

Health Impacts of Coal Plant Retirement:
Lessons from a Health Impact Assessment of the
New Madrid Power Plant in Southeastern Missouri

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Part 2 of 2: Policy Recommendations

The Renewable Energy Transition in Rural America: A Policy & Action Lab

Health Impacts of Coal Plant Retirement:

Lessons from a Health Impact Assessment of the New Madrid Power Plant in Southeastern Missouri - Policy Recommendations (Part 2 of two-part HIA)

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Executive Summary

The curtailment of the Magnitude 7 Aluminum Smelter in Marston, Missouri in January, 2024 marks a critical decision point for Associated Electric Cooperative Inc (AECI) for the future of New Madrid Power Plant, the coal plant that powers the smelter. Because the New Madrid Power Plant is costly, emissions intensive, and is associated with adverse human health impacts, AECI should explore all potential sources of renewable energy to power the plant. Not only will clean power make the Magnitude 7 smelter more economically viable, but there are also significant incentive programs that AECI could take advantage of to make a transition even cheaper.

This policy memo composes the second half of extended research conducted on behalf of Renew Missouri in Fall 2024 by the Stanford University graduate practicum, “The Renewable Energy Transition in Rural America,” under the direction of Professors Lisa Patel (Stanford Medical School) and Deborah Sivas (Stanford Law School). (See Part 1 focused on health impact, linked [here](#).) The full research project assesses the economic feasibility of transitioning the Magnitude 7 smelter to clean power by detailing the relevant incentives programs available through the Inflation Reduction Act of 2024, including which funding streams could stack together. It concludes that AECI should pursue local solar by stacking the Investment Tax Credit with funding from the Loan Programs Office. With the transition in federal administrations in January 2025, the future of these economic incentives is uncertain. However, dissolving tax credits and other IRA programs would require proactive legislation, which may take time and face political hurdles. Therefore, now is the time for AECI to develop a plan for transitioning the New Madrid plant’s power from coal to renewables, making use of current tax credits and funding mechanisms.

Background: Understanding the Problem

The future of aluminum depends on low-cost power. In January 2024, Magnitude 7 Metals, LLC curtailed its aluminum smelter in Marston, Missouri, which employs approximately 450 workers who live in rural communities surrounding the plant. The Magnitude 7 Smelter produced approximately 20% of the nation’s primary aluminum, which is a critical material for domestic supply chains, industrial manufacturing, and many clean energy technologies.¹ One of the primary challenges for the Magnitude 7 smelter was the high cost of energy, with its annual energy bill totalling \$55 million, according to Renew Missouri. Electricity is the largest cost of smelting, accounting for 40% of the total production costs.² Because the Magnitude 7 smelter is powered by an expensive coal plant, the smelter was unable to sustain full operations, costing this rural community 450 jobs.

The New Madrid coal plant is associated with adverse health impacts. In 2024, graduate students from Stanford University conducted a Health Impact Assessment (HIA) and found a higher prevalence of adverse health impacts for communities surrounding the plant. This includes higher rates of asthma, high blood pressure, infant mortality, chronic obstructive pulmonary disease, diabetes, cognitive disability and lower life expectancy.

New Madrid is expensive and highly emitting. The New Madrid plant has the fifth highest CO₂ emissions in Missouri, as well as high NO_x, SO₂, and PM_{2.5} emissions. The plant is also very expensive to run, with estimated costs of coal at \$29.89/MWh. Regional wind would be 33.2% less costly than coal, while local solar would be 30.2% to 33% less costly. Because the New Madrid power plant is out of compliance with the good neighbor rule, EPA also placed a cap on the New Madrid Power Plant’s production of SO₂ by limiting the plant’s capacity to 70% of their output to reduce emissions. Getting New Madrid into full compliance will also be costly.

By taking advantage of clean energy incentives, AECI can provide a pathway to reopen the smelter. Because New Madrid is expensive, is associated with adverse health impacts, and is a high emitting plant, AECI should act quickly to take advantage of renewable energy opportunities to power the Magnitude 7 Smelter. Securing an inexpensive, clean power source for the smelter could not only bring back essential jobs to the community, but it could also reduce adverse health impacts. This policy memo considers the economic factors affecting the

¹ Sustainable Aluminum Network. “Statement on the Curtailment of the Magnitude 7 Metals Aluminum Smelter.” <https://www.sustainablealuminumnetwork.org/reports-news-and-insights/statement-on-closure-of-magnitude-7-metals>.

² Sustainable Aluminum Network. “Statement on the Curtailment of the Magnitude 7 Metals Aluminum Smelter.” <https://www.sustainablealuminumnetwork.org/reports-news-and-insights/statement-on-closure-of-magnitude-7-metals>.

feasibility of renewable energy. Specifically, it considers options for stacking renewable energy incentive opportunities to further reduce the costs of clean energy.

Options for Procuring Clean Power

- **Procure wind via the Grain Belt Express:** AECI can first consider taking advantage of the Grain Belt Express DC transmission line that is being built across Missouri to bring wind generation from Kansas to the east coast to deliver affordable clean energy. As part of this arrangement Missouri is receiving 5,000 MW of wind energy from the line and is estimated to bring \$12.8M in annual energy savings to consumers throughout the state.
- **Build local solar by stacking the Investment Tax Credit with funding from the Loan Programs Office:** In addition to buying wind from Grain Belt, AECI should pursue building and interconnecting local solar at the New Madrid coal plant that is adjacent to the Magnitude 7 smelter. There are solar developers who have looked into building solar near Marston, and AECI could proactively engage these developers. The following section considers the various options for funding renewable energy, concluding that stacking the Investment Tax Credit with funding from the Loan Program Office would make the investment an economic win.

Options for Funding New Clean Energy

1) Tax Credits

IRA Tax Credits Overview

Tax credits are now available to rural electric cooperatives through direct pay. The Inflation Reduction Act (IRA) increased tax credits for clean energy projects (including solar, wind, energy storage, geothermal heat, and more) and extended them through 2035, with a phase-down starting in the later part of 2034 or the year after electricity sector CO₂ emissions drop below 75% below 2022 levels. Previously, tax-exempt entities (such as rural electric cooperatives) were unable to take advantage of these credits. The IRA changed this. The Act allows state and Tribal governments, certain tax-exempt entities, and rural cooperatives to access the tax credits through direct pay (a cash refund from the IRS for the tax credit). The following entities are eligible to receive clean energy tax credits through direct pay.

Direct Pay Eligible Entities³

- Tax-exempt organizations under §501(a), including §501(c) and §501(d) organizations;
- States and political subdivisions such as local governments;

³ The White House. “Direct Pay | Clean Energy.” <https://www.whitehouse.gov/cleanenergy/directpay/>.

- Federally recognized Tribes, their subdivisions, and their agencies;
- U.S. territory governments and political subdivisions;
- Agencies and instrumentalities of state, local, tribal, and territorial governments;
- Alaska Native Corporations;
- The Tennessee Valley Authority; and
- Rural Electric cooperatives

Types of Tax Credits

Most solar projects will either take advantage of the Section 48 investment tax credit (ITC) or the Section 45 production tax credit (PTC), discussed in further detail below. Both of these tax credits are eligible for direct pay. The ITC is an upfront tax credit that does not vary based on output, whereas the PCT provides tax credits earned over time.⁴ Smaller scale projects, those with less output potential, those with high installation costs, or those that qualify for bonus tax credits (discussed below) may be more likely to opt for the ITC.⁵

Investment Tax Credit (ITC)

If it meets the bonuses, the ITC could cover up to 50% to 70% of all project costs for AECL. The ITC works by reducing federal tax liability by a percentage of the cost of the solar system installed during that tax year.⁶ For direct pay projects, entities receive this percentage back in the form of a direct payment. The ITC has bonuses for projects benefiting low-income communities. In many cases, the ITC base credit covers 30% of clean energy project costs, with a 20% bonus for qualified low-income projects (+ other potential bonuses for a maximum of 70%). The following tables detail relevant bonuses for varying situations, with the relevant definitions below.

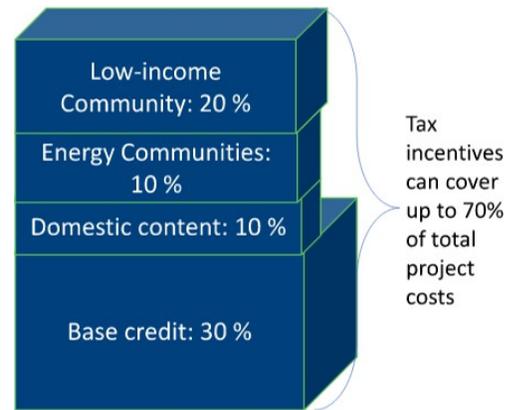


Image Credit: Miguel Yañez-Barnuevo. “Fact

ITC for Projects that Meet Labor Requirements⁷

Base ITC ¹	30%
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⁴ Energy.gov. “Federal Solar Tax Credits for Businesses.” <https://www.energy.gov/eere/solar/federal-solar-tax-credits-businesses>.

⁵ Energy.gov. “Federal Solar Tax Credits for Businesses.” <https://www.energy.gov/eere/solar/federal-solar-tax-credits-businesses>.

⁶ Energy.gov. “Federal Solar Tax Credits for Businesses.” <https://www.energy.gov/eere/solar/federal-solar-tax-credits-businesses>.

⁷ Energy.gov. “Federal Solar Tax Credits for Businesses.” <https://www.energy.gov/eere/solar/federal-solar-tax-credits-businesses>.

+ Bonus for Meeting Domestic Content Minimums ²	10%
+ Bonus for siting in “Energy Community”	10%
+ Allocated Low-Income Bonus ⁴	
• Projects Located in Low-Income Communities or Indian Land	10%
• OR Bonus for Qualified Low-Income Projects	20%

1 Bonuses are effective for projects in service after December 31, 2022.

2 Must include 100% domestic iron/steel and an increasing percent of manufactured goods over time.

4 Allocation will be based on an award process developed by the Secretary of the Treasury. Max 1.8 GWac/year.

ITC for Projects that DO NOT Meet Labor Requirements

Base ITC for all Projects^{1, 2}	6%
+ Bonus for Meeting Domestic Content Minimums ³	2%
+ Bonus for siting in “Energy Community”	2%
+ Allocated Low-Income Bonus ⁴	
• Projects Located in Low-Income Communities or Indian Land	10%
• OR Bonus for Qualified Low-Income Projects	20%

1 Bonuses are effective for projects in service after December 31, 2022.

2 For projects that begin construction 60 days after the Department of Treasury issues guidance.

3 Must include 100% domestic iron/steel and an increasing percent of manufactured goods over time.

4 Allocation will be based on an award process developed by the Secretary of the Treasury. Max 1.8 GWac/year

Tax Credits Definitions

“Energy Community”⁸

1. **Brownfield sites**⁹
2. **Coal Communities:** Communities located in census tracts in which (or census tracts adjoining census tracts in which)
 - a. A coal mine has been closed after 1999;
 - b. Or a coal-fired electric generating unit has been retired after 2009.
3. Communities that have (or at any time since 2009 have had):
 - a. Employment greater than 25% or tax revenues in excess of 0.17% that are attributable to the extraction, processing, transport or storage of coal, oil or

⁸ Energy Communities. “Energy Community Tax Credit Bonus.” <https://energycommunities.gov/energy-community-tax-credit-bonus/>.

⁹ See <https://www.epa.gov/brownfields>.

natural gas industries;

- b. AND: An unemployment rate at or above the national unemployment rate for the prior year.¹⁰

** While New Madrid County is not currently classified as an energy community, it could be reclassified as such if there is even a partial closure of the New Madrid Power Plant.¹¹*

“Low-Income Communities”¹²

- 1. Any population census tract if the poverty rate for such tract is at least 20%,
- 2. Or in the case of a tract not located within a metropolitan area, the median family income for such tract does not exceed 80% of statewide median family income,
- 3. Or in the case of a tract located within a metropolitan area, the median family income for such tract does not exceed 80% of the greater of statewide median family income or the metropolitan area median family income.

**The Census Tract near Marston is currently classified as under deep economic distress and therefore qualifies as low-income.*

“Qualified Low-Income Economic Benefit Project”

- 1. At least 50% of the financial benefits of the electricity produced by such facility are provided to households of income of less than 200% of the poverty line or less than 80% AMI.

**While it is unlikely that a solar project solely powering the Magnitude 7 smelter would meet this requirement, AECI could pursue such a structure for other projects.*

Production Tax Credit (PTC)

The PTC is a per kilowatt-hour tax credit for clean energy produced over the first ten years of the project, adjusted for inflation.¹³ The PCT also has bonuses for siting in an energy community and for meeting domestic content requirements, as detailed in the following tables:

PCT If the Project Meets Labor Requirements¹⁴

Base PTC for Projects <1 MWac ¹	2.6 ¢/kWh
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¹⁰ See: Daniel Raimi and Sophie Pesek. “What Is an ‘Energy Community’?” Resources for the Future. <https://www.resources.org/common-resources/what-is-an-energy-community/>.

¹¹ “IRA Energy Community Tax Credit Bonus.” <https://arcgis.netl.doe.gov/portal/apps/experiencebuilder/experience/?id=a2ce47d4721a477a8701bd0e08495e1d>.

¹² A reference tool to assist in identifying low-income communities as identified under §45D(e) can be found <https://www.policymap.com/newmaps#/widget/117/4D2AFE10710D41918F180775F0A353F2>.

¹³ Energy.gov. “Federal Solar Tax Credits for Businesses.” <https://www.energy.gov/eere/solar/federal-solar-tax-credits-businesses>.

¹⁴ Energy.gov. “Federal Solar Tax Credits for Businesses.” <https://www.energy.gov/eere/solar/federal-solar-tax-credits-businesses>.

+ Bonus for Meeting Domestic Content Minimums ²	0.26 ¢/kWh
+ Bonus for siting in “Energy Community”	0.26 ¢/kWh

Base PTC for all Projects >1 MWac¹	0.5 ¢/kWh
+ Bonus for Meeting Domestic Content Minimums ²	0.1 ¢/kWh
+ Bonus for siting in “Energy Community”	0.1 ¢/kWh

Base ITC for Projects >1 MW that Meet Labor Requirements¹	2.1 ¢/kWh
+ Bonus for Meeting Domestic Content Minimums ²	0.2 ¢/kWh
+ Bonus for siting in “Energy Community”	0.2 ¢/kWh

¹ The PTC is adjusted for inflation each year by the IRS

² Must include 100% domestic iron/steel and an increasing percent of manufactured goods over time.

Because AECI would only want to pursue tax credits eligible for direct pay, the following table details all clean energy tax credits eligible for direct pay, including the ITC and PTC.

Direct Pay Eligible Tax Credits

Section	Name/description
§45	Pre-2025 Production Tax Credit (PTC)
§45Y	Clean Energy Production Tax Credit (PTC post-2025)
§48	Pre-2025 Investment Tax Credit (ITC)
§48E	Clean Energy Investment Tax Credit (ITC post-2025)
§45Q*	Credit for Carbon Oxide Sequestration*

§45U	Zero-Emission Nuclear Power Production Credit
§30C	Federal Alternative Fuel Infrastructure Tax Credit
§45W	Credit for Qualified Commercial Clean Vehicles
§45V*	Clean Hydrogen Production Tax Credit*
§45Z	Clean Fuel Production Credit
§45X*	Advanced Manufacturing Production Credit*
§48C	Advanced Energy Project Credit

Other Tax Credit Options

§45X Advanced Manufacturing Production Credit

If AECI decided not to pursue the ITC or PCT, it could potentially work with Magnitude 7 Metals to take advantage of the Advanced Manufacturing Production Credit, based on the fact that the smelter manufactures clean energy components (aluminum). The credit supports the domestic production of specific clean energy components, such as solar modules, wind turbines, and battery components, and critical minerals.¹⁵ It offers a credit based on the quantity of eligible components produced and sold, and varies depending on the component type. However, the Department of Treasury and IRS is still considering the requirements for how aluminum might qualify for this credit.¹⁶ Proposed Section 1.45X-4(b)(1) would have defined aluminum to include commodity-grade aluminum, that is (i) converted from bauxite to a minimum purity of 99% alumina by mass; or (ii) purified to a minimum purity of 99.9% aluminum by mass, and that is sold on international commodity exchanges.¹⁷ The Department of Treasury and IRS further clarify eligibility requirements, the value of the credit will likely depend on production costs. Generally, the credit for eligible critical minerals is calculated as 10% of the costs incurred for production of the components. Further guidance will clarify what costs can be included under the cost of production.¹⁸

48C Advanced Energy Project Tax Credit

The Advanced Energy Project Tax credit is the up-front version of the Advanced Manufacturing Production Credit. It is an up-front credit for 30% of the investment costs for clean energy manufacturing and industrial facilities available for manufacturers to install technology that achieves an at least 20% reduction in climate pollution. Much like the ITC and PCT, manufacturing facilities must meet certain labor standards.¹⁹

Unlike other tax credits that are available on a first-come, first-served basis, the 48C credit is allocated through an application process. Companies must apply to the Department of Energy (DOE) and Internal Revenue Service (IRS), demonstrating the potential benefits of their project in terms of reducing emissions, job creation, and other factors. The DOE will review

¹⁵ Novogradac. “What Renewable Energy Stakeholders Should Know About IRC Section 45X Advanced Manufacturing Production Tax Credit,” March 7, 2024. <https://www.novoco.com/periodicals/articles/what-renewable-energy-stakeholders-should-know-about-irc-section-45x-advanced-manufacturing-production-tax-credit>.

¹⁶ Jiyeon Choi and Selene Cullen. “Final Regulations Released for the IRA Section 45X Tax Credit,” November 7, 2024. <https://www.bakertilly.com/insights/final-regulations-released-for-the-ira-section-45x>.

¹⁷ Troutman Pepper. “IRS Issues Final Regulations on Section 45X Credits for Advanced Manufacturing Production Credit,” October 31, 2024. <https://www.troutman.com/insights/irs-issues-final-regulations-on-section-45x-credits-for-advanced-manufacturing-production-credit.html>.

¹⁸ Novogradac. “What Renewable Energy Stakeholders Should Know About IRC Section 45X Advanced Manufacturing Production Tax Credit,” March 7, 2024. <https://www.novoco.com/periodicals/articles/what-renewable-energy-stakeholders-should-know-about-irc-section-45x-advanced-manufacturing-production-tax-credit>.

¹⁹ Energy.gov. “Qualifying Advanced Energy Project Credit (48C) Program.” <https://www.energy.gov/infrastructure/qualifying-advanced-energy-project-credit-48c-program>.

applications, and the IRS will allocate the credit.²⁰ As of October 2024, the Department of Energy closed its second allocation round. However, if further funding remains, the Department may announce additional rounds of funding, with applications potentially rolling out quickly in coming months.

2) Funding Opportunities

Advanced Industrial Facilities Deployment Program (AIFDP)

The AIFDPs provide competitive financial support to owners and operators of facilities engaged in energy intensive industrial processes to complete demonstration and deployment projects that reduce a facility's greenhouse gas emissions through installation or implementation of advanced industrial technologies and early-stage engineering studies to prepare a facility to install or implement advanced industrial technologies. The program includes a focus on reducing carbon emissions in heavy industries, such as steel, cement, aluminum, and chemical manufacturing, and explicitly targets aluminum smelting. However, the most recent funding opportunity, issued in March 2023, had a submission deadline for full applications on August 11, 2023,²¹ and additional funding is unlikely to become available.

The Loan Programs Office

The Loan Programs Office (LPO) is a division within the U.S. Department of Energy that provides loans, loan guarantees, and financial support to help accelerate the commercial deployment of innovative clean energy technologies and infrastructure projects in the United States. The LPO focused on de-risking large-scale energy projects that are too risky or capital-intensive for private investors alone but are essential for achieving national energy, environmental, and economic goals. The IRA appropriated almost \$12 billion to the LPO, increasing its loan program authority by about \$100 billion.²²

LPO 1706: Title 17 Energy Infrastructure Reinvestment (EIR) loans

The Loan Program's Office EIR program is a federal loan initiative designed to finance projects that repurpose, repower, retrofit, or replace existing energy infrastructure to support clean energy transitions and reduce greenhouse gas emissions. Eligible Project include repowering coal-fired power plants with clean energy sources (e.g., solar or wind); retrofitting existing natural gas or coal facilities to include carbon capture, utilization, and storage (CCUS); repurposing fossil fuel

²⁰ Energy.gov. "Qualifying Advanced Energy Project Credit (48C) Program."

<https://www.energy.gov/infrastructure/qualifying-advanced-energy-project-credit-48c-program>.

²¹ "Funding Notice: Industrial Demonstrations | Department of Energy." <https://www.energy.gov/oced/funding-notice-industrial-demonstrations>.

²² Penrod, Emma. "DOE's Jigar Shah Details the Operations of the Loan Programs Office Handling IRA Funding." Utility Dive. <https://www.utilitydive.com/news/jigar-shah-loan-program-office-ira-loans/653448/>.

facilities for new uses, such as hydrogen production or energy storage; and investments in grid resiliency. EIR will finance domestic projects at energy infrastructure sites up to \$100 million.²³ Magnitude 7 Metals and AECI could partner to obtain EIR financing.

LPO 1703: Innovative Supply Chain loans

The LPO's Innovative Supply Chain loans focuses on technologically innovative projects that help build a resilient domestic supply chain for clean energy components. Eligible projects include critical mineral processing facilities. Applicants must demonstrate that their project uses innovative technology that has not been commercially deployed at scale. Eligible projects are those that deploy novel manufacturing processes, and avoid, reduce, utilize, or sequester air pollutants, GHGs through: 1) The manufacturing process of the relevant product, or 2) The end-use of the component (on a full life-cycle basis).²⁴ If AECI partnered with Magnitude 7 Metals to power the smelter with renewable energy, the switch to renewables could potentially meet the requirement to incorporate innovative technology. If it does not qualify, Magnitude 7 Metals could deploy on-site small modular reactors or long-duration energy storage (coupled with off-site solar and wind) to provide affordable clean power for continuous aluminum production.

LPO 1703: State Energy Financing Institution (SEFI)-Supported Loans

The LPO's State Energy Financing Institution (SEFI)-Supported Loans program aims to support clean energy projects that are backed or facilitated by State Energy Financing Institutions (SEFIs). This program focuses on leveraging state-level financing mechanisms to accelerate the deployment of clean energy technologies at industrial and manufacturing facilities, especially in regions that may need additional support to decarbonize their energy systems. Eligible activities include emissions controls, efficiency improvements, modernization/smelter upgrades, and/or development of clean power source. While Missouri does not currently have any designated SEFIs, a state entity (like MDFB or EI ERA) could become a SEFI if it fits the statutory definition.²⁵ This SEFI could then agree to provide an economic development grant for modernization activities at the Magnitude 7 Metals site, thereby unlocking a potential LPO loan for smelter modernization activities (e.g. emissions controls, efficiency improvements) or the procurement of wholesale, lower-cost clean energy for the smelter. Projects under this program are not required to use innovative technology and are not tied to existing infrastructure, as opposed to the previously mentioned LPO opportunities.

²³ Energy.gov. "LPO's Energy Infrastructure Reinvestment (1706) Program."

<https://www.energy.gov/lpo/articles/lpos-energy-infrastructure-reinvestment-1706-program>.

²⁴ Energy.gov. "INNOVATIVE ENERGY AND INNOVATIVE SUPPLY CHAIN."

<https://www.energy.gov/lpo/innovative-energy-and-innovative-supply-chain>.

²⁵ Energy.gov. "State Energy Financing Institution (SEFI) Toolkit." <https://www.energy.gov/LPO/SEFIToolkit>.

Other Funding Opportunities

Energy Efficiency and Conservation Block Grant (EECBG) Program

Funded by the Infrastructure Investment and Jobs Act (IIJA), the EECBG Program offers grants to support energy efficiency and renewable energy projects. Missouri has received funding from the Energy Efficiency and Conservation Block Grant (EECBG) Program. The Missouri Department of Natural Resources (MoDNR) was allocated \$2,360,230 through the EECBG Program to support projects that promote energy savings, energy conservation, and emissions reductions within the state. MoDNR has opened application windows for subgrants targeting communities that were not eligible for direct formula funding from the U.S. Department of Energy. Applicants can request between \$100,000 and \$500,000 for eligible projects, with no cost match required.²⁶

Considerations on Retail Choice

If legislation allows, Magnitude 7 Metals could pursue other options for clean energy if AECI maintains the status quo. While the above options focus on how AECI could provide solar power for the smelter, it is worth noting that Magnitude 7 Metals (or a new buyer) could also work directly with a solar developer and enter into a power purchase agreement (PPA) with the developer to procure clean power. This is because in Missouri a state statute safeguards retail choice specifically for smelters. Missouri statute 91.026 states:

Notwithstanding any provisions of law to the contrary, any aluminum smelting facility shall have the right to purchase and contract to purchase electric power and energy and delivery services from any provider, wherever found or located, at whatever rates or charges as contracted for, and such periods or times as is needed or necessary or convenient for the operation of such aluminum smelting facility and for no other purpose, notwithstanding any past circumstances of supply. Any aluminum smelting facility purchasing or contracting to purchase electric power and energy pursuant to this section shall not resell such electric power and energy to any party except the original providers of such electric power and energy.²⁷

Because of this statute, AECI should be cognizant of the fact that the smelter owner could pursue other options for clean energy, and therefore is better served by proactively pursuing cheaper, clean power.

On a broader level, in order to attract new large industrial customers, Missouri and its communities may consider expanding the application of retail choice to applications beyond smelting. This consideration stems primarily from a desire to drive economic growth and job growth in the face of lost jobs from potential coal plant closure and smelter closure. As

²⁶ “Energy Efficiency and Conservation Block Grants | Missouri Department of Natural Resources.” <https://oembed-dnr.mo.gov/energy/grants-loans/efficiency-conservation-block-grant>.

²⁷ Justia Law. “2023 Missouri Revised Statutes :: Title VII - Cities, Towns and Villages :: Chapter 91 - Municipally Owned Utilities,” November 20, 2024. <https://law.justia.com/codes/missouri/title-vii/chapter-91/>.

reindustrialization of the US continues and industrial load growth increases power availability becomes a driving factor of new developments. Power availability, especially clean power, is perhaps the strongest lever to increase economic growth at this point in time.

Recommended Course of Action

Utilize the [Stanford Health Impact Assessment \(HIA\)](#) findings to create a renewed focus on New Madrid Power Plant. Renew Missouri should capitalize on the findings of Stanford's HIA and the current availability of renewable energy funding options to restart efforts to transition the Magnitude 7 aluminum smelter to renewable power. The HIA underscores significant adverse health impacts associated with the New Madrid coal plant, including higher rates of respiratory diseases and lower life expectancy in nearby communities. This new research provides a platform to restart educational and advocacy efforts and assemble coalitions around them.

Emphasize how economic interests align around reopening the smelter, and how low cost power could facilitate this goal. The New Madrid coal plant is expensive to operate and contributes to high energy costs that make the smelter uncompetitive. By developing local solar power, AECI could reduce energy costs by up to 33%, making the smelter economically viable and supporting the preservation of approximately 450 jobs in the region. Local and state lawmakers, community leaders, AECI, Renew Missouri, and many others with disparate interests all align when it comes to reopening the smelter to full capacity. Renew Missouri should continue to build coalitions around this shared interest.

By pairing the Investment Tax Credit with funding from the Loan Programs Office, AECI can cover much of the upfront costs of the project, increasing the long-term cost savings. Renew Missouri should highlight how the current Investment Tax Credit (ITC) - which can cover 50-70% of project costs, paired with opportunities such as those from the Loan Programs Office (LPO) - would make the transition economically advantageous. Given the uncertainty surrounding the longevity of tax credit bonuses and other funding under the Inflation Reduction Act (IRA), timing is critical. While the Loan Programs Office and the ITC have existed for decades, entities without a tax liability (including rural electric cooperatives) have only recently been able to capitalize on the tax credits. While any changes would require proactive legislation with potential political hurdles, AECI should still capitalize on existing opportunities before any potential changes. By taking advantage of incentives and forming partnerships, AECI can position itself as a leader in industrial decarbonization, providing a pathway for the aluminum smelter to reopen at full capacity.

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