MISSOURI STATE AUDITOR'S OFFICE
FISCAL NOTE (16-214)

Subject

Initiative petition from Andrew Linhares regarding a proposed amendment to Chapter 386 of the Revised Statutes of Missouri. (Received January 11, 2016)

Date

February 1, 2016

Description

This proposal would amend Chapter 386 of the Revised Statutes of Missouri.

The amendment is to be voted on in November 2016.

Public comments and other input

The State Auditor's office requested input from the **Attorney General's office,** the **Department of Agriculture,** the **Department of Economic Development,** the **Department of Elementary and Secondary Education,** the **Department of Higher Education,** the **Department of Health and Senior Services,** the **Department of Insurance, Financial Institutions and Professional Registration,** the **Department of Mental Health,** the **Department of Natural Resources,** the **Department of Corrections,** the **Department of Labor and Industrial Relations,** the **Department of Revenue,** the **Department of Public Safety,** the **Department of Social Services,** the **Governor's office,** the **Missouri House of Representatives,** the **Department of Conservation,** the **Department of Transportation,** the **Office of Administration,** the **Office of State Courts Administrator,** the **Missouri Senate,** the **Secretary of State's office,** the **Office of the State Public Defender,** the **State Treasurer's office, Adair County, Boone County, Callaway County, Cass County, Clay County, Cole County, Greene County, Jackson County Legislators, Jasper County, St. Charles County, St. Louis County, Taney County,** the **City of Cape Girardeau,** the **City of Columbia,** the **City of Jefferson,** the **City of Joplin,** the **City of Kansas City,** the **City of Kirksville,** the **City of Mexico,** the **City of Raymore,** the **City of St. Joseph,** the **City of St. Louis,** the **City of Springfield,** the **City of Union,** the **City of Wentzville,** the **City of West Plains, Cape Girardeau 63 School District, Hannibal 60 School District, State Technical College of Missouri, Metropolitan Community College, University of Missouri, St. Louis Community College,** the **Public Service Commission,** and the **Missouri Joint Municipal Electric Utility Commission**.

Edward D. Greim of Graves Garrett LLC provided information to the State Auditor's Office as an opponent of this initiative petition.

Assumptions

Officials from the **Attorney General's office** indicated they assume that any potential costs arising from the adoption of this proposal can be absorbed with existing resources.

Officials from the **Department of Agriculture** indicated no fiscal impact on their department.

Officials from the **Department of Economic Development** (DED) indicated this proposal would reduce state revenues by $50 million for fiscal year 2017, $50 million for fiscal year 2018, and $50 million for fiscal year 2019.

Summarize how this bill would affect the agency

<u>Section 386.890 – Net Metering and Easy Connection Act</u>
The Division of Energy (DE) assumes it would be involved in the implementation of this provision that modifies the existing net metering and interconnection requirements for regulated electric utilities. It is assumed there would be a rulemaking docket to set the process and details associated with this proposal. Rulemaking cases before the Public Service Commission (PSC) may be open for a year or more and include several full-day workshops. DE staff would participate in the workshops, monitor filings and review of other parties' proposals, research best practices and develop proposals and rule language, collaborate with other interested parties, and file comments. DE assumes it would monitor and participate in tariff and other related cases where net metering provisions are considered.

<u>Section 386.895 – Missouri Solar Energy Tax Credit</u>
The Department of Revenue (DOR) is required to implement the Missouri Solar Energy Tax Credit. The proposal requires DOR to promulgate rules to establish a process for claiming of the credit and may promulgate rules related to a certification of eligibility process.

The existing Missouri Renewable Energy Standard (RES) requires investor-owned utilities in Missouri to either produce green power or purchase Renewable Energy Certificates (RECs) for compliance. DE has statutory authority to certify that eligible renewable energy resources do not cause undue environmental impacts before RECs associated with those renewable energy resources can be used for RES compliance. There are no certification fees associated with this review. DE anticipates that enactment of a tax credit and expansion of the net- metering/interconnection size from 100 kilowatts (kW) to 2 megawatts (MW) will result in an increase in net-metered renewable energy installations (as modified by Section 386.890, RSMo, of this proposal) in Missouri which may be used for RES compliance.

Long-range implications

Fiscal impacts associated with the Missouri Solar Energy Tax Credits could continue until June 30, 2031. Economic benefits associated with construction of solar facilities would also have long-range implications.

Assumptions and methodology used in arriving at state fiscal impact

Section 386.890 –Net Metering and Easy Connection Act
For purposes of this fiscal note, DE assumes it would be involved in the PSC rulemaking and related cases to implement this provision but could do so with existing resources. However, there could be a cumulative fiscal impact to DE if multiple provisions related to PSC regulatory issues pass due to DE's involvement in such cases.

386.895- Missouri Solar Energy Tax Credit
The proposal's estimated impact to General Revenue could be up to $50 million per year from the effective date through June 30, 2021 depending on the schedule of implementation and applications submitted and approved. The potential impact would decrease by $2.5 million per year from 2022 through 2031.

DE assumes that DOR may consult with DE in development of rules associated with implementation of this proposal but that DE would not be involved in reviews of applications to DOR requesting certification of eligibility for net-metered solar facilities for the Missouri Solar Energy Tax Credit. For purposes of this fiscal note, DE assumes such consultation could be performed with existing resources.

DE anticipates that enactment of a tax credit will result in an increase in net-metered solar energy installations in Missouri which may be used for RES compliance. DE also anticipates that the increase in the capacity size of net metered renewable energy systems from 100 kW to 2 MW would result in an increase in other net-metered renewable energy installations in Missouri which may be used for RES compliance.

If all tax credits were used up to the cap of $50 million per year, and with consideration to the estimated cost and size of the solar projects, it is estimated there would be 4,718 residential project applications and 271 commercial project applications submitted for tax credit reviews (Source: Mark Reading analysis for similar Initiative Petitions).

For purposes of this fiscal note, DE assumes all applications for RES certification of no undue adverse environmental impacts are for solar projects and that only small numbers of these projects would submit applications for RES certification to DE. DE's review primarily focuses on environmental impacts of renewable electric generation facilities on air, water or land use. The actual staff time spent on each application varies. Solar photovoltaic and other renewable energy facilities with a larger capacity typically require more staff time for reviewing their third-party environmental impact assessments in addition to verifying applicable environmental permits, for data requests and discussion, data collection, database management, report production and website maintenance. For purposes of this fiscal note, DE assumes it could complete the additional RES environmental reviews/certifications anticipated from this proposal using existing resources.

Officials from the **Department of Higher Education** indicated this initiative petition would not have a fiscal impact on their department.

Officials from the **Department of Health and Senior Services** indicated no fiscal impact on their department.

Officials from the **Department of Insurance, Financial Institutions and Professional Registration** indicated this petition, if passed, will have no cost or savings to their department.

Officials from the **Department of Mental Health** indicated this proposal creates no direct obligations or requirements to their department that would result in a fiscal impact.

Officials from the **Department of Natural Resources** indicated they would not anticipate a direct fiscal impact from this proposal.

Officials from the **Department of Corrections** indicated no impact.

Officials from the **Department of Labor and Industrial Relations** indicated no fiscal impact on their department.

Officials from the **Department of Revenue** estimate this petition will result in increased operating expenses of $243,282 for fiscal year 2017, $181,985 for fiscal year 2018, and $183,470 for fiscal year 2019.

The legislation creates a negative impact of up to $50 million per fiscal year to total state revenue by creating a new tax credit.

This petition creates the Missouri Solar Energy Tax Credit which allows up to 35 percent of the costs and expenses for construction, design, and installation of a generation unit. The provisions of subsection 3 cap the tax credit at $50 million and beginning in calendar year 2022, the total cap is reduced by $2.5 million each year. The provisions expire June 30, 2031, allowing for no new tax credits after that date.

Their department suggests the provisions regarding the certification process be administered by the DED and the DE as they would be more familiar with the subject matter.

<u>Administrative Impact:</u>
Personal Tax:
Personal Tax requires one (1) Revenue Processing Technician I (Range 10, Step L) for every 6,000 credits claimed.

Corporate Tax:
Corporate Tax requires three (3) Revenue Processing Technicians I (Range 10, Step L) for every 4,000 credits redeemed, 4,000 credits transferred, and for every 520 SB 1099 compliance mailings and correspondence.

Integrated Tax System:
The integrated tax system incurs additional costs of $43,680 to implement the provisions of this petition.

Officials from the **Department of Public Safety** indicated they see no fiscal impact due to this petition.

Officials from the **Department of Social Services** indicated no fiscal impact on their department.

Officials from the **Governor's office** indicated there should be no fiscal impact to their office.

Officials from the **Missouri House of Representatives** indicated no fiscal impact to their office.

Officials from the **Department of Conservation** indicated that no adverse fiscal impact to their department would be expected as a result of this initiative petition.

Officials from the **Office of Administration** indicated this proposal this proposal amends Section 386.890, RSMo, and adds Section 386.895, RSMo, entitled “Missouri Solar Energy Tax Credit”.

Section 386.890, RSMo, assigns the DED, rather than the Department of Natural Resources, as the party responsible for certifying an energy source as renewable and makes other changes related to customer-generators and net excess energy credits.

Section 386.895, RSMo, establishes the “Missouri Solar Energy Tax Credit Act”. This Act establishes a state income tax credit for up to 35% of the total costs and expenses incurred for the construction, design, and installation of a solar powered electric energy generation unit, with a cap of $75,000 per utility metered account. The aggregate cap for all tax credits allowed under this section is $50 million. No new tax credits under this section shall be authorized after June 30, 2031. The DOR will promulgate rules and administer this tax credit program.

The caps are gradually reduced as shown below:

Year	%	Amt	Cap
2021	35%	$ 75,000	$50.0 M
2022	33%	$ 72,500	$47.5 M
2023	31%	$ 70,000	$45.0 M
2024	29%	$ 67,500	$42.5 M
2025	27%	$ 65,000	$40.0 M
2026	25%	$ 62,500	$37.5 M
2027	23%	$ 60,000	$35.0 M
2028	21%	$ 57,500	$32.5 M
2029	19%	$ 55,000	$30.0 M
2030	17%	$ 52,500	$27.5 M
2031	15%	$ 50,000	$25.0 M

Assuming the total amount allowed is issued, this proposal will have a cost of $50 million until 2022 and then lower costs until 2031, as shown above. This will impact the calculation under Article X, Section 18(e), of the Missouri Constitution.

This proposal will have no fiscal impact to their office.

Officials from the **Office of State Courts Administrator** indicated there is no fiscal impact on the courts.

Officials from the **Missouri Senate** indicated no fiscal impact on their office.

Officials from the **Secretary of State's office** indicated their office is required to pay for publishing in local newspapers the full text of each statewide ballot measure as directed by Article XII, Section 2(b) of the Missouri Constitution and Section 116.230-116.290, RSMo. Their office is provided with core funding to handle a certain amount of normal activity resulting from each year’s legislative session. Funding for this item is adjusted each year depending upon the election cycle with $1.3 million historically appropriated in odd numbered fiscal years and $100,000 appropriated in even numbered fiscal years to meet these requirements. Through FY (fiscal year) 2013, the appropriation had historically been an estimated appropriation because the final cost is dependent upon the number of ballot measures approved by the General Assembly and the initiative petitions certified for the ballot. In FY 2013, at the August and November elections, there were 5 statewide Constitutional Amendments or ballot propositions that cost $2.17 million to publish (an average of $434,000 per issue). In FY 2015, the General Assembly changed the appropriation so that it was no longer an estimated appropriation and their office was appropriated $1.19 million to publish the full text of the measures. Due to this reduced funding, their office reduced the scope of the publication of these measures. In FY 2015, at the August and November elections, there were 9 statewide Constitutional Amendments or ballot propositions that cost $1.1 million to publish (an average of $122,000 per issue). Despite the FY 2015 reduction, their office will continue to assume, for the purposes of this fiscal note, that it should have the full appropriation authority it needs to meet the publishing requirements. Because these requirements are mandatory, they reserve the right to request funding to meet the cost of their publishing requirements if the Governor and the General Assembly again change the amount or continue to not designate it as an estimated appropriation.

Officials from the **Office of the State Public Defender** indicated this initiative petition will not have any impact on their office.

Officials from the **State Treasurer's office** indicated this proposal would have no impact to their office.

Officials from **Greene County** indicated there are no estimated costs or savings to report from their county for this initiative petition.

Officials from the **City of Jefferson** indicated they expect no fiscal impact should this petition become law.

Officials from the **City of Kansas City** indicated no fiscal impact is anticipated if this proposal is adopted.

Officials from **University of Missouri** indicated their electric suppliers have not indicated the impact this legislation would have on utility rates so they do not know the impact on their university.

Officials from the **Public Service Commission** (PSC) indicated:

Proposed Section 386.890.18 states "Notwithstanding any provision in this chapter or chapter 393 and 394 to the contrary, the owner or operator of a qualified electric generation unit that provides renewable energy resources to a customer-generator through a power purchase agreement…, shall not be determined by reason of such ownership, operation, contract, or provision of energy to be an electrical corporation or public utility as those terms are defined by section 386.020…." This language suggests that any electrical corporation providing service to a customer-generator could be exempt from Section 386.020 and potentially somehow exempt from commission regulation even if already regulated. To alleviate any possible confusion delete the words "the owner or operator of a qualified electric generation unit that provides renewable energy resources to" before 'a customer-generator' (which is already limited by its definition of generators producing currently 1,000 kW or proposed change 2,000 kW). Further, the language "Notwithstanding any provision in this chapter or chapter 393 and 394 to the contrary," should also be removed to not potentially conflict.

Also absent from this proposal is an additional sentence clearly delineating that this does not diminish or supersede the commission's authority to ensure safe operation of any electric plant. The PSC respectfully suggests that this sentence should be added in for clarity.

"Qualified electric generation unit" and "qualified electric energy generation unit" are used throughout the proposal. It is recommended that one term be used consistently and be defined.

Proposed Section 386.895 discusses a "Missouri Solar Energy Tax Credit". It is not clear why the tax credit is in the PSC statute and not in a tax-related statute.

Officials from the **Missouri Joint Municipal Electric Utility Commission** (MJMEUC) indicated:

Missouri Public Utility Alliance (MJMEUC is part of the alliance) through its electric division represents 65 of the 86 cities with municipal electric utilities.

They believe that implementation of this petition would reduce municipal electric utility revenues of approximately $17,000,000 annually based on:
1. Varying changes to the state’s net metering law.
2. Greater penetration of solar panels throughout the state because of a state funded tax rebate for their purchase and installation.

Other proposed changes would increase the cost of city operations by approximately $1,520,000.

Several of these proposals modify the state’s net metering law to require cities to carry forward to subsequent months excess customer generation. Current software is not designed to provide this functionality and each city would have to contract with their own vendor to modify their billing software.

Because the State Constitution prohibits the imposition of any mandate on local governments (Mo. Const. Art X Sec 16) that reduces income or increases costs without “full state financing”, they anticipate that the costs would be reflected in the final state cost when the fiscal note is completed. They have no idea what litigation costs might be necessary.

Edward D. Greim provided the following information as an opponent of this initiative petition.

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January 14, 2016

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Re: *Fiscal Note in Initiative Petitions 2016-213 through 2016-215*

To Whom It May Concern:

Based on the information contained in this letter, we propose the following fiscal note summary for petitions 213, 214, and 215

> Lost revenue to state government is $680.3 million over the tax credit period, with annual losses of $7.6 million thereafter. Lost revenue to local government is $137.8 million over the tax credit period, with annual losses of $15.5 million thereafter. Other, substantial lost revenues of an unknown amount are likely.

Introduction

Missouri electric utilities are tightly regulated by the Public Service Commission, which regulates price, reliability, and customer service, among other areas. These utilities pay hundreds of millions dollars of taxes to Missouri state government and local governments. These taxes, however, will no longer be collected for electricity that is never sold due to the customer-generator production and community solar encouraged by the initiative petitions. Petition signers and voters must be informed of the certainty that the initiative petition will result in the loss of hundreds of millions of dollars of tax revenue to state and local governments due to tax credits and decreases in electricity sales volume. On the other hand, any positive fiscal impacts of the initiative petitions are speculative.

Description of Policy

Initiative Petitions 213-215 contain one or more of three main statutory provisions: (1) Changes to the Missouri Net Metering and Easy Connection Act; (2) Adoption of community solar facilities/arrangements; and (3) A state tax credit for solar powered electric energy generation units and arrangements.

1. Changes to Net Metering for Investor-owned electric utilities, municipal electric utilities, and rural electric cooperatives
    A. Redefine customer generator to include retail customers entitled by contract to receive the electrical energy generated by a qualified energy generation unit;
    B. Makes utilities generally responsible for purchasing necessary additional equipment/meter to accommodate the customer-generator's facility;
    C. Net excess energy credits expire every March, rather than after 12 months (but there is no compensation for net excess energy credits);
    D. Any costs incurred under this act by a retail electric supplier shall be recoverable in that utility's rate structure.
2. 5 Megawatt Community Solar Facilities
    A. Electric Customers may participate in community based solar arrangements up to with generation capacity up to 5 megawatts. There is no limit on the number of community solar facilities that may be developed.
    B. Bill credits are one to one against electric utility bills for customers who participate in the community solar facility.
    C. Excess bill credits are sold back to municipal utilities, investor-owned utilities, and electric cooperatives, by kilowatt hour (at rate to be set by commission, that is at least as great as all avoided costs, but up to the retail electric supply rate).
3. Tax credit
    A. 35% tax credit for solar powered energy generation units eligible for net metering, or in some petitions, community solar facilities up to 5 megawatt.
    B. Total value of eligible credits shall not exceed $50 million each year until 2022, with credits decreasing after that date. Unused credits carryover year to year.
    C. No tax credits after June 30, 2031.

Burdens on State Government

In determining the fiscal impact of each petition, it is generally reasonable to assume that the various statutory changes in the petitions will have independent fiscal impacts. The reasonableness of this assumption is demonstrated by the various iterations of the petitions themselves. *See* Petitions 213-215.

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i. Decreased tax collection due to changes to net metering – Initiative Petitions 213-215

Raising the net metering cap from 100 kilowatt units to 2 megawatt units will result in a decrease in electricity sales volume, when such changes are paired with other changes suggested by the petition. This assumption is conservative for several reasons. First, the current level of net metering is less than the current 5% cap due to the cost of solar and other residential net metering equipment, meaning that the changes to current net metering scheme may result in more than a simple increase due to economies of scale. Second, the declining price of solar and other renewable energy sources, paired with federal solar tax credits (30% federal tax credit) and a 35% state tax credit as proposed in some of the petitions provides a strong financial incentive to solar energy net metering, because customers can buy increasingly affordable technology at an additional 55% discount[1], suggesting that individuals and corporations will take full advantage of the state and federal tax credits. In this sense, however, the move to full 5% net metering will eventually occur due to declining prices for residential and commercial customer energy generation, coupled with increasing prices in the retail price of electricity. Third, technology changes allow customers to decrease their bill by a greater percentage than they decrease their usage. The commercialization of residential and commercial energy storage technology, like home batteries,[2] also allows customers to use their net-metering capacity more efficiently, because customers can completely offset usage during costly high demand periods.

The value of electricity used in Missouri in 2014 was 7.6 billion, and the value has increased every year since 2003. *See* U.S. Energy Information Administration – Independent Statistics and Analysis. Accordingly, a 1% decrease in electricity sales volume will reduce Missouri state sales tax revenues from electric providers by at least 3.2 million dollars. Based on the change from 100 kilowatt units to 2 megawatt units, individual net metering units may significantly impact tax revenues. Every megawatt of installed solar decreases state sales tax revenue by $7,700 annually.

ii. Decreased tax collections due to community solar facilities – Initiative Petition 215

Community solar facilities are in addition to net metering and represent an additional capacity of an unlimited amount. Energy generated from the community solar facility is allocated by the community solar facility owner or operator. Energy production allocation is done via "bill credits" that decrease the sales and gross receipts a utility receives from electricity sales. These community solar facilities will be operated in a manner, such as fractional ownership by customers or ownership by a nonprofit, that avoids property tax, sales tax, and license/franchise taxes. There is a strong financial incentive to operate these facilities in a fractional ownership

[1] The 35% state tax credit reduces the basis eligible for the 30% federal tax credit.
[2] One such energy storage/battery innovation is the Tesla Powerwall. https://www.teslamotors.com/powerwall.

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model, similar to net metering,[3] because doing so avoids state sales tax (4.225%), local sales tax (generally, 3.5-4%) and local utility license/franchise tax (generally, 5%). There is no cap on the amount of community solar facilities that may be constructed, and there are strong financial incentives to create excess production, given declining prices of solar electricity and a mandatory obligation of the interconnected utility to buy electricity at generous, retail rates.

A 1% decrease in electricity sales volume will reduce Missouri state sales tax revenues from electric providers by 3.2 million dollars. Every 5MW "renewable energy facility" will reduce state sales tax revenues by $38,500, annually. Up to $321.1 million in state sales tax revenue is at risk ($7.6 billion * 4.225%).

iii. Tax credits – Initiative Petitions 213-215

a. Decreased tax collections due to tax credits – Credits capped at $50 million annually

The 35% tax credits in these petitions will <u>directly result in a loss of state income of $25 million to $50 million, annually.</u> The total loss to state government over the tax credit effective period is $612.5 million.

b. Cost of eroding tax base due to new energy generation

To determine the impact of new customer energy generation on state sales tax revenues, we must first calculate the value of sales lost due to new customer generated energy production. Based on federal government data, we assume that the sun shines on average 5 hours per day in Missouri. According to the attached table, the tax credits will result in 988.7 MWh/988,700 kWh of new electricity generation. New production from such tax credits would produce approximately 1,804,090 MWh per year, also expressed as 1,804,090,000 KWh, or 1,804 million KWh (1,000 MWh * 5 hours per day * 365 days per year). Based on an assumed average retail price of electricity in Missouri of $100 per megawatt/hour,[4] this new production is valued at $180,408,983.

This new electricity generation is used by customers to offset charges they would otherwise incur on their bills. Accordingly, this amount of electricity will no longer be sold by Missouri utilities and electric cooperatives, and the state and local governments will lose sales tax revenues. The Missouri state sales tax rate is 4.225%.

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[3] The petitions use the terms "facility access", "arrangements", and "bill credits" all of which indicate that the electricity generated and allocated will not be subject to sales tax.

[4] In 2014, the average price of electricity in Missouri was $91.10 per megawatt/hour. The $100 an hour cost estimate is conservative as an average cost over the relevant period of the tax credits and beyond.

Credible independent analysts believe the installed cost of solar will be $1.77 per watt in 2017 ($1770 per kilowatt).[5] The cost is expected to further decline over time, but it is reasonable to assume a constant $1.77 per watt installed cost for solar energy resources according to the petition because of the competing forces of price inflation and decreased production costs of emerging technology.

For Initiative Petitions 213-215, the total, annual loss to state governments *due to the tax credits* is 32.6 million to 53.1 million over the tax credit period. The total loss during the tax credit period is $680.3 million. There is an annual loss in perpetuity after the tax credit period of $7.6 million, based on expected customer-generation resourced developed. *See* attached table.

Burdens on Local Governments

Local governments face losses in revenue from the various petition provisions that are similar to those faced by state government (with the exception of the direct losses to state government for the tax credits). In fact, local governments face a more significant burden because utility revenues make up a comparatively higher portion of the local governments' tax base. Missouri's electric utilities are large sources of local tax revenue, including property tax, sales tax (on average 3.585%) and license tax (approximately 5%). The amounts at issue are substantial. For example, Missouri electric utilities paid over $522 million in license taxes to local governments in 2014. Determining exactly how much of this revenue will be lost due to various provisions in the petition is uncertain and may require the expenditure of substantial litigation costs by some or all Missouri municipalities.

i. Decreased tax collection due to changes to net metering – Initiative Petitions 213-215

A 1% decrease in electricity sales volume will reduce Missouri local tax revenues from electric providers by $6.5 million, annually.

ii. Decreased tax collections due to community solar facilities – Initiative Petition 215

A 1% decrease in electricity sales volume will reduce Missouri local tax revenues from electric providers by 6.5 million dollars. Every 5MW "renewable energy facility" will reduce local government tax revenues by $78,300, annually. Up to $652.5 million in local sales and license/franchise tax revenue is at risk ($7.6 billion * [3.585% + 5%]).

[5] Some solar companies have forecasted a cost of under $1.00 per watt full installed by 2017. Comments of First Solar CEO, 'By 2017, We'll Be Under $1.00 per Watt Fully Installed', June 24, 2015, http://www.greentechmedia.com/articles/read/First-Solar-CEO-By-2017-Well-be-Under-1.00-Per-Watt-Fully-Installed.

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iii. Tax credits – Initiative Petitions 213-215 – Cost of eroding tax base due to new energy generation

The calculation of lost revenue for local governments is substantially similar as the calculation for state government lost sales tax. Local governments will collect less tax revenue from their various local taxes due to the decrease in demand for utility-provided electricity. The availability of lower local government taxes is a strong financial incentive for large-scale electricity users to invest in customer-generator projects supported by the petition. Further, Missouri's electric utilities are invested in Missouri and its local communities. The initiative petitions may jeopardize the jobs of Missouri electric utilities' employees to the extent the utilities suffer decreased revenue. Missouri electric utilities provide numerous other benefits to local governments, all of which may be reduced or discontinued if the initiative petitions are enacted.

The population weighted combined average state and local sales tax in Missouri is estimated at 7.81%.[6] Based on this estimate, the population-weighted combined average local sales tax is 3.585%. The tax credits will result in 988.70 megawatts of new electricity production that will be net metered or otherwise result in the allocation of bill credits and, as a result, decrease electric revenues. The corresponding annual loss to local governments from lost sales tax from the tax credit is $6,467,662. Assuming a license tax/franchise rate on electric utility service of 5%, which may be more or less depending on the municipality, if any, where electricity is sold, the additional lost local revenue from the loss of sales subject to license tax is $9,020,449.

<u>The overall annual loss to local governments due to the tax credits is $15.5 million.</u> The total loss to local government revenues during the tax credit period is $137.8 million.

In Conclusion

The initiative petitions will result in substantial, reasonably determinable losses in tax revenues to Missouri state government and local governments. State government incurs tax losses through the issuance of tax credits as well as the loss of electricity sales volume through certain changes promulgated by the petitions, such as increases in net metering and community solar. The total tax burden on state government imposed by the petitions with tax credits is at least $680 million over the tax credit period, with at least $7.6 million in lost revenues in perpetuity. The total tax burden on state government imposed by the petitions without tax credits is substantial, with up to $321.1 million at risk. The total tax burden on local governments imposed by the petitions with tax credits is at least $137.8 million over the tax credit period, with at least $15.5 million in lost revenues in perpetuity. The total tax burden on local government imposed by the petitions without tax credits is substantial, with up to $652.5 million at risk.

[6] http://taxfoundation.org/sites/taxfoundation.org/files/docs/LOST--2015.png.

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Graves Garrett LLC

Sincerely,

Edward D. Greim
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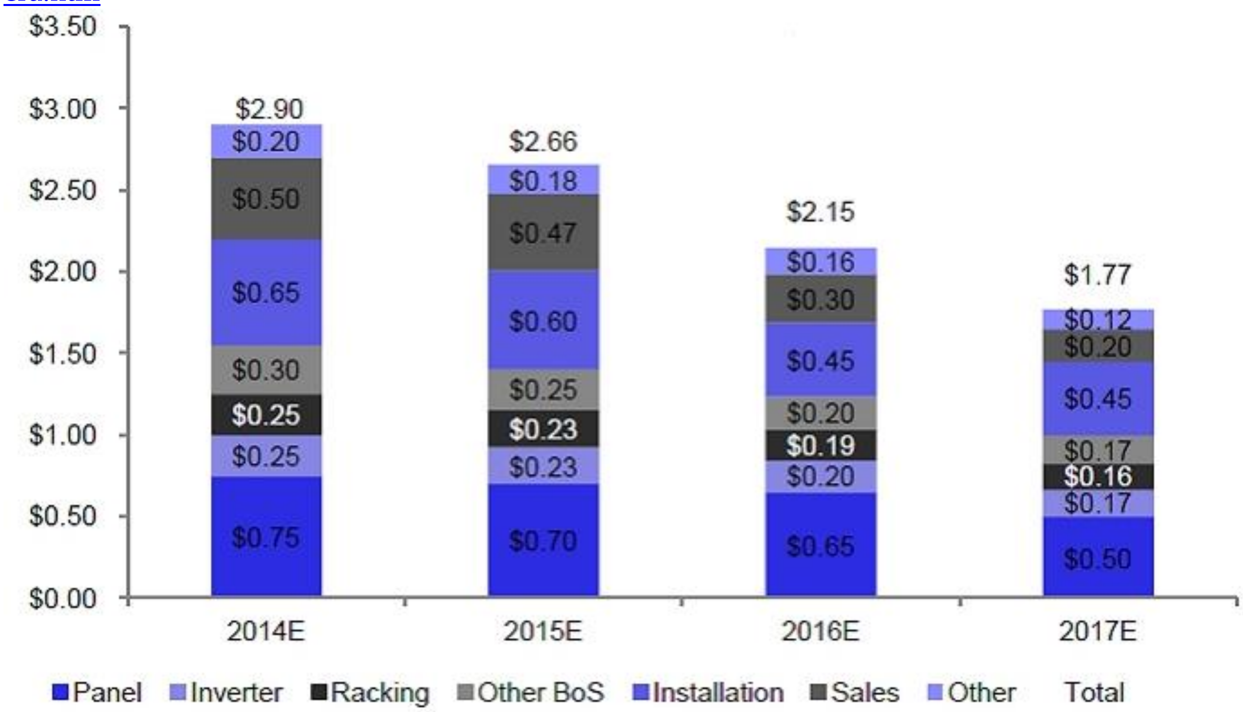
Additional Works Cited

Revenue from retail sales of electricity in Missouri

U.S. Energy Information Administration – Independent Statistics & Analysis - Table of Missouri Revenues
https://www.eia.gov/electricity/data/browser/#/topic/6?agg=01&geo=000002&endsec=vg&linechart=ELEC.REV.MO-ALL.A&columnchart=ELEC.REV.MO-ALL.A&map=ELEC.REV.MO-ALL.A&freq=A&ctype=linechart&ltype=pin&rtype=s&pin=&rse=0&maptype=0

Table of Deutsche Bank Solar Cost estimates – Cost trajectory on pace for a ~40% reduction by the end of 2017
https://www.db.com/cr/en/concrete-deutsche-bank-report-solar-grid-parity-in-a-low-oil-price-era.htm



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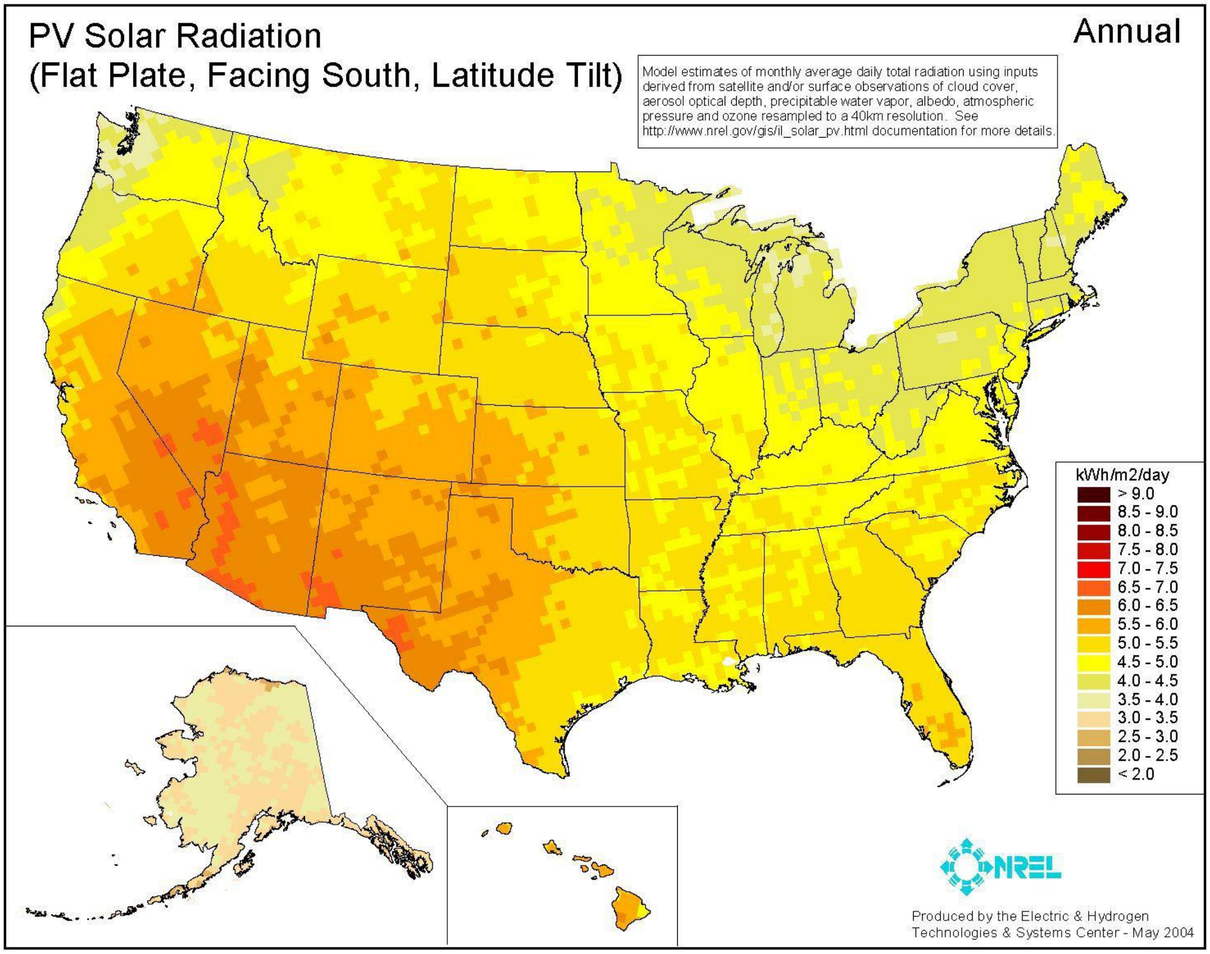
National Renewable Energy Laboratory data
http://www.nrel.gov/gis/solar.html



Renew Mo Solar Tax Credit Fiscal Analysis - Petitions 213-215

$/kW Installed Cost	$1,770	
MW's Installed	80.71	
Tax Rebate Incentive %	35%	
Tax Limit	$50,000,000	
Solar Capacity Factor	20.83%	5 hours / 24 hours
MW's of Output	147,273	

$/MWh Retail Rate $100

	Solar Tax Rebate	MW's Installed	Cumulative MW's Installed	MWh's Solar	Avg Retail Rate	Lost Utility Revenue	State Sales Tax Rate	Lost State Sales Tax Revenue	Annual State Tax Burden	Local Sales Tax Rate	Lost Local Sales Tax Revenue	Franchise Tax Rate	Lost Local Franchise Tax Revenue	Annual Local Tax Burden
2017	$50,000,000	80.71	80.71	147,273	$100	$14,727,264	4.225%	$622,227	$50,622,227	3.585%	$527,972	5.000%	$736,363	$1,264,336
2018	$50,000,000	80.71	161.42	294,545	$100	$29,454,528	4.225%	$1,244,454	$51,244,454	3.585%	$1,055,945	5.000%	$1,472,726	$2,528,671
2019	$50,000,000	80.71	242.13	441,818	$100	$44,181,792	4.225%	$1,866,681	$51,866,681	3.585%	$1,583,917	5.000%	$2,209,090	$3,793,007
2020	$50,000,000	80.71	322.84	589,091	$100	$58,909,056	4.225%	$2,488,908	$52,488,908	3.585%	$2,111,890	5.000%	$2,945,453	$5,057,342
2021	$50,000,000	80.71	403.55	736,363	$100	$73,636,320	4.225%	$3,111,135	$53,111,135	3.585%	$2,639,862	5.000%	$3,681,816	$6,321,678
2022	$47,500,000	76.67	480.23	876,272	$100	$87,627,220	4.225%	$3,702,250	$51,202,250	3.585%	$3,141,436	5.000%	$4,381,361	$7,522,797
2023	$45,000,000	72.64	552.87	1,008,818	$100	$100,881,758	4.225%	$4,262,254	$49,262,254	3.585%	$3,616,611	5.000%	$5,044,088	$8,660,699
2024	$42,500,000	68.60	621.47	1,133,999	$100	$113,399,932	4.225%	$4,791,147	$47,291,147	3.585%	$4,065,388	5.000%	$5,669,997	$9,735,384
2025	$40,000,000	64.57	686.04	1,251,817	$100	$125,181,743	4.225%	$5,288,929	$45,288,929	3.585%	$4,487,765	5.000%	$6,259,087	$10,746,853
2026	$37,500,000	60.53	746.57	1,362,272	$100	$136,227,191	4.225%	$5,755,599	$43,255,599	3.585%	$4,883,745	5.000%	$6,811,360	$11,695,104
2027	$35,000,000	56.50	803.07	1,465,363	$100	$146,536,276	4.225%	$6,191,158	$41,191,158	3.585%	$5,253,325	5.000%	$7,326,814	$12,580,139
2028	$32,500,000	52.46	855.53	1,561,090	$100	$156,108,998	4.225%	$6,595,605	$39,095,605	3.585%	$5,596,508	5.000%	$7,805,450	$13,401,957
2029	$30,000,000	48.43	903.95	1,649,454	$100	$164,945,356	4.225%	$6,968,941	$36,968,941	3.585%	$5,913,291	5.000%	$8,247,268	$14,160,559
2030	$27,500,000	44.39	948.35	1,730,454	$100	$173,045,351	4.225%	$7,311,166	$34,811,166	3.585%	$6,203,676	5.000%	$8,652,268	$14,855,943
2031	$25,000,000	40.36	988.70	1,804,090	$100	$180,408,983	4.225%	$7,622,280	$32,622,280	3.585%	$6,467,662	5.000%	$9,020,449	$15,488,111

Total State Tax Burden **$680,322,732**

Total Local Tax Burden (Sales + Franchise) **$137,812,581**

The State Auditor's office did not receive a response from the **Department of Elementary and Secondary Education,** the **Department of Transportation, Adair County, Boone County, Callaway County, Cass County, Clay County, Cole County, Jackson County Legislators, Jasper County, St. Charles County, St. Louis County, Taney County,** the **City of Cape Girardeau,** the **City of Columbia,** the **City of Joplin,** the **City of Kirksville,** the **City of Mexico,** the **City of Raymore,** the **City of St. Joseph,** the **City of St. Louis,** the **City of Springfield,** the **City of Union,** the **City of Wentzville,** the **City of West Plains, Cape Girardeau 63 School District, Hannibal 60 School District, State Technical College of Missouri, Metropolitan Community College,** and **St. Louis Community College.**

Fiscal Note Summary

State government revenue may decrease $25 million to $50 million annually until June 30, 2031, with approximately $200,000 annual increased operating costs. Local government electric revenue may decrease $17 million annually with $1.5 million increased operating costs. Other resulting economic activity will have an unknown impact on state and local governments.