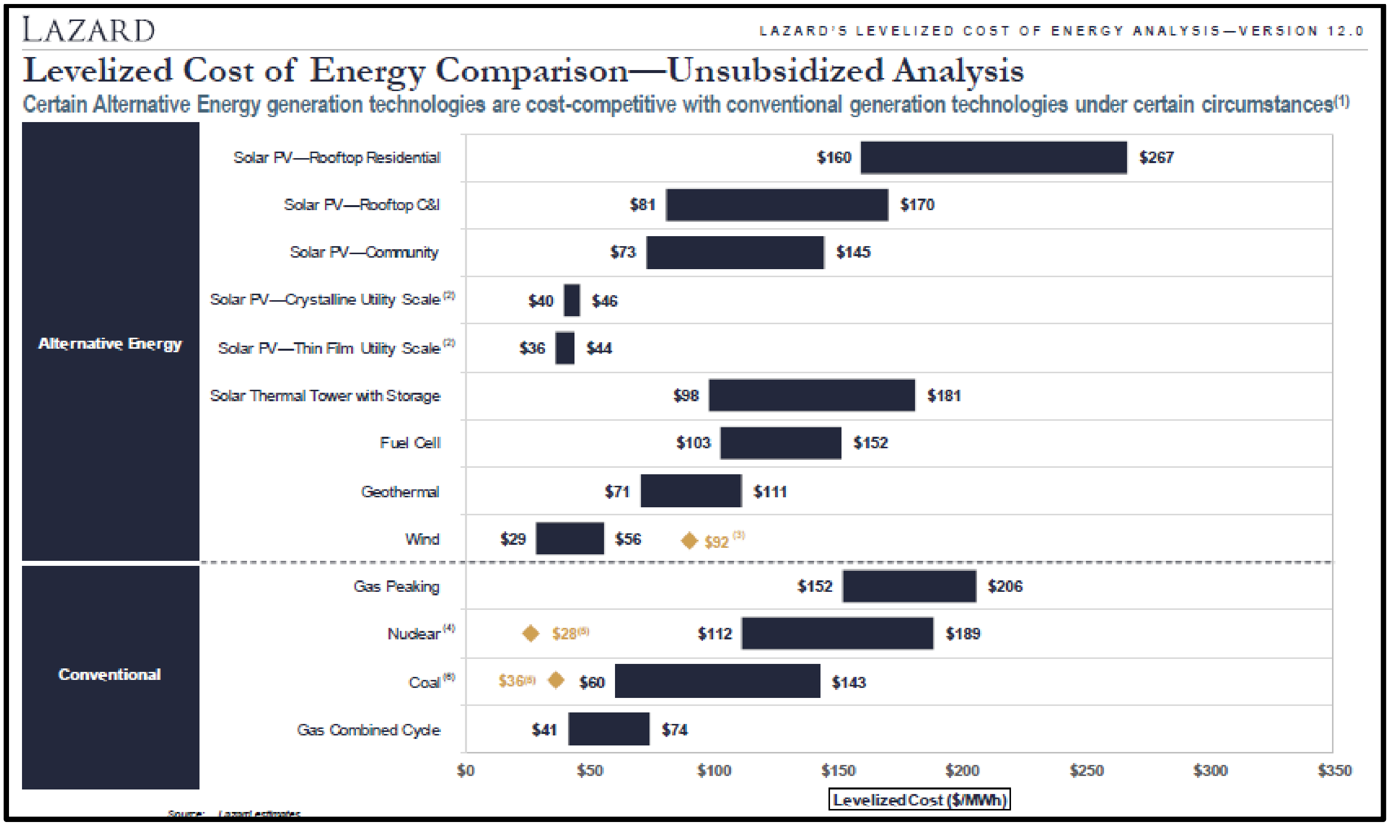
*"Nuclear power plants promote clean air by providing continuous power with no greenhouse gas or traditional air pollutant emissions."*

Response:

OPC agrees. Nuclear power has provided Missourians with a dependable, low variable cost supply of electricity. Nuclear has served as an excellent example of baseload energy because it can run continuously at maximum capacity except for when it is shut down for refueling. However, these units are not typically used to compensate for the intermittent availability of renewable resources (e.g., wind and solar). Additionally, the levelized cost of energy ("LCOE") for nuclear is also larger than other conventional base load generation sources as seen in figure 1 from Lazard's most recent levelized cost of energy analysis.[2,3]

[1] Admittedly, load growth projections are subject to confounding variables (i.e., an economic recession would decrease load further, but aggressive adoption of electric vehicles would increase load); however, IRP modeling attempts to consider these critical uncertain factors in the modeling efforts.
[2] The LCOE is a simple metric to capture the cost of energy produced at a supply-side generation source. It attempts to do so not based on short-term costs but on lifetime costs, which is important for providing fair comparisons between different sources of supply. The problem with the LCOE is that it does not necessarily say anything of the value of that same energy over the lifetime of the asset. Value depends not solely on the cost of generating energy but the price for which that energy can be sold.
[3] It should be noted that Lazard's analysis did not factor decommissioning costs in its valuation of the LCOE of nuclear.

Figure 1: Lazard's 2018 Levelized Cost of Energy Comparison[4]




*"Section 393.135 has proven to be an intractable roadblock for financing and construction of new nuclear power plants in Missouri."*

Response:

OPC respectfully disagrees. Section 393.135 reinforces the "used and useful principle" exercised in utility regulation that requires energy assets to be physically used and useful to current ratepayers before the ratepayers can be asked to pay the costs associated with them. This is a fundamental principle of utility regulation. Section 393.135 was enacted through the will of the people in a voter-driven initiative that was spurred, in part, from large capital overruns of nuclear power plants across the United States in the 1970s. The statute applies to all supply-side generation assets and does not single-out nuclear.

Today, nothing is preventing an electric utility from pursuing nuclear as a supply-side investment. Case in point, in 2012 Ameren Missouri publically announced a partnership with Westingthouse Electric to explore the funding, construction and deployment of small modular

[4] Lazard's Levelized Cost of Energy Analysis—Version 12.0 https://www.lazard.com/media/450784/lazards-levelized-cost-of-energy-version-120-vfinal.pdf

nuclear reactors.[5] Repeal of Section 393.135 would merely shift cost overrun risk from shareholders to ratepayers.

To date, utilities have not pursued nuclear for two primary reasons. 1.) They have no need to add incremental baseload generation; and 2.) The instability of the nuclear industry (see also Westinghouse Electric Company Chapter 11)

OPC believes a repeal of Section 393.135 is wholly unnecessary and would have the unintentional consequence of creating a regulatory step-change in utility/ratepayer risk allocation. Repeal of 393.135 would also run counter to the will of the people. OPC would point to the State of South Carolina as a recent example of the liability inherent in large power plant investments and the importance of robust customer safeguards.

In 2017 SCANA Corporation, an investor-owned electric utility in South Carolina abandoned the construction of two additional nuclear plant units at the Virgil C. Summer Nuclear Generating Station, following the bankruptcy of Westinghouse Electric Company. This resulted in more than $9 billion in sunk capital (which included an earnings return profit for shareholders), 19 lawsuits, the bankruptcy of SCANA and no nuclear power plants. To quote former Nuclear Regulatory Commissioner Gregory Jackzbo on the outcome: “In the private sector, you would never be able to justify this.”[6]

In 2019, Dominion Energy bought SCANA for $7.9 billion. Less than the cost of the nuclear project.

<u>OPC recommendations:</u>

OPC recommends that the Commission withdraw its proposed resolution regarding the repeal of 393.135 in light of the aforementioned information. Chief Economist Geoff Marke will be available for questions from the Commissioners at the scheduled agenda on October 17, 2019.

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[5] Ameren Missouri (2012) Ameren Missouri forms an alliance with Westinghouse Electric to apply for Department of Energy Small Modular Nuclear Reactor investment funds. News Release. http://ameren.mediaroom.com/news-releases?item=1037

[6] Lacy, A. (2019) South Carolina spent $9 billion to dig a hole in the ground and then fill it back in. https://theintercept.com/2019/02/06/south-caroline-green-new-deal-south-carolina-nuclear-energy/