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THE INFLATION REDUCTION ACT: BUILDING MOMENTUM FOR NUCLEAR ENERGY

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The recently passed Inflation Reduction Act (IRA) includes a large investment in clean energy technology.[1] Through its various tax incentives, the IRA is playing a part in continuing the building of momentum for nuclear energy.[2]

The IRA provides production tax credits and investment tax credits.[3] The zero-emission nuclear power production credit provides 0.3 cents per kilowatt hour for the electricity produced by the plant.[4] This credit will be available for operating facilities in 2024 and will continue through 2032.[5] There is also a production tax credit for advanced nuclear reactors, which are typically smaller, safer, and more efficient.[6] These facilities, going into service after 2025, will be eligible for a technology neutral production tax credit for 0.3 cents per kilowatt hour.[7] This technology neutral credit is for emissions free power generations.[8] Additionally, nuclear facilities going into service in or after 2025 are eligible for a tax credit ranging from 6% to 30% of the capital invested in constructing the facility.[9] The IRA also contains a bonus of 10% for facilities sited in certain energy communities including those with retiring coal plants.[10] Advanced nuclear reactor facilities are eligible for this investment tax credit, but it must choose between a production credit or the investment credit; they will not be eligible for both.[11] Furthermore, these credits are all transferable.[12] This legislation also includes a refundable direct pay credit that allows public power utilities to take advantage of tax credits as well.[13]



Over the past few decades nearly one thousand coal plants have been retired throughout the country.[14] This trend is expected to continue, and even accelerate.[15] These shutdowns have drastic impacts on the local economies where they are located.[16] However, studies have shown that nuclear facilities may be easy replacements for these plants.[17] The DOE recently released a report showing that hundreds of coal power plant sites could be converted to nuclear power plant sites.[18]

The report identified nine sites in Kentucky.[19] These site conversions could add new jobs, have a great economic benefit, and improve environmental conditions by providing more clean energy.[20] The case study showed that greenhouse gas emissions in a region could fall by 86% when nuclear power plants replaced large coal plants.[21] Reuse of the coal infrastructure will also lower costs for developing new nuclear facilities.[22]

One of the issues facing nuclear energy, however, is state moratoriums.[23] Several states currently have laws in place restricting the construction of new nuclear power facilities.[24] Several states have only recently changed their restrictions to allow more leeway for nuclear construction.[25] Kentucky ended its prior moratorium by passing S.B. 11 in 2017.[26] This law allows for the construction of new nuclear facilities as long as the plans for waste storage are approved by the Nuclear Regulatory Commission.[27] Many states now have similar laws that allow for construction but require some conditions to be met first.[28]



Kentucky is in a great spot to take advantage of the new tax credits contained in the Inflation Reduction Act. The state has ended their moratorium on nuclear construction and has many retiring coal plants.[29] Additionally, the state's Energy and Environment Cabinet has been researching the latest technology on advanced small modular reactors.[30] The IRA amended language in IRS rules to now include nuclear power, treating it as a clean energy source for the first time.[31] This change made advanced reactors and small modular reactors qualified facilities eligible for tax credits.[32] The IRA is set to expire in 2032, so parties that can take advantage of its benefits should start to

move now. The IRA provides \$10 billion in credits for qualifying advanced energy products and the first round of funding opens in May 2023.[33] During the 2022 Kentucky General Assembly, the Senate adopted Resolution 171.[34] This would require the Legislative Research Commission to examine funding sources and research institutions capable of conducting a feasibility study of advanced nuclear energy technology for electric power generation in the Commonwealth.[35] This resolution, however, was not adopted in the House.[36] The resolution should be adopted so Kentucky can take advantage of the current IRA tax credits.

[1] *Building a Clean Energy Economy: A Guidebook to the Inflation Reduction Act's Investments in Clean Energy and Climate Action*, CleanEnergy.Gov (Jan 2023),
extension://efaidnbmnnnibpcjpcglclefindmkaj/https://www.whitehouse.gov/wp-content/uploads/2022/12/Inflation-Reduction-Act-Guidebook.pdf

[2] *Id.*

[3] *Id.*

[4] 26 U.S.C. § 45U.

[5] *Id.*

[6] 26 U.S.C. § 45Y.

[7] *Id.*

[8] *Id.*

[9] 26 U.S.C. § 48E.

[10] *Id.*

[11] *Id.*

[12] *Id.*

[13] *Treasury, Energy Release Guidance on Inflation Reduction Act Programs to Incentivize Investments in Underserved Communities, Hard-Hit Coal Communities*, U.S. Dep't. of Treasury (Feb. 13, 2023), <https://home.treasury.gov/news/press-releases/jy1269> [<https://perma.cc/DB8U-YYBV>].

[14] Ryan K. Lighty & Kirstin Gibbs, *A new era for nuclear energy post Inflation Reduction Act*, Reuters (Dec. 21, 2022, 11:19 AM), <https://www.reuters.com/legal/legalindustry/new-era-nuclear-energy-post-inflation-reduction-act-2022-12-21/#:~:text=Nuclear%20energy%20offers%20a%20little,investment%20for%20the%20nuclear%20industry> [<https://perma.cc/GB2G-DCRY>].

[15] *Id.*

[16] *Id.*

[17] *Id.*

[18] J. Hansen et al., *Investigating Benefits and Challenges of Converting Retiring Coal Plants into Nuclear Plants*, U.S. Dep't of Energy (Sept. 13, 2022), [extension://efaidnbmnnnibpcajpcgiclfndmkaj/https://inldigitallibrary.inl.gov/sites/sti/sti/Sort_62780.pdf](https://efaidnbmnnnibpcajpcgiclfndmkaj/https://inldigitallibrary.inl.gov/sites/sti/sti/Sort_62780.pdf).

[19] *Id.*

[20] *Id.*

[21] *Id.*

[22] *Id.*

[23] Julia DeWahl, *Nuclear energy: past, present and future*, Julia DeWahl (2022), <https://juliadewahl.com/nuclear-energy-past-present-future> [<https://perma.cc/YD4J-UT3B>].

[24] *States Restrictions on New Nuclear Power Facility Construction*, Nat'l Conf. of State Legislatures, <https://www.ncsl.org/environment-and-natural-resources/states-restrictions-on-new-nuclear-power-facility-construction> (Aug. 17, 2021) [<https://perma.cc/CZM4-UPDX>].

[25] *Id.*

[26] S.B. 11, 171st Gen. Assemb., Reg. Sess. (Ky. 2017).

[27] *Id.*

[28] Nat'l Conf. of State Legislatures, *supra* note xxiv.

[29] Tripp Baltz & Stephen Lee, *Nuclear Bans Tumble as Once-Skeptical States Seek Carbon Cuts*, Bloomberg L. (Nov. 30, 2021, 6:00 AM), <https://news.bloomberglaw.com/environment-and-energy/nuclear-bans-tumble-as-once-skeptical-states-seek-carbon-cuts> [<https://perma.cc/5N4R->

9AEJ].

[30] *Will Kentucky's transition to Low-Carbon Energy include Nuclear?*, Ky Conservation Comm., <https://kyconservation.org/nuclear-energy> (last visited Apr. 6, 2023) [<https://perma.cc/V9E9-D2XU>].

[31] Peter Maloney, *Advanced Nuclear Plants Poised to Benefit from Inflation Reduction Act, Retiring Coal Plants*, Am. Pub. Power Ass'ns (Oct. 21, 2022), <https://www.publicpower.org/periodical/article/advanced-nuclear-plants-poised-benefit-inflation-reduction-act-retiring-coal-plants> [<https://perma.cc/K22Y-EZAL>].

[32] *Id.*

[33] U.S. Dep't. of Treasury, *supra* note xiii.

[34] Ky Conservation Comm., *supra* note xxiv.

[35] *Id.*

[36] *Kentucky Senate Bill 11 (Prior Session Legislation)*, LegiScan, <https://legiscan.com/KY/bill/SB11/2017> (last visited Apr. 7, 2023) [<https://perma.cc/AY82-2NTJ>].

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