

**BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI**

In the Matter of a Workshop File to Explore)
Legislative and Regulatory Means to Improve)
and Clarify Missouri's Renewable Energy)
Standard Law, Mo. Rev. Stat. §§ 393.1020 to)
393.1030.)

File No. EW-2011-0031

POSITION PAPER OF RENEW MISSOURI

The Commission in its Order opening this docket invited position papers on the implications of the following geographic sourcing scenarios. Our legal positions under the dormant commerce clause and the language of Proposition C are briefly stated here and discussed more fully below.

Alternative A. What are the legal, economic and public policy consequences and implications of requiring electric energy or RECs associated with electric energy for compliance with the RES to come from a generation facility located in Missouri?

Requiring generation to come from within the geographic borders of Missouri would very likely be struck down as a protectionist interference with interstate commerce under the “dormant” Commerce Clause doctrine. That has been the fate, for example, of measures favoring the use of in-state coal. Wyoming v. Oklahoma, 502 U.S. 437, 454–9 (1992). Prop C was drafted with this in mind.

Alternative B. What are the legal, economic and public policy consequences and implications of allowing electric energy or RECs associated with electric energy for compliance with the RES to come from a generation facility located outside of Missouri, only if the energy for compliance with the RES is sold to Missouri customers?

This is the intent of Prop C and it does not offend the dormant Commerce Clause. The RES applies to “all power sold to Missouri consumers.” Obviously, Missouri’s only legitimate concern is with the energy consumed or generated in Missouri. The RES does not discriminate against the interstate flow of electricity.

Alternative C. What are the legal, economic and public policy consequences and implications of allowing electric energy or RECs associated with electric energy for compliance with the RES to come from a generation facility located outside of Missouri, only if the energy for compliance with the RES is sold to retail customers located within the Regional Transmission Organization or Independent Transmission System Operator in which Missouri is located?

This geographic limitation has no basis in the language of the statute. It would not violate the Commerce Clause.

Alternative D. What are the legal, economic and public policy consequences and implications of allowing electric energy or RECs associated with electric energy for compliance with the RES to come from a generation facility located anywhere outside of Missouri irrespective of the location of the delivery of the energy.

This interpretation can only come from reading one sentence of the statute out of context: “A utility may comply with the standard in whole or in part by purchasing RECs.” § 393.1030.1, RSMo. It would do nothing to advance the legitimate state interests behind the RES but probably does not violate the Commerce Clause.

The Dormant Commerce Clause

The Commerce Clause of the Constitution gives Congress the power to regulate interstate commerce. The courts have long held that there is a “negative” or “dormant” aspect of the Commerce Clause that forbids the states to discriminate against interstate commerce. State laws may do this in either of two ways. First, a law may affirmatively discriminate against interstate commerce. In that case, the state has the burden of showing that the law serves a legitimate local purpose that could not be served as well by non-discriminatory means. Second, laws that only incidentally burden commerce do not violate the dormant commerce clause unless the burdens on interstate commerce are clearly excessive in relation to the putative local benefits. Maine v. Taylor, 477 U.S.131, 138 (1986). Shielding in-state industries from out-of-state competition is almost never legitimate. Id. at 148.

The RES is not a protectionist measure of the kind that is facially invalid. Unless the statute is interpreted according to alternative A, it does not discriminate against interstate commerce in energy. It is limited to energy consumed and/or generated in Missouri because that is the only energy Missouri has the authority to regulate. It seeks to promote renewable energy development in Missouri but does not protect Missouri businesses against any out-of-state competitor that might want to enter the market.

If the RES imposes any burden on interstate commerce, it is incidental and not excessive in relation to the legitimate local benefits. It is primarily an environmental measure aimed at reducing the pollution caused by Missouri's heavy reliance on coal. Environmental protection is a legitimate local interest even for a law that directly discriminates against interstate commerce. Maine v. Taylor, 477 U.S. at 147–52. Diversifying the state's fuel mix and hedging against increases in conventional fuel costs are prudent and legitimate policies. Coal has no vested interest in remaining Missouri's primary fuel. Preventing new technologies from replacing old ones would be the ultimate in protectionism. The Commerce Clause is not supposed to be a barrier to progress.

Regulation of utilities is one of the most important functions traditionally within the police power of the states. New Orleans Public Service v. Council of the City of New Orleans, 491 U.S.350, 365 (1989). State law governs the creation and conveyance of RECs and is not preempted by federal law. Wheelabrator Lisbon, Inc. v. Connecticut Department of Public Utility Control, 531 F.3d 183, 189–90 (2d Cir. 2008); ARIPPA v. PUC, 966 A.2d 1204, 1209 (Pa. Cmwlth. 2009). Missouri acted within its rights in adopting the RES.

The Intent of the RES

The other legal issue is whether the RES allows the utilities to purchase RECs that are unconnected to energy consumed in Missouri. Such an intent cannot easily be imputed to the statute. The Commerce Clause precludes application of a state law to commerce located entirely outside state borders even if that commerce has effects within the state. Healy v. Beer Institute, 491 U.S.324, 336 (1989). The legitimate intent of the RES is to encourage renewable energy; the trade in RECs is secondary to this goal and is only meant to aid in effectuating it. ARIPPA v. PUC, 966 A.2d at 1214.

The relevant portion of § 393.1030.1 reads: “The portfolio requirements shall apply to all power sold to Missouri consumers whether such power is self-generated or purchased from another source in or outside of this state. A utility may comply with the standard in whole or in part by purchasing RECs.”

Allowing out-of-state generation accommodates the dormant Commerce Clause. The problem is how to demonstrate that renewable power is “sold to Missouri consumers,” since the movement of electrons cannot be physically tracked. The statute provides three ways: generation by a Missouri electrical corporation, PPAs, and purchase of RECs. These are all just means to the fundamental end: “The portfolio requirements shall apply to all power sold to Missouri consumers...”

The first sentence of the quoted passage concerns power, self-generated or purchased. RECs are treated in a separate sentence because they are not power; they only represent the clean attributes and environmental benefits of renewable power. The qualification “sold to Missouri consumers” still applies.

In construing a statute courts must not be guided by a single sentence but must look to the provisions of the whole law, its object and policy. Rose v. Falcon Communications, 6 S.W.3d 429, 431 (Mo.App. SD 1999). A phrase cannot be read in isolation; the provisions must be construed together and read in harmony with the entire act. Gash v. Lafayette County, 245 S.W.3d 229, 232 (Mo. 2008).

Related clauses must be considered together when construing a particular provision of a statute. State ex rel. Ozark Border Electric Cooperative v. PSC, 924 S.W.2d 597, 600 (Mo.App. WD 1996). Legislative intent is ascertained not only through the words used but their context and the problem the legislation seeks to remedy. Soto v. State, 226 S.W.3d 164,166 (Mo.2007).

General provisions in a statute give way to specific ones. Younger v. Missouri Public Entity Risk Management Fund, 957 S.W.2d 332, 336 (Mo.App. WD 1996). Specific provisions prevail unless the statute as a whole clearly shows a contrary intent; they must be given effect notwithstanding that the general provision is broad enough to include the subject to which the particular provisions relate. Terminal Railroad Association v. City of Brentwood, 360 Mo. 777, 230 S.W.2d 768, 769 (1950).

In light of these principles, the “purchasing RECs” sentence, which by itself might mean RECs from anywhere, must be read together with the preceding sentence limiting the statute to power sold to Missouri consumers; otherwise the general swallows the particular and the intent of the law is defeated. It would be an illogical and absurd result to say that a Missouri utility could comply solely by purchasing RECs from California. That would not achieve the environmental purpose of the RES. Missouri also has a legitimate interest in developing a renewable energy industry as long as it does not unduly burden interstate commerce in doing so.

This legitimate state interest would not be served by alternative C or D but only by alternative B. Missouri has no business using its ratepayers' money to subsidize wind farms in Texas or solar development in Arizona. As to the claim that RECs purchased on a geographically unlimited market would be cheaper, the RES anticipated the problem of cost by imposing the 1% maximum rate impact.

ECONOMIC AND POLICY IMPLICATONS

The Economic Benefits of Developing Local Renewable Resources Are Substantial

In considering where the renewable facilities used for compliance should be located, it is appropriate to estimate the local economic effects of their development. The National Renewable Energy Laboratory of the Department of Energy has developed the Jobs and Economic Development Impact (JEDI) model to project the state-specific economic impacts of constructing and operating several types of power generation plants. For the purposes of these comments, we have used the JEDI wind power model to estimate the jobs and local economic effects of RES requirements procured from new Missouri resources for the 98% of the renewable portfolio that will be non-solar. More jobs and benefits will flow from the 2% solar portfolio, but those are not considered here. These numbers are detailed in the attached spreadsheet, and are scalable; i.e., they use the JEDI model to project the impact of meeting 100% of the non-solar RES requirements with Missouri resources, but they can be cut proportionally to estimate the effect of lower in-state percentages.

Meeting the RES would require approximately 3000 MW of renewable capacity by 2021, when the standard reaches 15%. With a total of 11,514 job-years extrapolated from the model over a 20 year period, the average number of annual jobs is 576 local jobs for construction and operation of the plants, including direct and induced effects. After completion of all construction,

570 direct and induced long-term jobs would result from ongoing operation of the plants. All of these numbers are conservative, in that they include only the effect of plant construction and operation, and do not include potential jobs for component manufacturing. Missouri has at least two firms producing wind power components today, and that number could certainly grow in response to increased future demand.¹

Property taxes paid by plant owners are projected to total \$233M over the 20-year period, and \$17M annually beginning upon completion of the fleet in 2021. Lease payments to farmers and other landowners would total \$123M and plateau at \$9M annually. Local spending is projected by JEDI to total about \$1.7B over the period, averaging \$116M annually during construction, with about \$45M in annual spending after construction is complete.

These numbers are based on the JEDI model's projection of the impact of a 100 MW wind facility in Missouri comprised of 50 2MW turbines. Therefore, about 30 facilities of that size eventually would be required to meet the ultimate standard. Large scale economies are not associated with wind facilities above the size of these utility scale developments, though certain costs, such as transmission extensions, could be spread over greater output. However, the numbers could be scaled down proportionally.

Missouri Has Ample Commercially Viable Wind Resources to Fulfill RES Requirements

The Missouri Department of Natural Resources publishes a map detailing the power density of wind across the state.² It shows 27 counties with areas of commercial-grade wind potential. These areas total an estimated 2,500 square miles, and have the technical potential to

¹ The firms are Continental Disc Corp., which makes brakes and other Nacelle parts in Liberty, and FAG Bearings, in Joplin.

² http://www.dnr.mo.gov/energy/renewables/MO_Final_PWR100m_24Jan05-low.pdf

produce 52 million MWh of electricity annually,³ an amount of energy equivalent to the output of about 18,000 MW of wind power plant capacity. Only a fraction of this potential may ever be developed, but with just 457 MW of existing capacity (17th in the US), Missouri has ample commercially viable potential new wind power resources for full RES compliance.⁴

The Economic Impact Projections Point to Alternative B as Optimal

The above numbers represent a reasonable and publicly available projection of the economic development consequences of Alternative A, i.e., if all the renewable energy for compliance were to be produced from new Missouri facilities.

However, because the law allows out-of-state sources to be used for compliance, such an outcome could not be the result of a requirement by rule. A 100% Missouri sourcing would only occur if that were chosen by utilities and deemed by the Commission to be the least cost and prudent approach to renewable energy procurement. If 50% of the RES requirements were met with Missouri wind power, the economic effects projected above would be cut in half. (Note: to the extent that in-state resources are used, they “count” for 25% more, so there would be less required for compliance. This may have implications for an ultimate solution, because presumably it would cost less to purchase 80 units of comparable renewable energy in-state than 100 units out-of-state).

Under alternative B, in order to ensure that the energy for compliance is “sold to” Missouri consumers, there would usually be contracts in place with a Missouri utility for acquisition of both the RECs and energy output of a facility (or a portion thereof), regardless of its location. (RECs could still be unbundled, for example, if a Missouri coop or muni bought

³ According to the American Wind Energy Association, based on an analysis of “An Assessment of the Available Windy Land Area and Wind Energy Potential in the Contiguous United States,” a report for the Department of Energy by the Pacific Northwest Laboratory; see http://www.awea.org/faq/wwt_potential.html

⁴ See: <http://www.awea.org/projects/projects.aspx?s=Missouri> for a list of existing projects.

Kansas wind energy and sold the associated RECs to an IOU.) To the extent these facilities were located in Missouri, the local economic benefits described above would occur, and to the extent they were located outside Missouri, they would not. Inasmuch as the referendum was approved by Missouri voters under the likely and reasonable belief that it would lead to development of Missouri renewable energy resources, alternative B is a fair interpretation of its intent. Under alternatives C and D, there would be limited or no restrictions on the geographic location of the renewable energy facilities or its deliverability or sale to Missouri customers. Therefore, all compliance could be met with purchases of unbundled RECs sourced elsewhere. This would in all likelihood lead to very little development of Missouri renewable energy resources, if any at all.

Development of New Renewable Energy Resources Requires a Long-Term Strategy

A key regulatory policy question, particularly raised by alternatives C and D, is: How would a prudent and least cost method of procurement of RECs be structured and implemented? If utilities were to forswear long-term contracts, they might get a “good deal” on RECs in the short run, when there appears to be a buyer’s market. However, as RES requirements in 28 other states continue to grow over time, the market could change quite dramatically and quickly if not enough renewable electricity facilities are built to satisfy the growing demand. To illustrate the volatility of REC prices, we include the following spreadsheet summarizing the purchase prices for RECs in Illinois in the three annual bidding processes conducted to date for RES compliance:

	Ameren			ComEd		
	In-state	Adjacent State	Other State	In-state	Adjacent State	Other State
May, 2008	\$29.32	\$21.20	\$5.65	\$35.72	\$18.35	\$7.34
May, 2009	\$16.66	n/a		\$21.13	n/a	
May, 2010	\$4.06	n/a		\$5.00	\$4.40	
3-yr average	\$16.68			\$20.62	\$11.38	

The prices paid by Illinois utilities for in-state RECs have ranged from about \$4 to about \$36 in just three years.⁵ This wide disparity is due to a variety of economic, regulatory, legal, and market factors that are beyond the scope of these comments. However, it is very likely that the most recent REC prices are unsustainable, since they are well below the cost of renewable energy production above the market energy value. In the long run, it is likely that REC costs will approximate the incremental cost of building renewable energy facilities as compared to fossil-fueled generation to produce comparable energy output.

The value (and cost) of a REC can be expected to rise and fall in inverse proportion to the difference between the cost of producing renewable electricity and the market price over time. In other words, in the long run, as the market price of energy rises, the cost of a REC can be expected to fall (and vice-versa). This fact points to the hedge value of long-term contracts for bundled RECs and energy for at least a portion of renewable purchases. To the extent that a long-term contract locks in the total cost of a REC and the underlying energy, consumers and utilities will have certain costs and protection from volatility in both the energy and REC markets. In addition, long-term contracts are usually necessary for developers of wind facilities to secure financing and begin construction. Therefore, reliance solely on short-term purchases of

⁵ A recent change in Illinois law subjects REC prices to a benchmarking process, which may be one of the factors in reducing their cost. Market and other factors are also at work.

unbundled RECs would not only be risky for consumers but would not allow significant development of new renewable energy resources — anywhere — to be the direct result of the Missouri RES.

While Detailed Modeling of Future Energy System Costs Will Be Required to Calculate Estimates of Amounts Available for Renewable Purchases Under The 1% Retail Rate Impact, Reasonable Estimates Show Potential Missouri Resources to Be Cost-Effective

The Commission asks parties to discuss the operation of the 1% retail rate impact. MCE observes that the maximum amount of customer dollars available for renewable energy purchases will not change significantly under the different alternatives. That amount is determined by the calculations and projections used to estimate the difference between the cost of a RES-compliant portfolio and an entirely non-renewable portfolio, averaged over time and taking into account the likelihood of future environmental regulations. That difference will be dependent upon a number of variables, the most significant and uncertain of which are the potential costs of carbon emission allowances under a national policy to address climate change, and the future costs of fossil fuels. Modeling of the fossil portfolio will also require estimates of future capital additions and upgrades as well as new plant construction when existing plants must be replaced or expanded capacity is needed. As the average age of large coal-fired power plants in Missouri is presently over 42 years, significant capital investment would be likely in coming decades.⁶

⁶ See: http://www.sourcewatch.org/index.php?title=Missouri_and_coal

The JEDI model projects total costs for each 100MW wind facility at about \$150M for equipment and \$50M for labor, materials, and other costs, making the total cost about \$200M (in 2008 dollars) for a single facility. Therefore, to build 30 such plants would require about \$6B in capital. Annual costs, (including O&M and capital costs amortized over twenty years assuming 80/20 debt/equity ratio, 9% interest rate, and 14% equity return, among other assumptions) are projected to total \$22.3M for a 100MW plant, or about \$670M for 30 such facilities. From this one can extrapolate the gross cost per MWh of wind generated electricity bundled with the associated REC to be about \$50/MWh after accounting for the federal Production Tax Credit (and assuming that it is renewed by Congress). It should be noted that renewable facility costs would not be dramatically different for plants built in other states, because the cost to buy a turbine, the cost of capital, and many other costs are about the same. Capacity factors and certain cost components may differ, however there is no reason to expect that meeting a significant portion of RES requirements with Missouri resources will cost much more in the long-run than other compliance strategies. The benefits to Missouri will grow to the extent that “home-grown” resources are utilized, regardless of the amount eventually calculated to be the annual spending cap.