

Different Name, Same Result: Why Master Limited Partnerships Are Unlikely to Finance Our Green Energy Future

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Introduction

The world is losing the war against climate change.¹ The burning of fossil fuels is widely considered to be the cause of severe floods, droughts, heat waves, and rising sea levels assaulting our planet.² Climate change is now seen by the rest of the world as the greatest threat to international security.³ Humanity can no longer afford to ignore its effects. Certainly, the United States has a role to play, as it contains three of the world's top-ten cities with the biggest carbon footprints.⁴

Successful climate-change mitigation requires timely decarbonization of the American electricity sector, the largest source of U.S. greenhouse gas emissions alongside transportation.⁵ And the United States is responding. Renewable electricity generation has doubled since 2008.⁶ Natural gas, the cleanest fossil fuel, is quickly replacing coal as the primary fuel for electricity

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1. *The World Is Losing the War Against Climate Change*, ECONOMIST (Aug. 2, 2018), <https://www.economist.com/leaders/2018/08/02/the-world-is-losing-the-war-against-climate-change> [<https://perma.cc/8B59-SL3U>].

2. Alexa Lardieri, *Evidence Humans Are Causing Global Warming Reaches 'Gold Standard,'* U.S. NEWS (Feb. 25, 2019), <https://www.usnews.com/news/politics/articles/2019-02-25/study-evidence-humans-are-causing-global-warming-reaches-gold-standard> [<https://perma.cc/Y66T-J73Z>].

3. Sintia Radu, *Climate Change Seen as World's Greatest Threat*, U.S. NEWS (Feb. 10, 2019, 6:00 PM), <https://www.usnews.com/news/best-countries/articles/2019-02-10/climate-change-isis-seen-as-greatest-global-threats-survey-finds> [<https://perma.cc/46K8-4E3G>].

4. Jordan Friedman, *Cities with the Biggest Carbon Footprints*, U.S. NEWS (Feb. 19, 2019), <https://www.usnews.com/news/cities/slideshows/cities-with-the-most-carbon-emissions> [<https://perma.cc/772L-QN5T>] (ranking Chicago at number eight, Los Angeles at number five, and New York City at number three).

5. U.S. ENVTL. PROT. AGENCY, INVENTORY OF U.S. GREENHOUSE GAS EMISSIONS AND SINKS: 1990-2017, at ES-24 (2019), <https://www.epa.gov/sites/production/files/2019-02/documents/us-ghg-inventory-2019-main-text.pdf> [<https://perma.cc/T63K-GPLD>].

6. *U.S. Renewable Electricity Generation Has Doubled Since 2008*, U.S. ENERGY INFO. ADMIN. (Mar. 19, 2019), <https://www.eia.gov/todayinenergy/detail.php?id=38752> [<https://perma.cc/2X4W-GXD8>].

generators across the country.⁷ But burning natural gas still emits too much greenhouse gas to meet the goals of the global Paris Agreement.⁸ Scientists consider these goals—specifically, limiting warming to two degrees Celsius as compared to preindustrialization levels—vital in order to avoid permanent damage to the environment.⁹

The United States is ill-suited to form a national renewable energy policy.¹⁰ Structural¹¹ and cultural¹² impediments suggest that the U.S. system of government is not good at government-led transformations of the economy, such as mobilizing significant amounts of capital to remake our energy infrastructure.¹³ Instead, the United States allows states and private companies to experiment with different approaches, using the markets to decide what works best.¹⁴ States¹⁵ and private actors¹⁶ have taken it upon themselves to fuel the clean-energy transition with varying levels of success.

Private ordering alone has not been able to drive the transition. Because environmental externalities are not accounted for and assigned to polluters,

7. *More Than 60% of Electric Generating Capacity Installed in 2018 Was Fueled by Natural Gas*, U.S. ENERGY INFO. ADMIN. (Mar. 11, 2019), <https://www.eia.gov/todayinenergy/detail.php?id=38632> [<https://perma.cc/HAZ4-ZHUF>].

8. See JAMES H. WILLIAMS ET AL., POLICY IMPLICATIONS OF DEEP DECARBONIZATION IN THE UNITED STATES 14 (2015), http://deepdecarbonization.org/wp-content/uploads/2015/11/US_Deep_Decarbonization_Policy_Report.pdf [<https://perma.cc/8V38-Y7FQ>] (“Policies (including state-level) that drive a ‘natural gas transition’ without also driving a major expansion of renewable, nuclear, or CCS generation will not achieve the required emission intensities.”).

9. For a description of the necessary pace for decarbonization of the global-energy economy, see INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, GLOBAL WARMING OF 1.5° CELSIUS 95 (2019), <https://www.ipcc.ch/sr15/> [<https://perma.cc/FX27-THHJ>].

10. E. Donald Elliott, *Why the United States Does Not Have a Renewable Energy Policy*, 43 ENVTL. L. REP. 10095, 10095 (2013).

11. Regulatory authority of energy is fragmented, where fifty different states regulate electric utilities while the federal government regulates wholesale transportation of electricity. *Id.* at 10096. The United States has difficulty maintaining consistent energy policies because of frequent changes in government control by our political parties. *Id.* at 10097. And future generations who would largely derive the benefits of clean energy are largely unrepresented in current politics. *Id.* at 10098.

12. American citizens have come to expect energy to remain cheap because it has historically been cheap. *Id.* The United States’ strong free-market ideology opposes heavy government intervention. *Id.* at 10099. And our electricity system is controlled by private ownership of electric utilities, oil, and coal companies, which are powerful lobbying forces against change. *Id.*

13. Elisabeth Rosenthal, *Portugal Gives Itself a Clean-Energy Makeover*, N.Y. TIMES (Aug. 9, 2010), <https://www.nytimes.com/2010/08/10/science/earth/10portugal.html> [<https://perma.cc/W7PA-KZML>] (insisting that, to catch up, the United States “must overcome obstacles like a fragmented, outdated energy grid poorly suited to renewable energy”).

14. Elliott, *supra* note 10, at 10100.

15. NAT’L CONFERENCE STATE LEGISLATURES, STATE RENEWABLE PORTFOLIO STANDARDS 2 (Feb. 1, 2019), <http://www.ncsl.org/research/energy/renewable-portfolio-standards.aspx> [<https://perma.cc/8QJZ-92DY>].

16. Silvio Marcacci, *Google and Apple Lead the Corporate Charge Toward 100% Renewable Energy*, FORBES (Apr. 12, 2018, 7:50 AM), <https://www.forbes.com/sites/energyinnovation/2018/04/12/google-and-apple-lead-the-corporate-charge-toward-100-renewable-energy/> [<https://perma.cc/Z8WK-RY57>].

private actors have little incentive to mitigate the negative consequences of burning fossil fuels.¹⁷ While economists are in “near-universal” agreement that putting a price on greenhouse gas emissions is the most efficient policy to accomplish such a transition,¹⁸ climate change and pollution are exceedingly difficult to measure. The level of emissions from some activities is uncertain.¹⁹ And even if emissions could be estimated accurately, their precise effect on temperature is debated.²⁰ If temperature changes could be accurately forecasted, their welfare effects would nevertheless be difficult to predict.²¹ And finally, most effects of climate change will not be felt for several decades, and thus must be discounted back to the present with some disputable discount rate.²² Given these inherent uncertainties, there is no global consensus about the climate cost of carbon.²³ Pollution, too, is difficult to measure, and its effects would need to be assigned to the polluter.²⁴

The ability to externalize most of their societal and environmental costs allows coal, gas, and other fossil fuel power providers to continue producing and selling electricity at competitive rates with renewable energy sources, even in spite of rapidly declining costs of renewable energy.²⁵ Other costs,

17. See Tracey M. Roberts, *The World Trade Organization and Renewable Energy*, in TAX LAW AND THE ENVIRONMENT: A MULTIDISCIPLINARY AND WORLDWIDE PERSPECTIVE 253, 254 (Roberta F. Mann & Tracey M. Roberts eds., 2018) (“Market failures may result from negative or positive externalities . . .”).

18. Felix Mormann, *Beyond Tax Credits: Smarter Tax Policy for a Cleaner More Democratic Energy Future*, 31 YALE J. ON REG. 303, 307 (2014); Roberts, *supra* note 17, at 254–55.

19. See, e.g., David M. Schizer, *Energy Subsidies: Worthy Goals, Competing Priorities, and Flawed Institutional Design*, 70 TAX L. REV. 243, 248 (2017) (explaining the inability to estimate climate harms accurately).

20. *Id.*

21. *Id.*

22. *Id.*

23. *Id.* at 249 (“While the IMF values it at \$25 per metric ton of CO₂, the Obama administration uses \$38, and others have offered much lower or higher numbers.”).

24. *Id.* For example, hydraulic fracturing has been criticized as contaminating subsurface water. *Id.*

25. LAZARD, LAZARD’S LEVELIZED COST OF ENERGY ANALYSIS—VERSION 12.0, at 2 (2018), <https://www.lazard.com/media/450784/lazards-levelized-cost-of-energy-version-120-vfinal.pdf> [<https://perma.cc/2VGZ-YV47>] (comparing the levelized cost of energy between alternative and conventional sources and concluding that utility-scale solar and wind are cheaper than most fossil fuel sources).

such as net energy,²⁶ intermittency,²⁷ and capital intensity,²⁸ also contribute to fossil fuel entrenchment.

As a result, the federal government has recognized that some intervention is necessary.²⁹ Various approaches have been proposed for cost-effective promotion of renewable energy deployment, including a federal cap-and-trade regime, federal renewable-portfolio standards, and a federal feed-in tariff.³⁰ Though each has its merits, none have gained significant political support.³¹ Rather, Congress has expressed a systemic preference for tax policy over nontax policy options to promote renewables.³² As an example, Congress has repeatedly renewed expiring tax credits for renewables.³³ Their political advantages make them our politicians' favorite mechanism for subsidizing renewable energy.³⁴

Yet, this is unsurprising. Tax incentives have long been the federal policy of choice to promote the development of *all* energy infrastructure—fossil fuels included. The Internal Revenue Code allows for up-front tax

26. While fossil fuels have large amounts of concentrated energy readily available, renewable sources generally have a very low net energy ratio; therefore, a large energy investment is necessary to produce a small amount of usable energy. Elena Cima, *Caught Between WTO Rules and Climate Change: The Economic Rationale of 'Green' Subsidies*, in ENVIRONMENTAL LAW AND ECONOMICS 379, 383 (Klaus Mathis & Bruce R. Huber eds., 2017).

27. It is more difficult to increase renewable energy output on demand than it is for fossil fuels to accommodate changes in consumer demand. *Id.*

28. Renewable energy generation facilities require significantly higher initial capital investments than the fossil fuel industry. *Id.* at 384.

29. See *Beyond the Debate: The Role of Government in Renewable Energy Finance*, SCI. NEWS (Dec. 15, 2012), <http://sitn.hms.harvard.edu/flash/2012/energy-finance/> [https://perma.cc/45KF-M9TN] ("The federal government has traditionally used finance to promote the development of new energy sources and technologies, improve extraction and production of an energy source, or encourage domestic production of an energy source."); see also Cima, *supra* note 26, at 388 ("In the area of renewable energy development, there is a need to create favorable economic conditions for these new technologies. Because the market alone fails to address the externalities . . . , government intervention is therefore necessary to encourage their deployment.").

30. Mormann, *supra* note 18, at 309–10. For a discussion of how each policy instrument operates, see Roberts, *supra* note 17, at 254–61, 264–68.

31. Mormann, *supra* note 18, at 310. These policies have combined for over thirty failed legislative proposals. See *id.* at 337–38 n.249 (listing various failed campaigns).

32. See Mark Bolinger et al., *Preliminary Evaluation of the Section 1603 Treasury Grant Program for Renewable Power Projects in the United States*, 38 ENERGY POL'Y 6804, 6804–05 (2010).

33. Michael J. Graetz, *Problems, Policies, and Politics of Energy Prices in the United States*, in TAX LAW AND THE ENVIRONMENT: A MULTIDISCIPLINARY AND WORLDWIDE PERSPECTIVE 45, 51 (Roberta F. Mann & Tracey M. Roberts eds., 2018) ("The PTC was extended ten times since 1992 Five of the extensions were retroactive In each of the years with the retroactive extensions for which data is available, wind energy additions slowed significantly compared to years in which the PTC was in effect.").

34. See *id.* at 49 (noting that Republicans in Congress almost always support tax cuts while Democrats view tax benefits as the only way to achieve their policy goals without being criticized as big spenders).

deductions for drilling oil and gas wells,³⁵ exploration and development of oil shales,³⁶ depletion of oil and gas deposits,³⁷ and general domestic manufacturing.³⁸ Accelerated depreciation rates allow energy companies to recognize lower taxable income in earlier years,³⁹ freeing up investment capital. This preference for using tax policy over more-direct spending measures suggests that the smoothest and fastest way to promote renewable energy development is through amendments to the current tax structure.

The most important tax benefits for renewable energy have been the production tax credit (PTC)⁴⁰ and the investment tax credit (ITC).⁴¹ Tax credits incentivize investment by reducing the after-tax cost of the tax-favorable activity—in this case, development of renewable energy generation. But the evidence is mixed on whether these benefits have meaningfully affected the country’s energy production.⁴² Though billions of dollars in federal subsidies have been distributed,⁴³ they have been insufficient to raise the share of wind, solar, geothermal, and other low-carbon renewable sources in the electricity mix beyond 18%.⁴⁴ And future growth is expected to remain inadequate, with renewables expected to account for no more than 31% of American electricity generation by 2050.⁴⁵ United States federal debt now exceeds \$22 trillion, and America may not want to spend more money on clean-energy policy moving forward.⁴⁶

35. 26 U.S.C. § 263(c) (2018).

36. *Id.* § 617(a)(1).

37. *Id.* § 613A(c)(1).

38. *Id.* § 199, *repealed by* Tax Cuts and Jobs Act, Pub. L. No. 115-97, § 13305, 131 Stat. 2054, 2126 (2017).

39. Depreciation expense reduces taxable income. As a result, accelerated depreciation lowers the taxes paid in earlier years while increasing the taxes paid in later years. But because accelerated depreciation rates are available for all energy projects, *see* Tax Reform Act of 1986, Pub. L. No. 99-514, 100 Stat. 2085, 2122 (permitting accelerated depreciation rates under what is commonly known as the Modified Accelerated Cost Recovery System), there is no advantage for renewables over fossil fuels.

40. 26 U.S.C. § 45 (2018). The PTC provides a credit based on the amount of electricity that is generated by the qualifying project over a period of years. Graetz, *supra* note 33, at 49.

41. 26 U.S.C. § 48 (2018). The ITC provides a credit based on the cost of building the qualifying project. Graetz, *supra* note 33, at 49.

42. Graetz, *supra* note 33, at 50.

43. Mormann, *supra* note 18, at 305.

44. U.S. ENERGY INFO. ADMIN., ANNUAL ENERGY OUTLOOK 2019, at 21 (Jan. 24, 2019), <https://www.eia.gov/outlooks/aeo/pdf/aeo2019.pdf> [<https://perma.cc/WQK6-577H>].

45. *Id.* Note that this is insufficient to meet the goals of the Paris Agreement. *See* INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, *supra* note 9, at 95 (“For limiting global warming to below 2°C with at least 66% probability CO₂ emissions are projected to decline by about 25% by 2030 in most pathways (10–30% interquartile range) and reach net zero around 2070 (2065–2080 interquartile range).”).

46. Bill Chappell, *U.S. National Debt Hits Record \$22 Trillion*, NPR (Feb. 13, 2019, 10:47 AM), <https://www.npr.org/2019/02/13/694199256/u-s-national-debt-hits-22-trillion-a-new-record-thats-predicted-to-fall> [<https://perma.cc/M93C-ZDAG>].

The primary issue with the existing tax incentives is that they do not benefit those without adequate tax liability to absorb the credits.⁴⁷ Most renewable energy developers, at least at the outset, are too small in size or lack sufficient profitability to generate tax liabilities capable of absorbing the credit.⁴⁸ These losses are partly due to the life cycle of the business,⁴⁹ as well as the effects of accelerated depreciation deductions⁵⁰ or immediate expensing⁵¹ of capital expenditures. Ironically, these advantages do not pair well together. As a result, the current tax incentives are inefficient.

This problem is exacerbated by restrictions in the Internal Revenue Code. Congress does not allow the transfer of tax credits; therefore, project developers must enter into partnerships with corporate investors that have income to shelter.⁵² Professor Felix Mormann explains: “In the absence of taxable income to offset, renewable energy project developers are unable to reap the immediate benefit of their projects’ tax credits without the help of a tax equity investor who can monetize [in a timely fashion] the credits by offsetting tax liabilities from other sources.”⁵³

Developers who are unwilling to give up ownership or management of their projects seek out these tax equity investors to obtain capital.⁵⁴ But there is a shortage of available tax equity investors;⁵⁵ historically, fewer than twenty-five sophisticated and profitable entities—mainly large banks, insurance companies, and other financial firms—have been capable of

47. Mormann, *supra* note 18, at 325 (“In doing so, however, policymakers were willing to overlook the fact that renewable energy developers and their projects tend to lack the quintessential requirement to benefit from tax credits—a high enough tax bill to offset with these credits.”).

48. Mormann, *supra* note 18, at 360 (“Tax credits may work well for mature industries that generate steady flows of taxable income to offset. But they are a poor fit for the emerging renewables industry whose high up-front capital intensity prevents projects from generating taxable profits for the first ten or more years of operation.”).

49. Graetz, *supra* note 33, at 50.

50. The Modified Accelerated Cost Recovery System enables developers to depreciate their renewable energy projects on a five-year schedule for tax purposes, despite a longer useful life for bookkeeping purposes.

51. *New Rules and Limitations for Depreciation and Expensing Under the Tax Cuts and Jobs Act*, U.S. INTERNAL REVENUE SERV. (Apr. 2018), <https://www.irs.gov/newsroom/new-rules-and-limitations-for-depreciation-and-expensing-under-the-tax-cuts-and-jobs-act> [<https://perma.cc/F5L9-59YJ>]. The new law increases the bonus depreciation percentage from 50% to 100% for qualified property acquired and placed in service after September 27, 2017, and before January 1, 2023. *Id.* The bonus depreciation percentage for qualified property that a taxpayer acquired before September 28, 2017, and placed in service before January 1, 2018, remains at 50%. *Id.*

52. Graetz, *supra* note 33, at 50; *see also* 26 U.S.C. § 382 (2018) (prohibiting straightforward sale of tax attributes). This prohibition thereby compels costly deal structures to legally assign tax benefits to the investor.

53. Mormann, *supra* note 18, at 360.

54. Mormann, *supra* note 18, at 325.

55. Graetz, *supra* note 33, at 51 (acknowledging the decline in tax equity investors from twenty before the 2008 financial crisis to five after the crisis).

supporting renewable energy projects through their tax equity investments.⁵⁶ These investors exploit their exclusivity to receive higher rates of return than the project's risk would otherwise require.⁵⁷ And the cyclical nature of the tax equity market further depresses the value of tax credits during economic downturns, when developers are most desperate for capital.⁵⁸ The participation of a tax equity investor in renewable-power projects results in high transaction costs.⁵⁹ It also limits a developer's ability to raise project capital from more cost-efficient sources, such as cheaper debt financing.⁶⁰

Therefore, under the current regime, renewable energy developers can realize no more than two-thirds of the value of their project's tax benefits, even when bringing in a tax equity investor.⁶¹ And while a project developer could forego tax equity investors and elect to carry forward his credits into the future until his tax bill is high enough, this delay would cost him up to two-thirds of the net present value of his project's tax benefits.⁶²

The Master Limited Partnership (MLP) business structure has been proposed as a possible solution to the subsidy problem. Rather than using tax credits, MLPs promote growth by simply removing a layer of taxation on profits. Allowing renewable energy developers to structure as MLPs would provide a financing option that bypasses the tax equity market and provides a competitive advantage over corporate entities that are subject to double taxation.

There are compelling reasons why the MLP could be effective. From 2009–2011, the Treasury experimented with the § 1603 program,⁶³ which allowed taxpayers to receive direct grants from the Treasury—in lieu of back-end credits—and thus avoid the problems that plague the tax equity market.⁶⁴

56. Mormann, *supra* note 18, at 316.

57. WILLIAM T. ALLEN & REINIER KRAAKMAN, COMMENTARIES AND CASES ON THE LAW OF BUSINESS ORGANIZATION 494 (5th ed. 2016); Felix Mormann, *Clean Energy Equity*, 2019 UTAH L. REV. 335, 368 (“But tax equity investors are few and far between—and they exploit their exclusivity status to exact higher rates of return than the risk profile of their involvement would normally warrant.”).

58. Mormann, *supra* note 57, at 368.

59. Graetz, *supra* note 33, at 51 (attributing high transaction costs in tax equity financing to “the services of lawyers, engineers, accountants, environmental consultants, and other specialists”).

60. Mormann, *supra* note 57, at 368–69 (explaining that tax equity investors are wary of losing their preferred access to project cash flows).

61. UDAY VARADARAJAN ET AL., CLIMATE POL’Y INITIATIVE, SUPPORTING RENEWABLES WHILE SAVING TAXPAYERS MONEY 4 (2012).

62. Mormann, *supra* note 57, at 369.

63. American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, § 1603, 123 Stat. 115, 364.

64. MOLLY F. SHERLOCK & MARK P. KEIGHTLEY, CONG. RESEARCH SERV., MASTER LIMITED PARTNERSHIPS: A POLICY OPTION FOR THE RENEWABLE ENERGY INDUSTRY 8 (2011); *see also Treasury Issues Guidelines on Payments for Specified Energy Property in Lieu of Tax Credits Under the American Recovery and Reinvestment Act of 2009*, JONES DAY (July 2009), <https://www.jonesday.com/en/insights/2009/07/treasury-issues-guidelines-on-payments-for-specified->

This policy has been credited with broadening the pool of renewable energy investors⁶⁵ and has provided \$25.7 billion of funding for installed capacity of 34.5 gigawatts.⁶⁶ Similarly, the MLP would *guarantee* that benefits flowed through to the developer, without concern for having enough taxable income to benefit from credits.

Such a solution has garnered tremendous support over the past several years. Proponents include professors,⁶⁷ law students,⁶⁸ non-law students,⁶⁹ professionals,⁷⁰ and even governmental bodies.⁷¹ The Financing Our Energy Future Act (FOEF Act) is the most recent attempt to apply the MLP model to the renewable energy industry. Part I of this Note introduces the FOEF Act and provides an overview of the Master Limited Partnership structure. Part II argues that the MLP was a deliberate attempt to encourage investment in the midstream oil and gas industry. It considers the purpose and history of the MLP to determine whether its success could be replicated in the renewable

energy-property-in-lieu-of-tax-credits-under-the-american-recovery-and-reinvestment-act-of-2009 [https://perma.cc/68FN-VJQ9] (“Pursuant to the program, an applicant must agree to forgo the production tax credit and investment tax credit under sections 45 and 48 of the Internal Revenue Code (“IRC”) with respect to the property that is the subject of the application.”).

65. SHERLOCK & KEIGHTLEY, *supra* note 64, at 8.

66. U.S. DEP’T OF THE TREASURY, OVERVIEW AND STATUS UPDATE OF THE § 1603 PROGRAM 1 (Apr. 1, 2017), <https://www.treasury.gov/initiatives/recovery/Documents/Status%20overview.pdf> [https://perma.cc/7MR4-ZPN4].

67. *See, e.g.*, Mormann, *supra* note 18, at 348 (“Publicly traded shares in renewable energy MLPs and REITs would allow millions of Americans to invest in the nation’s energy future.”); Sonia Toson, *Master Limited Partnership Parity Act: Friend or Foe?*, 32 PACE ENVTL. L. REV. 285, 305 (2015) (“There appears to be no legitimate economic reason to allow non-renewable energy companies to organize as MLPs while denying renewable energy companies the same access.”).

68. *See, e.g.*, Andrew C. Fink, *Securitize Me: Stimulating Renewable Energy Financing by Embracing the Capital Markets*, 12 U.N.H. L. REV. 109, 135 (2014) (“If this legislation is passed, securitization through the MLP structure could soon be realized, bringing an estimated \$6 billion of capital immediately into MLP renewable energy investment, with billions more likely in the pipeline.”); E. Cabell Massey, *Master Limited Partnerships: A Pipeline to Renewable Energy Development*, 87 U. COLO. L. REV. 1009, 1040 (2016) (“One thing is certain though—MLPs have a proven track record and are a great solution for raising capital.”).

69. *See, e.g.*, Ryan Buxbaum, *Driving Renewable Energy Growth Through Effective Public Policy* 26 (Dec. 2014) (unpublished undergraduate thesis, Duke University), https://dukespace.lib.duke.edu/dspace/bitstream/handle/10161/9345/Buxbaum%2CRyan_Undergraduate_HonorsThesis.pdf [https://perma.cc/6LVG-ZWU7] (“The pass-through structure serves as an efficient vehicle to manage steady, cash flow generating assets for a parent company, who can then efficiently distribute yield-oriented dividends to investors and, ultimately, attract a larger investor base.”).

70. Oliver Fankhauser, Comment, *Publicly Traded Partnerships for Electricity Generators: Why Amending I.R.C. Section 7704 Is Good for the Power Industry*, 17 HOUS. BUS. & TAX L.J. 254, 276 (2017) (“[E]xpanding the definition of publicly traded partnership to include electricity generation activities may provide significant economic and social benefits for investors and the country.”).

71. SHERLOCK & KEIGHTLEY, *supra* note 64, at 11 (“MLPs could have the potential to attract additional capital to the renewable energy sector.”).

sector. Finally, Part III evaluates the possible benefits of the FOEF Act and assesses whether it would have the success anticipated by its proponents. I conclude that it likely would not.

I. The Financing Our Energy Future Act

A. *What Is the Master Limited Partnership?*

Master Limited Partnerships are publicly traded limited partnerships that combine the pass-through tax treatment of partnerships with the liquidity of ownership interests associated with publicly traded corporations. Because MLPs are not subject to entity-level taxation, they realize greater net cash flows and have more cash available to distribute to their unitholders.⁷² This gives them a competitive advantage over taxable entities such as corporations.

As a general rule, publicly traded companies are subject to entity-level taxation.⁷³ But in 1987, Congress passed the Omnibus Budget Reconciliation Act, providing an exception for certain partnerships having at least 90% of gross income derived from “qualifying” sources.⁷⁴ While qualifying income is generally passive-type income such as interest, dividends, and rent,⁷⁵ § 7704(d)(1)(E) extends such qualifying sources to also include: “income and gains derived from the exploration, development, mining or production, processing, refining, transportation (including pipelines transporting gas, oil, or products thereof), or the marketing of any mineral or natural resource (including fertilizer, geothermal energy, and timber), industrial source carbon dioxide, or the transportation or storage of [certain] fuel[s]”⁷⁶

Because of the § 7704(d) exception, most MLPs satisfy the qualifying-income test with income from natural resources.⁷⁷ And natural-resource MLPs comprise 90% of all MLP market capitalization.⁷⁸

72. Philip H. Peacock, Recent Development, *Master Limited Partnerships: At the Crossroads?*, 4 TEX. J. OIL GAS & ENERGY L. 397, 408–09 (2009).

73. See 26 U.S.C. § 7704(a) (2018) (“[A] publicly traded partnership shall be treated as a corporation.”).

74. See Omnibus Budget Reconciliation Act of 1987, Pub. L. No. 100-203, § 10211, 101 Stat. 1330, 1403–04 (codified as amended at 26 U.S.C. § 7704(c)(2)).

75. 26 U.S.C. § 7704(d)(1)(A)–(C) (2018).

76. *Id.* § 7704(d)(1)(E) (emphasis added).

77. *Current MLPs & MLP Funds*, ENERGY INFRASTRUCTURE COUNCIL, <http://eic.energy/current-mlps-and-mlp-funds/> [<https://perma.cc/JR53-YCFM>] (last updated Aug. 26, 2019).

78. MASTER LTD. P’SHP ASS’N, MASTER LIMITED PARTNERSHIPS 101: UNDERSTANDING MLPs 29 (Aug. 2017), <https://www.mlpassociation.org/wp-content/uploads/2015/08/MLP-101-MLPA.pdf> [<https://perma.cc/S2GR-SL97>].

Not all minerals and natural resources qualify; notably, qualifying income excludes income derived from “inexhaustible sources.”⁷⁹ With this specific prohibition, Congress left no room for statutory interpretation that would make renewables MLP eligible. If an MLP fails to meet the 90% qualifying-income threshold, the partnership is deemed to have transferred “all of its assets (subject to its liabilities) to a newly formed corporation in exchange for the stock of the corporation” and to have distributed “such stock to its partners in liquidation of their interests in the partnership.”⁸⁰ In effect, it would be subject to federal income tax on its earnings.

By listing on public stock exchanges, MLPs can access far more investors than a privately held partnership. MLPs are attractive investments for many investors because unitholders are entitled to distributions on a quarterly basis.⁸¹ Under MLP partnership agreements, the MLP is required to distribute all “available cash” to its partners.⁸² Since paying these distributions is critical to the success of an MLP, businesses that generate consistent cash flows are better suited to the MLP structure than volatile businesses such as those exposed to commodity-price risk.⁸³

Critics of the current MLP qualifying-income requirements question why the benefits from an energy MLP are exclusively available to producers of nonrenewable energy. MLPs helped fuel the rapid expansion of fracking nationwide during the shale boom. This expansion happened while the rest of the world was preparing for the transition to renewables.⁸⁴

B. *The Financing Our Energy Future Act*

The Financing Our Energy Future Act⁸⁵ was introduced on June 13, 2019 and has been referred to the Senate Committee on Finance⁸⁶ and the House Committee on Ways and Means.⁸⁷ The bill was initially proposed by

79. 26 U.S.C. § 613(b)(7)(B) (2018); *see also* H.R. REP. NO. 100-1104, at 17 (1988) (“The conference agreement follows the Senate amendment; except that . . . minerals from sea, water, the air, or similar inexhaustible sources, shall not be treated as a mineral or natural resource.”); S. REP. NO. 100-445, at 424 (1988) (clarifying that “qualifying income does not include, for example, income from . . . hydroelectric, solar, wind, or nuclear power production”).

80. 26 U.S.C. § 7704(e)–(f) (2018).

81. J.T. Carpenter, Comment, *Master Limited Partnerships Shed a Tier*, 53 S. TEX. L. REV. 381, 385 (2011).

82. *Id.*

83. Peacock, *supra* note 72, at 413 (explaining that upstream MLPs exposed to commodity-price fluctuations are riskier than midstream MLPs).

84. Sharon Kelly, *As Rest of World Moves Towards Renewables, US Keeps Offering Exclusive Tax Breaks for Fossil Fuels*, DESMOG (May 6, 2018), <https://www.desmogblog.com/2018/05/06/us-tax-breaks-shale-oil-gas-master-limited-partnerships> [<https://perma.cc/3A3N-VGGM>].

85. Financing Our Energy Future Act, S. 1841, 116th Cong. (2019); Financing Our Energy Future Act, H.R. 3249, 116th Cong. (2019).

86. 165 CONG. REC. S3476 (daily ed. June 13, 2019).

87. 165 CONG. REC. H3693 (daily ed. June 13, 2019).

Senator Chris Coons of Delaware in 2017 as the “MLP Parity Act.”⁸⁸ Earlier this year, Senator Coons provided the following description during Senate proceedings:

This bill expands to renewable forms of energy, to carbon capture and sequestration, and to renewable and so-called clean energy a popular and long-established tax tool for financing energy projects that the oil and gas and pipeline sectors have enjoyed for decades. It would level the playing field. It would stop picking winners and losers in terms of energy tax policy. It would be, literally, an “all of the above” energy financing strategy.⁸⁹

1. Expansion of Qualifying Income.—The clear objective of the bill is “to extend the publicly traded partnership ownership structure to energy power generation projects and transportation fuels.”⁹⁰ Section 2(a)(4) extends eligibility to “[t]he generation of electric power . . . exclusively utilizing any resource described in section 45(c)(1) or energy property described in section 48”⁹¹ These new “qualified energy resources” would include wind, biomass, geothermal, solar, hydropower, and hydrokinetic (wave) energy.⁹²

The expansion is significant for five reasons. First, the bill expands qualifying income to many *renewable* sources of energy for the first time. Only geothermal energy is provided for under the current law.⁹³ Second, the bill extends MLP eligibility into *power-generation* equipment for the first time. While it does so for power generation from renewable sources, it makes no mention of fossil fuel electricity generators such as coal or natural gas. Third, it makes no mention of companies that *transmit* electricity generated from renewable sources; the Internal Revenue Code, however, presently

88. Master Limited Partnerships Parity Act, S. 2005, 115th Cong. (2017); 163 CONG. REC. S6816 (daily ed. Oct. 25, 2017). Though the bill was initially introduced in 2017 as the “MLP Parity Act,” it has been reintroduced by Senator Coons as the “Financing Our Energy Future Act” after its original title was mistaken for a reference to the TV series “My Little Pony.” Zack Budryk, *Senate Dem to Reintroduce Bill with New Name after ‘My Little Pony’ Confusion*, HILL (June 13, 2019, 3:16 PM), <https://thehill.com/blogs/blog-briefing-room/448432-senate-dem-to-reintroduce-bill-with-new-name-after-my-little-pony> [<https://perma.cc/AF6A-J2TH>].

89. 165 CONG. REC. S1577 (daily ed. Feb. 28, 2019).

90. S. 1841.

91. *Id.* § 2(a)(4).

92. 26 U.S.C. § 45(c)(1) (2018). The bill includes additional qualifying activities, such as carbon capture and sequestration, expansion of qualifying renewable chemicals, disposal and utilization of captured carbon dioxide, energy-efficient buildings, waste heat to power, combined heat and power, and energy storage. S. 1841. This Note focuses on those clean energy sources that have been most widely adopted and those showing the most promise for future deployment—specifically wind and solar.

93. It is unclear why geothermal energy is currently included, as it is not generally considered a “depletable” resource under 26 U.S.C. § 611. *See* 26 U.S.C. § 7704(d)(1)(E) (2018) (defining “qualifying income” as including “income and gains derived from the . . . development . . . of . . . geothermal energy”).

considers the transportation of mineral resources to be a qualifying activity.⁹⁴ Fourth, the bill does not remove or alter any of the existing categories of business activities eligible for structuring as an MLP.⁹⁵ Finally, nuclear energy—though widely considered “clean”—is excluded from the legislation as currently written. This exclusion is consistent with the global trend away from nuclear as a significant energy source.⁹⁶

The expansion of qualifying income is expected to enlarge the investor base for renewable energy projects. Once an MLP is formed, the general partner would handle the operations of the renewable energy project. Hundreds of limited partners (the investing public) would invest capital and receive quarterly dividends. The MLP, as a pass-through entity, is not subject to corporate income tax. Investors are taxed according to their individual rate only on dividends received.⁹⁷ Thus, the Act would allow the investing public to purchase units of renewable-electricity partnerships to finance America’s clean-energy transition. Previously, individuals were unable to invest in new utility-scale renewable energy projects because of the immense investment required.⁹⁸ Capital would no longer need to come from private equity, hedge funds, or institutional investors.⁹⁹

2. *Congressional Support and Likelihood of Passage.*—The bill has drawn support from a broad range of institutions, including states, businesses, trade associations, environmental advocates, and investors.¹⁰⁰ The supporting trade associations largely represent various renewable energy interests that would directly benefit from the bill.¹⁰¹ Environmental advocates have

94. *Id.*

95. S. 1841.

96. *See Despite Closures, U.S. Nuclear Electricity Generation in 2018 Surpassed Its Previous Peak*, U.S. ENERGY INFO. ADMIN. (Mar. 21, 2019), <https://www.eia.gov/todayinenergy/detail.php?id=38792> [<https://perma.cc/3L8E-N86P>] (“In the near future, however, EIA expects that U.S. nuclear power output will decline.”). But this is the type of issue that could be submitted to the IRS for a written determination as part of the gradual broadening of MLP eligibility that has occurred in many other areas. *See infra* note 139 and accompanying text.

97. *See supra* subpart I(A).

98. *See* JOHN P. HARPER ET AL., LAWRENCE BERKELEY NAT’L LAB., WIND PROJECT FINANCING STRUCTURES: A REVIEW & COMPARATIVE ANALYSIS, at i (2007), <https://eetd.lbl.gov/sites/all/files/publications/report-lbnl-63434.pdf> [<https://perma.cc/S23X-7NK9>] (comparing up-front capital expenditures relative to generation capacity).

99. *See* Mormann, *supra* note 18, at 309 (describing the limited pool of investors for renewable energy projects).

100. *Support for the Financing Our Energy Future Act*, U.S. SENATE, <https://www.coons.senate.gov/imo/media/doc/116th%20Support%20Quotes%20-%20Financing%20Our%20Energy%20Future%20Act.pdf> [<https://perma.cc/G4MR-Q7XM>] (listing quotes from endorsers).

101. *See generally* Letter from 360 Sun Solutions, LLC et al., to Members of Congress (Apr. 24, 2013), <https://www.coons.senate.gov/imo/media/doc/2013-04-24%20cap-fair%20mlp>

acknowledged the success of MLPs in the fossil fuel industry and recognize the Act as an “important complement to other renewable energy policies.”¹⁰²

Surprisingly, the bill has also been endorsed by many traditional oil and gas companies.¹⁰³ And oil-patch senators have cosponsored the bill.¹⁰⁴ While Republicans have traditionally supported fossil fuel interests and Democrats are more likely to support renewable energy,¹⁰⁵ such endorsement could be a political tactic to entrench the MLP as a continued subsidy for fossil fuels. There are many who would prefer the complete elimination of the MLP structure and its tax benefits rather than its expansion to renewables.¹⁰⁶ However, the inclusion of renewables as eligible resources could generate a bipartisan coalition protecting the subsidy,¹⁰⁷ making it nearly impossible to eliminate the tax-favored status for fossil fuel MLPs.

Despite widespread support, the bill has been overlooked in previous congressional sessions.¹⁰⁸ Some critics have indicated that they would not support the Act unless both the production- and investment-tax credits are eliminated.¹⁰⁹ However, Senator Coons recently reaffirmed his intent to pass the Act in the current legislative session.¹¹⁰ His commitment to the bill is

%20letter.pdf [https://perma.cc/GP4Y-6QZR] (endorsing the FOEF Act’s predecessor on behalf of 236 entities across various industries).

102. Steve Clemmer, *Master Limited Partnerships: Lowering Financing Costs for Renewable Energy Projects*, UNION OF CONCERNED SCIENTISTS (Apr. 25, 2013), <https://blog.ucsusa.org/steve-clemmer/master-limited-partnerships-lowering-financing-costs-for-renewable-energy-projects-110> [https://perma.cc/A8AB-RQ82].

103. Maria Gallucci, *A Rare Bipartisan Clean Energy Bill Is Ready for Passage*, INSIDECLIMATE NEWS (May 13, 2013), <https://insideclimatenews.org/news/20130513/rare-bipartisan-clean-energy-bill-ready-passage> [https://perma.cc/Q3WY-J345] (including executives from Arch Coal, Chesapeake Energy, Chevron, and ExxonMobil as supporters of the bill).

104. See Dino Grandoni, *The Energy 202: Tax Debate Opens Door for Renewables to Get Same Break as Fossil Fuels*, WASH. POST: POWERPOST (Oct. 25, 2017), https://www.washingtonpost.com/news/powerpost/paloma/the-energy-202/2017/10/25/the-energy-202-tax-debate-opens-door-for-renewables-to-get-same-break-as-fossil-fuels/59efbb4b30fb045cba000a27/?utm_term=.71436510fbe8 [https://perma.cc/MEV6-D45A] (listing Republican Senator Moran of Kansas, Republican Representative Poe of Texas, and Republican Senator Murkowski of Alaska as supporters of the MLP Parity Act).

105. David Roberts, *The Green New Deal, Explained*, VOX (Mar. 30, 2019, 8:23 AM), <https://www.vox.com/energy-and-environment/2018/12/21/18144138/green-new-deal-alexandria-ocasio-cortez> [https://perma.cc/PDL6-WVBL].

106. David Powers, *Fighting the Wrong Fight: Why the MLP Parity Act Is a Misguided Attempt at Achieving Renewable Energy Capital Raising Parity*, SUSTAINABLE DEV. L. & POL’Y, Fall 2016, at 30, 35.

107. Mormann, *supra* note 18, at 352.

108. See 116 CONG. REC. S1577 (daily ed. Feb. 28, 2019) (noting that MLP parity for renewables had been introduced, but not passed, in three Congresses).

109. Robert Rapier, *The MLP Parity Act Is a No-Brainer for Renewable Energy*, ENERGY CENTRAL (June 3, 2014, 1:00 PM), <https://www.energycentral.com/c/ec/mlp-parity-act-no-brainer-renewable-energy> [https://perma.cc/B3U8-USCK].

110. 116 CONG. REC. S1695 (daily ed. Mar. 6, 2019) (“I promise to continue to do my part here to bridge what divides us That includes passage of the Master Limited Partnerships Parity Act,

evidenced by his recent efforts to rebrand the legislation with a new, catchy name.¹¹¹

II. Are MLPs a Good Fit for Renewables?

This Part considers the legislative history of the Master Limited Partnership to determine whether its expansion into renewables is presently warranted. It attempts to interpret the sparse text of the Financing Our Energy Future Act. Finally, it evaluates the MLP's success in the midstream oil and gas industry and whether conditions in the renewable industry are similar.

A. *Legislative History of the Master Limited Partnership*

The overarching purpose of the 1987 Omnibus Budget Reconciliation Act was to counteract the "explosion of shelters and limited partnerships created solely for the purpose of evading tax responsibilities."¹¹² Congress limited the entities that qualify for MLP status because the "proliferation of publicly traded partnerships" caused "concern about long-term erosion of the corporate tax base."¹¹³ The exception was meant to cover only those companies providing passive-type income. Energy companies are generally not considered passive investments.¹¹⁴

The legislative history of the 1987 Act does not explicitly state Congress's reason for allowing energy companies to participate in the qualifying-income exception.¹¹⁵ However, the exception was very likely intended to encourage the development of energy infrastructure within the United States. When the law was passed, the energy industry was depressed and energy imports were on the rise.¹¹⁶ The committees responsible for drafting the legislation held three days of hearings to review the use and

important bipartisan legislation that will level the tax playing field for clean energy . . . —work that I intend to finish.”).

111. Budryk, *supra* note 88.

112. *Administration's Fiscal Year 1988 Budget Proposals Relating to the Internal Revenue Service: Hearing Before the Subcomm. on Oversight of the Comm. on Ways & Means*, 100th Cong. 52 (1987) (statement of Rep. Byron L. Dorgan).

113. H.R. REP. NO. 100-391, at 1065 (1987).

114. *See Master Limited Partnerships: Hearings Before the Subcomm. on Select Revenue Measures of the Comm. on Ways & Means*, 100th Cong. 10 (1987) [hereinafter *Master Limited Partnerships: Hearings*] (statement of J. Roger Mentz, Assistant Secretary for Tax Policy, U.S. Department of the Treasury) (expressing concern that MLPs were “increasingly being used for active business enterprises” and were no longer “limited to passive ownership or wasting assets such as oil and gas or natural resource properties”).

115. Powers, *supra* note 106, at 33.

116. *Master Limited Partnerships: Hearings*, *supra* note 114; *see also Master Limited Partnerships: Hearing before the Subcomm. on Taxation and Debt Management of the S. Comm. on Finance*, 100th Cong. 90 (1987) (statement of James R. Moffett, CEO, Freeport-McMoRan, Inc.) (explaining that the “commodities in this country have been decimated” and that the mining and natural resources businesses must be “completely rebuilt”).

taxation of MLPs.¹¹⁷ Witnesses explained how partnerships could be used to more easily raise capital for oil and gas exploration.¹¹⁸

For energy infrastructure to be built, the right economic incentives must be in place. Investors require a rate of return that compensates them for both the cost of a project and its associated risks—in the case of energy projects, the risks of delay or cancellation.¹¹⁹ Expanded regulatory reviews of these types of projects increase their uncertainty, causing investors to demand more as a risk premium on their investment.¹²⁰ The MLP's tax advantages afford it a lower cost of capital, which enables it to more easily attract investor capital. Rational investors will invest their capital in companies offering higher returns after adjusting for risk. By allowing energy companies to benefit from these advantages, investment flows into the industry.

In the end, Congress merely explained that the activities in natural resource industries “have commonly or typically been conducted in partnership form, and . . . disruption of present practices in such activities is . . . inadvisable *due to general economic conditions in these industries*.”¹²¹ “In the case of natural resources activities, special considerations apply.”¹²² These special considerations were likely related to the United States' reliance on foreign energy. And it is possible that this fear prompted Congress to take protective action in creating the Master Limited Partnership.

Economic conditions today are markedly different from those of the 1980s, when the MLP was created. Industry experts are no longer concerned with the global supply of oil.¹²³ Widespread use of hydraulic fracturing and directional drilling have brought about the shale oil and gas boom, unlocking

117. Qualifying Income from Activities of Publicly Traded Partnerships with Respect to Minerals or Natural Resources, 82 Fed. Reg. 8318, 8319 (Jan. 24, 2017) (codified at 26 C.F.R. § 1.7704-4 (2017)) (interpreting the congressional intent for § 7704(d)(1)(E)).

118. See *Master Limited Partnerships: Hearings*, *supra* note 114, at 1 (statement of Christopher L. Davis, President, Investment Partnership Association) (explaining that “[o]il and gas exploration and development are among the riskiest of business ventures,” but that partnerships had been “an economical way to share the risks”).

119. See James W. Coleman, *Energy Market and Policy Revolutions: Regulatory Process and the Cost of Capital*, in *ENERGY LAW AND ECONOMICS* 159, 163 (Klaus Mathis & Bruce R. Huber eds., 2018) (explaining that the public's increased focus often delays energy infrastructure projects, raising uncertainty for energy investors and causing them to demand higher returns).

120. James W. Coleman, *Pipelines & Power-Lines: Building the Energy Transport Future*, 80 OHIO ST. L.J. 263, 265–66 (2019). But see Coleman, *supra* note 119, at 164–65 (noting that regulation of pipelines has been somewhat relaxed under the Trump Administration).

121. H.R. REP. NO. 100-391, at 1066 (emphasis added).

122. *Id.* at 1069.

123. See Colin J. Campbell & Jean H. Laherrère, *The End of Cheap Oil*, *SCI. AM.*, Mar. 1998, at 78, 81 (predicting peak oil within ten years, twenty years ago).

an abundance of energy resources.¹²⁴ As a result, proved reserves¹²⁵ of domestic crude oil and gas have approximately doubled in the last decade.¹²⁶ U.S. oil production nearly doubled in the past ten years, from five million barrels per day in 2007 to nearly ten million barrels per day in 2017.¹²⁷ Natural gas production has increased by about 50% over the same period.¹²⁸ Foreign imports have been substantially reduced and domestic production has thrived, curtailing national security concerns.¹²⁹

But while energy independence has dramatically improved, national security may still be a valid reason for expanding the MLP to renewable sources. Shocks to global energy supply and demand cause domestic economic disruptions. For example, the 2011 instability in Libya caused domestic energy prices to skyrocket.¹³⁰ Avoiding these shocks has been a primary objective of U.S. foreign policy for the past fifty years.¹³¹ This tradition is perhaps most evident in President George H.W. Bush's invasion of Kuwait in 1990¹³² and (arguably) President George W. Bush's invasion of Iraq in 2003.¹³³

Politicians ordinarily try to prevent energy spikes by increasing domestically produced oil. However, this approach is not entirely responsive.¹³⁴ Because the global energy market is so interconnected, U.S. energy prices would still rise if the global supply—from the Middle East, for example—was interrupted. This is because global consumers would bid up

124. Alexandra B. Klass & Danielle Meinhardt, *Transporting Oil and Gas: U.S. Infrastructure Challenges*, 100 IOWA L. REV. 947, 949 (2015).

125. "Proved reserves" is an accounting concept based on known projects; it is the part of the drilling company's deposits that can be recovered with a reasonable level of certainty. ROBERT L. BADLEY, JR. & RICHARD W. FULMER, *ENERGY: THE MASTER RESOURCE* 87 (2004).

126. U.S. ENERGY INFO. ADMIN., U.S. CRUDE OIL AND NATURAL GAS PROVED RESERVES, YEAR-END 2017, at 3 (Nov. 2018), <https://www.eia.gov/naturalgas/crudeoilreserves/pdf/usreserves.pdf> [<https://perma.cc/83PA-BW4L>].

127. See *U.S. Field Production of Crude Oil*, U.S. ENERGY INFO. ADMIN., <https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=MCRFPUS2&f=A> [<https://perma.cc/3GAW-BGHH>] (last updated July 31, 2019) (showing data for each year).

128. See *U.S. Natural Gas Marketed Production*, U.S. ENERGY INFO. ADMIN., <https://www.eia.gov/dnav/ng/hist/n9050us2A.htm> [<https://perma.cc/2V82-6LNG>] (last updated Aug. 31, 2019) (showing data for each year).

129. See Samantha Oller, *The Great MLP Crash*, CSP MAG. (Mar. 9, 2016), <https://www.cspdailynews.com/csp-magazine/great-mlp-crash> [<https://perma.cc/UV23-T59N>] ("When this tax-advantaged vehicle was launched during the Reagan administration, it sought to extricate America's energy dependence from the stranglehold of OPEC.").

130. Schizer, *supra* note 19, at 257.

131. *Id.* at 254.

132. *Id.*

133. See Matt Purple, *Hagel Skewers Iraq War, Defends Greenspan's Oil Comments*, CNSNEWS (July 7, 2008, 8:32 PM), <https://www.cnsnews.com/news/article/hagel-skewers-iraq-war-defends-greenspan-oil-comments> [<https://perma.cc/A2W4-V86D>] (quoting former Secretary of Defense Chuck Hagel as admitting that the Iraq War was attributable to energy concerns).

134. Schizer, *supra* note 19, at 261.

the price of U.S. oil if they could not purchase from the Middle East.¹³⁵ The real solution is creating excess capacity in the global market, which can also be achieved by reducing demand. Reducing reliance on oil by diversifying the U.S. energy infrastructure to include more alternative energy options leads to self-sufficiency, and can be a valid means of enhancing national security. Notably, electricity (generated from green sources) is insulated from global supply shocks because it has no global market.¹³⁶

Congress has remained relatively inactive in § 7704 since the law was initially passed, but it did make small changes to the definition of “qualifying income” in recent years. The Emergency Economic Stabilization Act of 2008¹³⁷ expanded the definition of qualifying income to include the transportation and storage of certain renewable and alternative fuels, including ethanol and biodiesel.¹³⁸ The limited expansion of qualifying income could indicate that Congress intended for the enumerated list of qualifying activities to be read narrowly.

However, Congress could also have intended to delegate more specific interpretations to the Internal Revenue Service (IRS). Many companies have sought private letter rulings (PLRs) from the Internal Revenue Service to confirm whether their income streams meet the requirements of § 7704.¹³⁹ In response to an increasing number of these requests, the IRS issued specific regulations in January 2017 to provide further guidance on qualifying income.¹⁴⁰ Among the reasons for issuing these rulings was that “investor demand for higher yields has increased the incentive to push for an expanded definition of qualifying income through PLR requests concerning novel or non-traditional activities.”¹⁴¹ Further, MLP activities have expanded beyond the more traditional qualifying activities due to “technological advances, deconsolidation, and specialization.”¹⁴²

Congress’s budgetary fears in 1987 no longer hold weight with regard to the Financing Our Energy Future Act. While the proliferation of partnerships could reduce tax revenue and erode the corporate tax base,

135. *Id.*

136. *Cf. id.* at 264 (explaining that gas is largely insulated from global supply shocks because it is not as easily exported).

137. Pub. L. No. 110-343, 122 Stat. 3765.

138. *Id.* § 208 (codified at 26 U.S.C. § 7704(d)(i)(E)).

139. For a compilation of these private letter rulings, see *MLP Qualifying Income*, VINSON & ELKINS, <https://www.velaw.com/What-We-Do/MLP-Qualifying-Income/> [https://perma.cc/27KY-7WTZ].

140. Qualifying Income from Activities of Publicly Traded Partnerships with Respect to Minerals or Natural Resources, 82 Fed. Reg. 8318, 8318 (Jan. 24, 2017) (codified at 26 C.F.R. § 1.7704-4 (2017)).

141. *Id.* (citing Todd Keator, “Hydraulically Fracturing” Section 7704(d)(1)(E)—Stimulating Novel Sources of “Qualifying Income” for MLPs, 29 TAX MGMT. REAL EST. J. 223, 227 (2013)).

142. *Id.*

almost all renewable energy projects already use the classic partnership structure to finance themselves.¹⁴³ Therefore, the foregone tax revenue attributable to renewable energy MLPs would not exceed that which renewable energy partnerships already enjoy by way of pass-through taxation.¹⁴⁴

So, while the legislative history does not conclusively reveal Congress's purpose for prescribing the Master Limited Partnership, the buildout of renewable energy as advocated by the FOEF Act may still be warranted. Similar to oil and gas companies in 1986, the vast majority of renewable energy developers are structured as partnerships.¹⁴⁵ Additional renewable energy infrastructure could alleviate national security concerns. And, Congress may have simply wished to defer detailed interpretation to the IRS rather than defining an exclusive list of qualifying income. Section II(A)(2), below, considers how current IRS interpretations of § 7704 could be applied to the Financing Our Energy Future Act.

B. Interpreting the Financing Our Energy Future Act

The Financing Our Energy Future Act is short—the entire bill is fewer than 1,500 words.¹⁴⁶ Absent a thorough discussion by Congress, the IRS would have to provide additional guidance on how the law applies to the renewable energy industry. Academics have not yet attempted to interpret the Act; however, the legislative history of § 7704 informs how the IRS is likely to construe its provisions. Specifically, the IRS's 2017 guidance—though addressing the current provisions of § 7704 applying to oil and gas activities—is instructive.¹⁴⁷ It can be used to resolve four particularly relevant ambiguities in the text of the FOEF Act.¹⁴⁸

First, the IRS has tended to interpret the exceptions within § 7704(d) narrowly. The initial purpose of § 7704 was to restrict the growth of pass-

143. Mormann, *supra* note 18, at 354.

144. *Id.* “The Congressional Budget Office gave a past version of the bill a ‘modest’ score, estimating that it would cost the federal government \$1.3 billion over 10 years.” Grandoni, *supra* note 104.

145. *See* Mormann, *supra* note 18, at 331 (describing the partnership-flip structure as the most common tax equity structure).

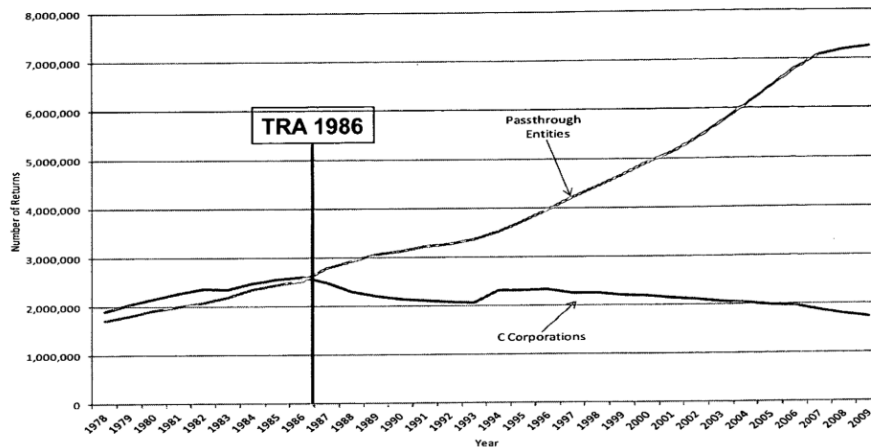
146. Financing Our Energy Future Act, S. 1841, 116th Cong. (2019).

147. *See generally* Qualifying Income from Activities of Publicly Traded Partnerships with Respect to Minerals or Natural Resources, 82 Fed. Reg. 8318 (Jan. 24, 2017) (codified at 26 C.F.R. § 1.7704-4 (2017)) (providing the agency's interpretation of the activities that Congress intended to qualify).

148. *Id.* at 8319 (“Although the statute and the legislative history do not provide definitions or a clear demarcation of the eight active terms and industry experts disagree on the scope of these terms, certain guiding principles can be gleaned.”).

through partnerships, which it viewed as eroding the corporate tax base.¹⁴⁹ In response to the Tax Reform Act of 1986, the tax community was engaging in a mass transition from the corporate structure into partnerships to take advantage of the preferential individual tax rates.¹⁵⁰ Several publicly traded companies attempted to disincorporate and restructure as a Master Limited Partnership.¹⁵¹ Because Congress perceived this disincorporation as a threat to its tax base, it created a general prohibition against public entities receiving the more-favorable individual tax rates. The following graph illustrates the proliferation of partnerships resulting from the 1986 amendments to the tax code.

Figure 1¹⁵²



Because § 7704(d)(1)(E) was an exception to the general rule,¹⁵³ the IRS interprets it narrowly.¹⁵⁴

Applying these rules to the FOEF Act produces interesting results. While the bill extends MLP eligibility into power-generation equipment for

149. See H.R. REP. NO. 100-391, at 1065 (1987) (“The recent proliferation of publicly traded partnerships has come to the committee’s attention. The growth in such partnerships has caused concern about long-term erosion of the corporate tax base.”).

150. Bret Wells, *Pass-Through Entity Taxation: A Tempest in the Tax Reform Teapot*, 14 HOUS. BUS. & TAX. L.J. 1, 13 (2014).

151. *Id.* at 16.

152. *Id.* at 17.

153. See *supra* subpart I(A) (explaining the significance of entity-level taxation).

154. See, e.g., *Comm’r v. Jacobson*, 336 U.S. 28, 49 (1949) (“The income taxed is described in sweeping terms and should be broadly construed in accordance with an obvious purpose to tax income comprehensively. The exemptions, on the other hand, are specifically stated and should be construed with restraint in the light of the same policy.”).

the first time,¹⁵⁵ it makes no mention of fossil fuel electricity generators, and therefore, they are presumably ineligible. Similarly, nuclear energy generation is excluded and is presumably ineligible. But the exclusion of natural gas-fired power plants is particularly noteworthy, as natural gas is forecasted to be the leading provider of electric power in the coming decade.¹⁵⁶ Low natural gas prices resulting from the shale boom are driving the shift from coal-burning to natural gas-fired plants.¹⁵⁷ Perhaps the bill was drafted with this risk in mind: as both natural gas and renewable energy sources compete to replace coal, the FOEF Act could help renewables fighting to stay afloat amidst low natural gas prices.¹⁵⁸

The IRS did acknowledge that reading the listed exceptions too narrowly would be problematic because it would ignore technological advances in the mineral- and natural-resource industries.¹⁵⁹ This problem is even more pronounced as it relates to the generation of electricity from clean sources, as the technologies will undoubtedly continue to develop.¹⁶⁰ But while the “Treasury Department and the IRS agree with commenters that the list of § 7704(d)(1)(E) activities should not be exclusive,”¹⁶¹ both natural gas and nuclear technologies are widely known and sufficiently developed, indicating that Congress intended to exclude them from qualifying income under the Financing Our Energy Future Act.

Second, the FOEF Act makes no mention of the *transmission* of electricity derived from renewable sources. This is somewhat inconsistent with the prevailing Internal Revenue Code because § 7704 already provides an exception for the transportation of mineral resources,¹⁶² whether via

155. “Heat, steam, or electricity produced by the refining process” of oil and gas are not qualifying sources under the agency’s interpretation. Qualifying Income From Activities of Publicly Traded Partnerships With Respect to Minerals or Natural Resources, 82 Fed. Reg. 8318, 8325 (Jan. 24, 2017) (codified at 26 C.F.R. § 1.7704–4 (2017)).

156. *EIA Forecasts Renewables Will Be Fastest Growing Source of Electricity Generation*, U.S. ENERGY INFO. ADMIN. (Jan. 18, 2019), <https://www.eia.gov/todayinenergy/detail.php?id=38053> [<https://perma.cc/966H-ZRNG>] (“Coal was the predominant generation fuel in the United States for decades, but in 2016, annual U.S. electricity generation from natural gas-fired power plants surpassed coal-fired generation. Since then, natural gas has remained the primary source of electricity.”).

157. *Id.*

158. See David E. Adelman & David B. Spence, *U.S. Climate Policy and the Regional Economics of Electricity Generation*, 120 ENERGY POL’Y 268, 274 (2018) (concluding that the primary effect of low gas prices is to impede the entry of renewable energy sources into the market).

159. Qualifying Income, 82 Fed. Reg. at 8321 (acknowledging that “an exclusive list is appropriate only when the universe of matters to be included or excluded is known, defined, considered, and categorized”).

160. Most of the private letter rulings issued in the past ten years relate to technological advancements in hydraulic fracturing. See *MLP Qualifying Income*, *supra* note 139 (listing private letter rulings).

161. Qualifying Income, 82 Fed. Reg. at 8312.

162. 26 U.S.C. § 7704(d)(1)(E) (2018).

pipeline, marine vessel, rail, or truck.¹⁶³ The rule does not require ownership or control of the transported minerals, so the transmission of electricity could be considered a qualifying activity.¹⁶⁴ But again, the absence of an explicit provision in the FOEF Act suggests that income from the transmission of energy from renewable sources would not qualify. Only the generation would qualify.¹⁶⁵ Perhaps this was because transmission of *electricity* from fossil fuel generators has never been permitted to qualify; electricity is not considered a “mineral or natural resource.”

Third, the Financing Our Energy Future Act does not clarify whether traditional utilities sourcing or generating all of their energy from qualifying renewable sources would be allowed to structure as MLPs. This issue presents the most uncertainty and has been hotly debated in the context of natural-resource MLPs.¹⁶⁶ The IRS’s current interpretation precludes qualifying income for transportation of natural resources to retail customers.¹⁶⁷ The IRS specifically considers utility sales to retail customers to be ineligible.¹⁶⁸ However, in an example provided by the IRS, a publicly traded partnership would be eligible to sell diesel to a government entity at wholesale prices if it delivers those goods in bulk.¹⁶⁹ While renewable energy generators can sell to utilities, what if the utility itself—which sells to retail customers—is engaging in the qualifying generation? The prohibition against selling to retail customers would conflict with the authorization for renewable energy generation.

Fourth, the FOEF Act makes no mention of hedging activities and whether hedging of renewable energy generation would qualify. However,

163. See Qualifying Income, 82 Fed. Reg. at 8329 (citing BLACK’S LAW DICTIONARY for a definition of “transport”).

164. See *id.* (“As a general matter, these final regulations do not require ownership or control of the assets used to perform a listed activity so long as the action being performed is within the definition of a qualifying activity.”).

165. Financing Our Energy Future Act, S. 1841, 116th Cong. (2019).

166. See Qualifying Income, 82 Fed. Reg. at 8329–31 (addressing numerous comments made in response to IRS proposed regulations).

167. H.R. REP. NO. 100-1104, at 18 (“For example, income from transporting refined petroleum products by truck to retail customers is not qualifying income.”); Qualifying Income, 82 Fed. Reg. at 8329 (“Specifically, these final regulations provide that transportation includes the movement of minerals . . . to a place that sells to retail customers, *but do not expand the list of qualifying activities to include the movement of such items . . . directly to retail customers.*” (emphasis added)). Income from marketing of specific products for bulk sales “not considered retail sales” also qualifies. H.R. REP. NO. 100-1104, at 18; see also S. REP. NO. 100-445, at 424 (“By contrast, income from marketing minerals . . . to end users at the retail level is not intended to be qualifying income.”). For example, gas station operations are not intended to be treated as qualifying income. S. REP. NO. 100-445, at 424.

168. Qualifying Income, 82 Fed. Reg. at 8330 (explaining that “a retail customer does not include a person who acquires the oil or gas for refining or processing or . . . a utility providing power to customers”).

169. *Id.* at 8342.

the IRS ruled that “hedging income, when it is derived from a section 7704(d)(1)(E) activity, should give rise to qualifying income under section 7704(d)(1)(E).”¹⁷⁰ In permitting such activities to qualify, it recognized that hedging is a common part of the industry and a prudent business practice.¹⁷¹ It is reasonable to expect that hedging transactions for renewable energy generation would also qualify.¹⁷² This understanding of the Act’s provisions will assist with further analysis of the bill.

C. *Regulatory Environment*

The successful extension of the MLP structure to renewable energy also depends on whether the appropriate regulatory environment is in place. But what is the appropriate environment for renewable energy companies? It is widely accepted that fossil fuel MLPs have facilitated the buildout of America’s energy infrastructure. Therefore, this subpart proceeds by comparing the regulatory environment of the renewable and fossil fuel industries to identify where the MLP could be a good fit.

1. Comparison of Gas and Electricity Markets.—In the 1900s, the investor-owned public utility emerged as the dominant model in American gas and electricity markets.¹⁷³ Under this model, regulators certified monopoly providers of natural gas and electric services and set the prices of those services *ex ante*.¹⁷⁴ The Federal Power Act (FPA)¹⁷⁵ and the Natural Gas Act (NGA)¹⁷⁶ authorized the Federal Power Commission to regulate wholesale sales of electricity and natural gas in interstate commerce. The regulation of retail sales was left to the states.¹⁷⁷ Under close regulatory scrutiny, utilities delivered gas and electricity to customers over growing networks of pipelines and wires. As regulated entities, these companies

170. *Id.* at 8332.

171. *Id.*

172. David B. Spence & Robert Prentice, *The Transformation of American Energy Markets and the Problem of Market Power*, 53 B.C. L. REV. 131, 131 (2012) (explaining that companies are more likely to turn to energy derivatives in more competitive energy markets).

173. See AM. PUB. POWER ASS’N, 2013-2014 ANNUAL DIRECTORY & STATISTICAL REPORT 30 (2013) (reporting data showing that investor-owned utilities serve 68.2% of U.S. electricity customers, publicly owned utilities serve 14.6%, cooperatives serve 12.9%, and power marketers serve 4.3%).

174. *Id.*

175. Federal Power Act, Pub. L. No. 74-333, ch. 687, 49 Stat. 803, 847–48 (1935) (codified as amended at 16 U.S.C. § 824 (2018)).

176. Natural Gas Act, Pub. L. No. 76-88, ch. 556, 52 Stat. 821, 821–22 (1938) (codified as amended at 15 U.S.C. § 717 (2018)).

177. 16 U.S.C. § 824(b)(1) (2018).

tended to be vertically integrated, which allowed them to provide customers with both energy and the service of transmitting it.¹⁷⁸

In 1992, the Federal Energy Regulatory Commission (FERC) issued Order 636, ordering full unbundling of gas-transmission services from gas sales by all pipelines.¹⁷⁹ Market-based rates were permitted for wholesale gas sales where sellers were unaffiliated with pipelines.¹⁸⁰ Pipeline customers, which include local distribution utilities, electric generators, and large industrial users participating in wholesale markets, were able to buy their gas at the best available market price and hired the pipeline only to transport the gas.¹⁸¹ This gas transmission, however, remained subject to rate regulation under the NGA.¹⁸²

Electricity generators followed a similar path toward deregulation in the late twentieth century.¹⁸³ But electric utilities were more vertically integrated than their natural gas counterparts and owned most of their own generation.¹⁸⁴ In 1996, FERC issued Orders 888 and 889, mandating that electricity transmission from electricity sales in wholesale markets be unbundled and that owners of transmission lines act as common carriers providing transmission service on a nondiscriminatory basis to affiliated and nonaffiliated companies alike.¹⁸⁵ At the same time, FERC authorized market-based rates for the wholesale of electricity as long as the seller lacked market power.¹⁸⁶ As a result of deregulation, non-utilities—also known as independent power producers (IPPs)—have been able to enter competitive power markets.¹⁸⁷

178. Spence & Prentice, *supra* note 172, at 142.

179. Pipeline Service Obligations and Revisions to Regulations Governing Self-Implementing Transportation; and Regulation of Natural Gas Pipelines After Partial Wellhead Decontrol, 57 Fed. Reg. 13267, 13270 (Apr. 16, 1992) (codified at 18 C.F.R. pt. 284).

180. Regulations Governing Blanket Marketer Sales Certificates, 57 Fed. Reg. 57952, 57953 n.4 (Dec. 8, 1992) (codified at 18 C.F.R. pt. 284).

181. Spence & Prentice, *supra* note 172, at 145.

182. *Id.*

183. *Id.* at 146 (explaining that electricity “followed the same conceptual path as natural gas restructuring”); see David B. Spence, *Can Law Manage Competitive Energy Markets?*, 93 CORNELL L. REV. 765, 770–74 (2008) (describing the “unbundling” of energy production and distribution as a result of changing economic and political views of regulation in the United States and Europe during the 1980s).

184. Spence & Prentice, *supra* note 172, at 146.

185. Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities, 61 Fed. Reg. 21540, 21541–43 (May 10, 1996) (codified at 18 C.F.R. pts. 35, 385).

186. Spence & Prentice, *supra* note 172, at 148.

187. David A. Repka & Tyson R. Smith, *Deep Decarbonization and Nuclear Energy*, 48 ENVTL. L. REP. 10244, 10251 (2018).

Consequently, some states began to introduce market-based rates into their retail electricity markets.¹⁸⁸ This caused utilities in these states to sell off most of their generation assets and increased the number of independent merchant generators.¹⁸⁹ In these deregulated states, the FERC pushed owners of transmission lines to form “independent system operators” (ISOs) and “regional transmission organizations” (RTOs) to ensure the reliability of the grid and prevent discrimination in the provision of transmission services.¹⁹⁰ In those states that did not engage in restructuring of retail markets, some public utilities continue to generate most of the electricity they sell to customers, while others satisfy most of their electricity needs from wholesale markets.¹⁹¹ Notably, electricity transmission rates remained regulated.¹⁹² The following chart compares the two regulatory frameworks.

188. Spence & Prentice, *supra* note 172, at 148 (including California, Texas, and New York as examples).

189. *Id.*

190. *Id.* (citing Regional Transmission Organizations, Order No. 2000, 89 FERC ¶ 61,285 (1999)). These ISOs and RTOs run the wholesale power markets, operate electricity transmission, and engage in transmission planning in about 60% of the United States.

191. Spence & Prentice, *supra* note 172, at 148.

192. *Id.* FERC regulates the transmission of electricity in interstate commerce. In regions of the country where an ISO or RTO manages and controls the transmission system (such as California and the Midwest, Mid-Atlantic, and Northeast regions), each ISO and RTO is regulated by FERC. Outside of the systems operated by an ISO or RTO, electric utilities generally continue to provide unbundled transmission service under each utility’s own FERC-approved tariff. At the distribution level, regulation varies by state. *See id.*

*Figure 2: Characteristics of Energy Product Markets*¹⁹³

| | Wholesale Market Characteristics | Retail Market Characteristics | Product Characteristics |
|-------------|---|--|---|
| Natural Gas | Regional (subnational) prices; Bilateral and spot (including system balancing) markets; Competition and market prices in all phases except transmission, where prices are regulated. | Mostly regulated monopolies; some competitive market. | Limited quality variation; Limited storage capacity. |
| Electricity | Local and Regional (subnational) prices; Bilateral and spot (including system balancing) markets; Competition and market prices, except for internal production by vertically integrated firms; Transmission prices are regulated. | Regulated monopolies in three-fourths of states; remainder have competitive markets. | Fungible commodity; Cannot be stored in commercial quantities. |

An evaluation of the regulatory environments yields three important takeaways. First, transmission of each energy product remains subject to rate regulation. Second, wholesale gas and electric markets both are largely deregulated. And third, states vary as to whether they preserve the traditional vertically integrated utility structure for their electricity markets. The wider variety of regulatory schemes in electricity markets makes it difficult to draw broad conclusions about the efficacy of the FOEF Act outside the scope of the oil and gas industry. But some inferences can be made.

2. The MLP Is a Natural Fit in Regulated Industries.—Midstream oil and gas companies have been the primary beneficiaries of the MLP structure. Forty-six of the seventy-five energy MLPs are in the midstream sector.¹⁹⁴ And from 2005 to 2009, MLPs were involved in 27% of all U.S. natural gas pipeline-infrastructure projects.¹⁹⁵ This heavy concentration is no coincidence; it suggests that the midstream industry possesses characteristics that are favorable to the MLP structure. This is most likely because the midstream industry is subject to rate regulation.

193. *Id.* at 149.

194. *Current MLPs & MLP Funds*, *supra* note 77.

195. Jeanette Sorice, *Adapting Master Limited Partnerships as a Policy Option for the Renewable Energy Industry* 9 (May 2012) (unpublished master's thesis, Duke University), https://dukespace.lib.duke.edu/dspace/bitstream/handle/10161/5230/MLP%20MP%20Final%20Draft_Sorice.pdf [https://perma.cc/QS99-GJZH].

State and federal agencies have established ceilings on the rates that regulated entities such as pipelines can charge.¹⁹⁶ Cost-based ratemaking is widely accepted as the general methodology for setting pipeline transportation rates.¹⁹⁷ Under cost-of-service ratemaking, rates are designed based on a pipeline's cost of providing service, including an opportunity for the pipeline to earn a reasonable return on its investment.¹⁹⁸ What constitutes a "reasonable return" is a complex determination that varies by jurisdiction and pipeline, and may be disputed by either pipelines or their shippers.¹⁹⁹ If rates are set too low, pipeline companies may be discouraged from initiating new projects. While regulated entities are generally considered to be less risky assets, the risk–return profile is not attractive for all investors.

The ratemaking restrictions can make it more difficult for regulated entities to compete for investor capital. And this phenomenon is no secret. It is possible that the legislature recognized the unique challenges that midstream companies face in attracting capital and responded by creating the MLP. The Master Limited Partnership addresses these concerns because its tax advantages afford a reduced cost of capital.²⁰⁰

3. Regulation in the Renewable Energy Industry.—Like the NGA, the FPA requires that charges for transmission rates be "just and reasonable, and

196. Interstate pipelines are regulated by FERC, which has the authority to approve pipeline transportation rates. *What FERC Does*, FED. ENERGY REG. COMM'N, <https://www.ferc.gov/about/ferc-does.asp?csrt=13689605132283963692> [<https://perma.cc/9XD4-TKUG>] (last updated Aug. 14, 2018). Intrastate pipelines are regulated by state agencies, which generally have authority similar to the FERC. *Id.*

197. See JAMES H. MCGREW, FERC: FEDERAL ENERGY REGULATORY COMMISSION 97, 228 (2d ed. 2009) (discussing FERC's use of cost-based ratemaking); Alternatives to Traditional Cost-of-Service Ratemaking for Natural Gas Pipelines; Request for Comments on Alternative Pricing Methods, 60 Fed. Reg. 8356, 8357 (Feb. 14, 1995) ("Operating under the 'just and reasonable' standard of the Natural Gas Act (NGA), the Federal Power Act (FPA), and the Interstate Commerce Act (ICA), the [Federal Energy Regulatory] Commission generally authorizes rates based on the cost of service."). This is especially true for natural gas pipelines.

198. *Duquesne Light Co. v. Barasch*, 488 U.S. 299, 309 (1989) ("The utilities . . . are limited to a standard rate of return on the actual amount of money reasonably invested."). These costs include the cost of capital, which is the cost of debt and the cost of attracting equity investment. MCGREW, *supra* note 197, at 102. The rate of return must be sufficient to attract capital from investors but cannot be so high so as to cause injury to customers. *Id.* It must occur within a "zone of reasonableness." *Fed. Power Comm'n v. Nat. Gas Pipeline Co.*, 315 U.S. 575, 585 (1942).

199. See MCGREW, *supra* note 197, at 105 ("Suffice it to say that such methods involve considerable exercise of discretion and allow plenty of room for disagreement."). The FERC's methodologies to determine an appropriate return on equity "involve considerable exercise of discretion and allow plenty of room for disagreement." *Id.* "The Commission uses a proxy group of firms with corresponding risks" to establish a range of reasonable returns. *Id.* But prior to 2008, MLPs were not permitted to be included in the proxy group, possibly making these groups risk-inappropriate. *Id.* at 106. Courts have traditionally shown deference to FERC's ratemaking decisions. See *Fed. Power Comm'n v. Hope Nat. Gas Co.*, 320 U.S. 591, 617–18 (1944) ("Congress has entrusted the administration of the Act to the Commission, not to the courts.").

200. See *supra* subpart I(A).

that no public utility grants undue preference or advantage to any entity or charges different rates to similarly situated transmission customers.”²⁰¹ The transmission of electricity is regulated in a similar manner to the transmission of gas. Under the simple analysis provided in the subpart above, regulated transmission of electricity could be a good fit for the MLP model. But the text of the FOEF Act does not make transmission a qualifying activity.²⁰²

On the production side, independent power producers are like upstream gas companies in that their sales are subject to market pricing in wholesale product markets. MLPs, however, have been much less effective in the upstream sector than the midstream sector. For example, when crude oil fell from \$40 in 1981 to \$10 in 1986, virtually all the MLPs involved in cyclical-commodity businesses suffered dramatic drops in valuation or failed.²⁰³ This happened again when oil and gas prices bottomed out in 2014.²⁰⁴ Renewable-electricity generators structured as MLPs could face similar issues, as generation²⁰⁵ and market prices²⁰⁶ are highly variable. Additionally, nonregulated upstream companies do not face the same challenges in attracting investor capital as do midstream companies; they have more upside because they are not subject to rate regulation. The “sexy part of oil and gas has always been exploration and production and the pipelines follow.”²⁰⁷

A remaining question is whether the Financing Our Energy Future Act could be implemented for traditional utilities. Because such entities are vertically integrated, they may contain generation, transmission, and distribution capabilities. Recall, though, that the current tax laws require that an MLP derive at least 90% of its income from qualifying activities. While

201. Kenneth L. Wiseman et al., *Electricity Regulation in the United States: Overview*, THOMSON REUTERS: PRAC. L., [https://content.next.westlaw.com/Document/Ieb49d7b91cb511e38578f7ccc38dcbee/View/FullText.html?contextData=\(sc.Default\)&transitionType=Default&firstPage=true&bhcp=1](https://content.next.westlaw.com/Document/Ieb49d7b91cb511e38578f7ccc38dcbee/View/FullText.html?contextData=(sc.Default)&transitionType=Default&firstPage=true&bhcp=1) [https://perma.cc/4ZP7-6NPV] (last updated Mar. 1, 2018).

202. See *supra* subpart II(A).

203. James J. Murchie, Feature, *Master Limited Partnerships—Lessons from History*, INV. & WEALTH MONITOR, Mar./Apr. 2008, at 7, 7.

204. Simon Lack, *Here's Why Linn Energy LLC (LINE) Was the Wrong Kind of MLP*, SMARTER ANALYST (May 16, 2016, 5:31 PM), <https://www.smarteranalyst.com/bloggers-corner/heres-why-linn-energy-llc-line-was-the-wrong-kind-of-mlp/> [https://perma.cc/X4V7-XBZ4] (“Although E&P companies can and do structure themselves as MLPs, their returns are ill-suited to the traditional MLP investor base.”).

205. Put simply: the wind does not always blow and the sun does not always shine.

206. Electricity trading between generators and load serving entities (ISO/RTO) typically occurs through wholesale market transactions based on market auctions to match supply and demand. Wiseman, *supra* note 201. Consider a scenario in which a grid generated electricity *solely* from wind turbines. At times when the wind was blowing, the grid would be flooded with electricity, depressing prices.

207. Stephanie Joyce, *Leaky Barrels, German U-Boats and 2.6 Million Miles of Pipe*, INSIDE ENERGY (Aug. 1, 2014), <http://insideenergy.org/2014/08/01/leaky-barrels-german-u-boats-and-2-6-million-miles-of-pipe/> [https://perma.cc/5N69-X67E] (quoting Joseph Pratt, Professor of History and Business at the University of Houston).

utilities are subject to government oversight and regulation (and therefore stable), it is unlikely that they would derive 90% of their income from generation—the only qualifying activity under the FOEF Act.²⁰⁸ Pure retail (downstream) utilities would also be ineligible based on the IRS's current guidance.²⁰⁹ Nonetheless, the deregulation of the power industry is significant because it allows the Act's benefits to apply to independent power providers.

The similarities in the regulation of the natural gas and electricity markets suggest that expansion of the MLP structure to renewable generation could be effective. Electricity-transmission providers appear to be the best fit for the MLP structure, but are not accounted for in the Act. In the case of energy generation, which *is* provided for under the Act, the deregulated wholesale markets could still benefit from the MLP structure. Deregulated markets will choose energy sources based on the economic costs captured in market prices, which means that an MLP's lower cost of capital could effectively incentivize investment.²¹⁰

D. *Characteristics of a Successful MLP*

Six factors have been identified as characteristics of successful MLPs in the oil and gas sector.²¹¹ Whether the MLP structure would be a good fit in the renewable industry also depends on whether these conditions can be replicated.

1. *Stable, Growing Cash Flows.*—MLPs are attractive investments for many investors because unitholders are entitled to distributions on a quarterly basis.²¹² Under MLP partnership agreements, the MLP is required to distribute all “available cash” to its partners.²¹³ Since paying these distributions is critical to the success of an MLP,²¹⁴ businesses that generate consistent cash flows—like pipelines—are well-suited to the MLP

208. See Financing Our Energy Future Act, S. 1841, 116th Cong. (2019) (extending the exception to “generation of electric power . . . *exclusively* utilizing any resource described in section 45(c)(1)” (emphasis added)).

209. See *supra* subpart II(A).

210. Repka & Smith, *supra* note 187, at 1251. Note that in a deregulated market, investors will be discouraged to invest in renewable projects when there is a risk of curtailment. Traditional utilities do not have the same risk because of their cost-of-service ratemaking formula.

211. See Sorice, *supra* note 195, at 12 (listing factors).

212. Carpenter, *supra* note 81.

213. *Id.*

214. See MICHAEL BLUM ET AL., WELLS FARGO SEC., MLP PRIMER 85 (5th ed. 2013), <https://mlpprotocol.files.wordpress.com/2013/03/wells-fargo-mlp-primer-5th-edition.pdf> [https://perma.cc/WE2Y-GG7L] (“The most common valuation method typically focuses on yield due to the fact that MLPs are income-oriented securities.”).

structure.²¹⁵ Pipeline companies typically operate under long-term cost-of-service or take-or-pay contracts that produce stable, predictable income and are unaffected by volatility in the industry.²¹⁶

The ability of renewable energies to generate power is limited by factors including daily hours of sun, wind speed, or water pressure. While lower-than-expected production cannot be avoided, solid planning of renewable projects and technological advances are enhancing generation capacity. Another risk is that wholesale energy sold on the spot market might be for a low price. But this risk can largely be mitigated through long-term power-purchase agreements (PPAs)²¹⁷—essentially energy hedges—put in place at the outset of operations.²¹⁸ PPAs can also be used to bypass regulatory barriers in traditionally regulated states via elaborate legal arrangements that are essentially “virtual,” or financial, PPAs.²¹⁹ Under such an arrangement, a corporate buyer pays for energy that a renewable energy developer sells into the wholesale power market.²²⁰

2. *Low, Predictable Maintenance Capital Expenditures.*—A successful MLP is defined as one that makes regular, growing distributions to its unitholders.²²¹ One important component of increasing earnings is minimizing costs. Midstream pipelines are long-lived assets that are depreciated over thirty-five years; however, if properly maintained, they can

215. See STEPHEN J. MARESCA ET AL., MORGAN STANLEY, MIDSTREAM ENERGY MLPs PRIMER 3.0, at 7 (2013), <http://www.fulltreacymoney.com/system/data/images/archive/2013-04-18/MSMidstreamEnergyMLPPrimer3.pdf> [https://perma.cc/CW3V-S5FR] (“MLPs receive a fee, or ‘toll,’ for handling a customer’s product on their infrastructure system. The MLP does not own the commodity, virtually eliminating commodity-price exposure and smoothing out its cash flows.”).

216. See Peacock, *supra* note 72, at 413 (“Interstate pipelines are the classic MLP asset because they . . . frequently have long-term ‘firm’ contracts pursuant to which their customers pay them regardless of whether the customers actually ship any hydrocarbons through the pipeline.”). These “ship-or-pay” contracts obligate shippers to reserve a specified amount of the pipeline’s capacity and pay for it whether or not it is used. *Id.*

217. PPAs are executed prior to construction of a renewable energy project and typically last ten to twenty-five years for solar projects and twenty years for wind projects. 1 AM. BAR ASS’N, FINANCING RENEWABLE ENERGY PROJECTS: A GLOBAL ANALYSIS AND REVIEW OF RELATED POWER PURCHASE AGREEMENTS 141 (Kaamil Ansar ed., 2019).

218. *Id.*

219. RETAIL INDUS. LEADERS ASS’N ET AL., CORPORATE CLEAN ENERGY PROCUREMENT INDEX: STATE LEADERSHIP AND RANKINGS 25 (2017), <http://www.informz.net/rila-fonteva/data/images/RILAITICEIndex.pdf> [https://perma.cc/P5B6-TAKD].

220. *Id.* “Synthetic” PPAs are the same basic financial arrangements but are situations where “the renewable generation plant and the purchaser’s facilities are located in different ISOs.” *Id.*

221. MARESCA ET AL., *supra* note 215 (“Investors typically seek partnerships that can grow distributions over time, and an MLP accomplishes this partly by growing its asset base through organic projects, asset purchases from its parent (‘dropdowns’), or third-party acquisitions.”).

be used for close to one hundred years.²²² Upstream companies have more volatile expenditures because exploration requires large and irregular investments.²²³

Renewable energy projects also involve long-lived assets, though not as long as midstream oil and gas assets. Renewable energy generation assets are usually depreciated over twenty years, but with proper maintenance capital expenditures, they may be used in excess of twenty-five years.²²⁴ Like midstream assets, they require very little maintenance capital expenditures.²²⁵

3. *Regulations that Protect Revenues.*—Energy investors require a rate of return that compensates them for both the cost of a project and the risk of its possible failure.²²⁶ Regulatory uncertainty elevates this risk, causing investors to demand more as a risk premium on their investment.²²⁷ As discussed above, MLPs are particularly effective in industries subject to cost-of-service rate regulation because it is highly likely that they will recover their investment.²²⁸ The FERC closely regulates midstream MLP assets.²²⁹ And MLPs diversify their risk by holding intrastate assets too, which are regulated by agencies within the individual states in which they operate.²³⁰

The federal government's inconsistent commitment to renewable energy growth is one of the leading risk factors investors consider when evaluating a potential solar or wind investment. While renewable energy projects are not subject to rate regulation, they have benefited from tax credits, which Congress has consistently renewed.²³¹ But because the extensions of these credits do not extend far into the future, determining

222. See Jordan Wirfs-Brock, *Half Century Old Pipelines Carry Oil and Gas Load*, INSIDE ENERGY (Aug. 1, 2014), <http://insideenergy.org/2014/08/01/half-century-old-pipelines-carry-oil-and-gas-load/> [<https://perma.cc/2MC3-TD99>] (describing data provided by the Pipeline and Hazardous Materials Safety Administration).

223. See Conrad S. Ciccotello & Chris J. Muscarella, *The Energy MLP Goes Institutional: Implications for Strategy and Governance*, 15 J. APPLIED CORP. FIN., Spring 2003, at 112, 116 (explaining that “[c]orporations are much better suited for the more volatile ends of the value chain”).

224. ERNEST E. SMITH ET AL., WIND LAW § 2.02 (2018).

225. For example, a typical wind farm incurs annual maintenance capital expenditures (capex) ranging from 3.5%–5.3% of the total cost of the wind turbines. ERICH HAU, WIND TURBINES: FUNDAMENTALS, TECHNOLOGIES, APPLICATION, ECONOMICS 746–47 (2d ed. 2005). But see Fankhauser, *supra* note 70, at 277 (“[N]atural gas assets also cost far less to operate and maintain on a per kilowatt basis versus other renewable assets like wind and solar.”).

226. See Coleman, *supra* note 119, at 163 (noting that industry trends have increased the uncertainty for energy investors).

227. Coleman, *supra* note 120, at 3–4.

228. See *supra* subpart II(B).

229. See generally MCGREW, *supra* note 197 (explaining the role of FERC).

230. *Id.* at 12.

231. “[W]ind capacity additions boom in years in which tax credits are set to expire and lag in the interim years.” Fankhauser, *supra* note 70, at 275.

whether an energy project will fully benefit can be challenging for taxpayers.²³² The deregulated nature of the power-generation industry is also a primary difference; deregulated markets do not share the same predictability in income as do regulated markets.

4. High Barriers to Entry.—Most MLP assets operate in a natural monopoly.²³³ Pipelines are very capital-intensive, and high barriers to entry exist for new market entrants.²³⁴ Pipelines often span thousands of miles across private land, requiring costly negotiations for easements or eminent-domain proceedings. The government permitting process requires a substantial investment of time and labor.²³⁵ And pipelines feature economies of scale as throughput volumes increase because most of a pipeline's costs are fixed and unaffected by throughput.²³⁶ Once built, it is easier for an owner of such a pipeline to exercise market power in any given market.

Renewable power plants require relatively greater up-front capital expenditures for planning, construction, and equipment than their fossil fuel counterparts.²³⁷ Renewable energy projects—like fossil fuel—can take ten or more years before they recover their high up-front capital expenditures and begin to generate taxable profits.²³⁸ While market entry for power generators might be easier from a regulatory perspective, the higher capital costs are still a sizeable barrier to entry for new market players.

5. Access to Capital Markets.—Because an MLP pays out most of its operating cash flows to unitholders, it relies on capital markets for access to equity and debt financing.²³⁹ The payout structure prevents MLPs from accumulating cash that could be used for expansion projects; therefore, they must access the capital markets in order to grow their distributions. Regulated entities are typically investment grade because of stable cash flows and ratemaking that permits recovery of costs.²⁴⁰

232. Jonathan Barry Forman & Roberta F. Mann, *Making the Internal Revenue Service Work*, 17 FLA. TAX REV. 725, 778 (2015).

233. See Richard A. Posner, *Natural Monopoly and Its Regulation*, 21 STAN. L. REV. 548, 614 (1969) (“The incremental cost of service in a pipeline that has unused capacity is very low. No entrant will be able to meet a price equal to that cost.”).

234. See Coleman, *supra* note 120, at 3, 10 (explaining that the midstream industry is capital-intensive, and these “[m]ulti-billion-dollar investments” take decades to pay off).

235. *Id.* at 3.

236. U.S. DEP’T OF JUSTICE, OIL PIPELINE DEREGULATION 6–7 (1986), <https://ferc.gov/industries/oil/gen-info/handbooks/volume-I/doj-report.pdf> [<https://perma.cc/ML5S-754V>].

237. See HARPER ET AL., *supra* note 98, at i.

238. Mormann, *supra* note 18, at 308.

239. BLUM ET AL., *supra* note 214, at 28.

240. Ryan Wobbrock & Michael G. Haggarty, *Moody’s Changes the US Regulated Utility Sector Outlook to Negative from Stable*, MOODY’S INV. SERV. (June 18, 2018), <https://>

Funding for renewable projects may be more difficult to obtain depending on the price of competing power suppliers, the reliability concerns, and the investment-grade nature of the technologies.²⁴¹ But renewable projects may still seek debt financing from banks, public bond issues, or private bond issues; in terms of equity financing, renewables projects may seek funding from pension funds, private-equity firms, investment arms of various operating companies, or investment banks.²⁴² While borrowing may be more expensive for renewable projects, they nonetheless have access to the markets. Expanding the MLP to renewable generation would lower financing costs, alleviating this concern.

6. *Low Exposure to Commodity-Price Risk.*—Midstream companies such as pipelines typically do not own the physical assets that they transport. By avoiding physical possession, they do not engage in the sale or purchase of the commodity, and therefore are not exposed to commodity-price fluctuations.²⁴³ In this regard, they are less risky than upstream exploration and production companies.²⁴⁴ Several upstream energy companies have gone bankrupt in recent years due to greater volatility in cash flows.²⁴⁵

Renewable energy power assets generally have low exposure to commodity-price volatility. Like successful upstream MLPs, they hedge production.²⁴⁶ They often possess long-term offtake contracts²⁴⁷ with a utility or corporate buyer, locking in long-term energy prices.²⁴⁸

www.moodys.com/research/Moodys-changes-the-US-regulated-utility-sector-outlook-to-negative-PR_385425 [https://perma.cc/PF5Z-BRZZ] (“US utilities continue to be viewed as critical infrastructure assets, which means they have a roughly 3x lower probability of default than their non-financial corporate peers. . . . These factors provide the [utilities] sector with a strong, investment grade credit profile, which continues to be the case . . .”).

241. Braden W. Penhoet, *Financing Structures and Transactions*, in *THE LAW OF CLEAN ENERGY: EFFICIENCY AND RENEWABLES* 241, 241–42 (Michael B. Gerrard ed., 2011).

242. *See id.* at 242–54 (discussing various sources of debt and equity financing available for renewable energy companies).

243. Peacock, *supra* note 72, at 413 (“Interstate pipelines are the classic MLP asset because they do not own the products they ship and therefore have little exposure to commodity-price risk.”).

244. *Id.* (explaining that upstream MLPs are riskier than midstream MLPs).

245. *See, e.g.*, Kurt Gallon, *Will More Upstream MLPs Succumb to Bankruptcy?*, YAHOO! FIN. (May 27, 2016), <https://finance.yahoo.com/news/more-upstream-mlps-succumb-bankruptcy-164713125.html> [https://perma.cc/MB66-XVJ6] (arguing that upstream MLPs fail due to high leverage, low liquidity, and high insolvency risk as compared to similarly sized upstream C corporations).

246. While hedging aims to mitigate commodity risk, a prolonged period of low commodity prices could still force MLPs to cut distributions.

247. *See* Steven Ferrey, *Sale of Electricity*, in *THE LAW OF CLEAN ENERGY: EFFICIENCY AND RENEWABLES* 217, 233 (Michael B. Gerrard ed., 2011) (“Providers of capital to all independent electricity generating stations . . . seek long-term purchase power agreements to back-stop the loan.”).

248. *Id.*

III. Practical Application of the Financing Our Energy Future Act

The similar industry conditions suggest that the success of the MLP could be replicated; however, it would depend on the ability of renewable energy generators to produce consistent, predictable cash flows, which could be difficult in the absence of regulations protecting revenue.²⁴⁹ This Part considers whether the Financing Our Energy Future Act—if implemented—would meaningfully contribute to decarbonization of the United States.

A. *Purported Benefits of the Act*

Because of the inefficiencies associated with tax credits, the MLP has been suggested as a better tool for generating investment. But pairing the MLP structure with the tax-credit regime would render the credits practically useless²⁵⁰ because “it is almost impossible for single-project MLPs to fully [monetize] tax credits and depreciation benefits.”²⁵¹ For this reason, proponents suggest that the MLP *replace* tax credits as a means of promoting investment in renewable energy.²⁵²

Is the MLP without tax credits really a better alternative than tax equity financing with credits? Importantly, renewable energy companies are already eligible to structure as corporations, and corporations share many of the Master Limited Partnership’s financing advantages.

Proponents of the FOEF Act provide several reasons why the law would stimulate investment in renewable energy infrastructure. They argue that the bill would avoid many of the issues created by tax credits by allowing renewable energy companies to bypass the tax equity market. But they fail to explain why the MLP would be a superior financing option to the traditional corporate structure, which has repeatedly been spurned in favor of tax equity investment. These arguments rely on assumptions that may be inappropriate, outdated, or unsupported by empirical evidence. I address each, in turn.

249. *See supra* subpart II(C).

250. While tax equity investors may benefit from credits, the at-risk and passive-loss rules of the tax code severely constrain the ability of unitholders to monetize tax credits and depreciation benefits. 26 U.S.C. §§ 465, 469 (2018). The at-risk rules limit the losses an investor can deduct to the amount of capital actually invested. *Id.* § 465(a)(1)(B). The passive-loss rules further limit the offset to include only passive income. *Id.* § 469(c). The code’s passive-loss rules, however, do not apply to unitholders that are publicly traded corporations. *Id.* § 469(a)(2). Even if an individual investor held interests in different MLPs, she could not use the losses and tax credits from one MLP to offset taxable income from another MLP. *Id.* § 469(k).

251. ALEX KOVACHEVA & MICHEL DI CAPUA, BLOOMBERG NEW ENERGY FIN., MASTER LIMITED PARTNERSHIPS FOR U.S. RENEWABLES: PANACEA OR PIE IN THE SKY? § 4.2 (Jan. 5, 2012), https://www.mlpassociation.org/wp-content/uploads/2015/08/Bloomberg_bnef_rm_2012_01_usrenewablemlps.pdf [<https://perma.cc/7YFM-MHVC>].

252. *E.g.*, Mormann, *supra* note 18, at 358.

1. Access to Capital Markets Promotes Broad Investor Appeal.—Under the current regime, a limited number of large and wealthy investors are able to finance renewable energy projects. Tax credits are incentivizing the use of the tax equity structure to ensure that credits are monetized. However, MLPs can be structured to pool illiquid financial assets—the PPAs themselves—into marketable partnership units.²⁵³ This process of securitization could attract investors who are deterred by the prospect of tying up capital in long-term energy projects²⁵⁴ or who wish to diversify their risk across multiple natural-resource projects.²⁵⁵ The argument is that access to the public-equity markets would cure this problem.²⁵⁶ But the corporate structure is already available to renewable energy companies to securitize energy projects.

The MLP does not broaden the investor base beyond that which a traditional corporation can. Investment in MLPs is actually limited in several ways. Some institutional investors cannot own MLPs, which reduces the number of investors that are able to purchase MLP units.²⁵⁷ MLPs are also excluded from the S&P 500 index despite satisfying the market-capitalization requirements.²⁵⁸ Because many investment funds hold a portfolio of the S&P 500 index, unit prices are depressed and less capital reaches the MLP. Further, foreign investors typically avoid MLPs because they must file a United States tax return and pay U.S. income taxes.²⁵⁹ Nor are MLPs attractive investments for investors using tax-advantaged retirement accounts.²⁶⁰ All of these factors contribute to low trading volumes of MLP

253. *Id.* at 347.

254. Tracey M. Roberts, *Picking Winners and Losers: A Structural Examination of Tax Subsidies to the Energy Industry*, 41 COLUM. J. ENVTL. L. 63, 104 (2016) (“[B]ecause the credits are delivered over a five- or ten-year period, the only investors able to take full advantage of the credits are those with a predictable level of tax liability.”).

255. *Id.* (noting that “the pooling of risks from the securitization of many interests in natural resources makes these investments more attractive”).

256. Mormann, *supra* note 18, at 347–48.

257. Patrick W. Mattingly, *Master Limited Partnerships*, 28 ENERGY & MIN. L. INST. 117, 129 (2008). It was only in 2004 that the American Jobs Creation Act began allowing mutual funds to invest in MLPs. American Jobs Creation Act, Pub. L. No. 108-357, 118 Stat. 1418 (2004). Still, MLP investments cannot comprise more than 25% of a fund’s assets, and no fund may own more than 10% of any one MLP. *Id.* § 331(f)(B).

258. See Mattingly, *supra* note 257 (explaining market capitalization growth of MLPs); see also Maria Halmo, *Did You Know? All MLPs Are Ineligible to Be in the S&P 500*, ALERIAN (July 19, 2017), <https://www.alerian.com/did-you-know-all-mlps-are-ineligible-to-be-in-the-sp500/> [<https://perma.cc/X54R-GMJA>] (explaining that the S&P 500 requires a market capitalization of at least \$6.1 billion, and that absent the restriction, there are seventeen MLPs that would be included in the index).

259. Mattingly, *supra* note 257.

260. *Id.* at 149–50.

units, which disadvantages the MLP in raising money in the public-equity markets.²⁶¹

2. *Access to Capital Markets Lowers the Cost of Financing.*—Proponents claim that the MLP structure would reduce the transaction costs associated with financing renewable energy projects—the role currently filled by tax equity investors.²⁶² Tax-equity deals require case-by-case contracts that must be custom tailored for each transaction.²⁶³ The general view is that MLPs for renewables would reduce the complexity of project financing structures with relatively standardized deal structures to reduce lead times and transaction costs.²⁶⁴ This is because the United States “has the largest and most efficient capital markets in the world.”²⁶⁵

But MLPs themselves have high transaction costs; they have been described as “Wall Street’s dream” because they are “fee machines.”²⁶⁶ Although MLPs are a product of federal tax law, they are governed by state partnership law—typically Delaware²⁶⁷ limited partnership law.²⁶⁸ One of the key principles of Delaware partnership law is “to give maximum effect to the principle of freedom of contract and to the enforceability of partnership agreements.”²⁶⁹ The Supreme Court of Delaware reinforced this notion in 1999, stating that:

[T]he partnership agreement is the cornerstone of a Delaware limited partnership, and effectively constitutes the entire agreement among the partners with respect to the admission of partners to, and the creation, operation and termination of, the limited partnership. Once partners exercise their contractual freedom . . . [they] have a great deal of certainty that their partnership agreement will be enforced in accordance with its terms.²⁷⁰

261. See Peacock, *supra* note 72, at 411–13 (explaining why low trading volumes make public offerings difficult).

262. See Mormann, *supra* note 18, at 346–47, 350–51 (discussing how MLPs reduce the cost of financing and lower the cost and complexity of deals).

263. *Id.* at 350.

264. *Id.*; see also Mattingly, *supra* note 257, at 126–28 (discussing various advantages of the MLP structure).

265. Grandoni, *supra* note 104.

266. Kelly, *supra* note 84 (noting that MLPs earned Wall Street banks \$890.3 million in fees in 2013).

267. See Peacock, *supra* note 72, at 398 (explaining that “MLPs are typically organized in Delaware because Delaware has a very flexible limited partnership statute that, among other things, provides that the liability of the general partner to the limited partners may be limited by contract”).

268. Limited Partnerships, DEL. CODE ANN. tit. 6, ch. 17 (2018).

269. *Id.* § 17-1101(c).

270. *Elf Atochem N. Am., Inc. v. Jaffari*, 727 A.2d 286, 291 (Del. 1999).

Because of this deference, MLP partnership agreements are typically long, complex, and drafted with great care.²⁷¹ MLPs incur significant legal fees in drafting these agreements and structuring drop-down asset transactions. Additionally, MLPs must carefully monitor sources of income to ensure that the qualifying income requirements are satisfied.²⁷² Finally, the K-1 tax form that partnership unitholders receive is a more burdensome and expensive endeavor for MLP investors to file.²⁷³ These costs exceed those burdening a similarly sized corporate entity.

Proponents further argue that the MLP reduces transaction costs by creating a security that is readily tradeable on a secondary market.²⁷⁴ This is because the owners of the partnership interests are readily able to purchase, sell, or exchange such interests on an established securities market, permitting them to exit an investment easily should the need arise.²⁷⁵ It is true that MLPs provide enhanced liquidity over tax equity investments. Section III(A)(3), below, explains why this benefit is overstated.

3. Capital Markets Provide Increased Transparency to Investors.—Proponents claim that because MLPs are listed on a public exchange, increased transparency will better inform investors about the status of their investments.²⁷⁶ With publicly traded shares, MLPs could improve the liquidity of renewable energy investment.²⁷⁷ MLPs do so by providing the option to sell shares freely and easily, and by creating a secondary market for existing renewable energy projects to refinance themselves.²⁷⁸ As discussed earlier, however, MLP partnership units are less liquid than other publicly traded securities for several reasons, and these factors contribute to low trading volumes of MLP units.²⁷⁹

Proponents also assert that the trading prices for renewable energy MLP units is informed by market forces, which could “help investors better assess

271. ALLEN & KRAAKMAN, *supra* note 57, at 469; *see also* John Goodgame, *Master Limited Partnership Governance*, 60 BUS. LAW. 471, 490 n.111 (2005) (listing MLP partnership agreements, e.g., Amerigas LP Agreement (53 pages long); Atlas LP Agreement (92 pages long); Enbridge LP Agreement (89 pages long); Enterprise LP Agreement (79 pages long); Ferrellgas LP Agreement (102 pages long); Holly LP Agreement (79 pages long); Kinder Morgan LP Agreement (79 pages long); Northern Border LP Agreement (84 pages long); Plains LP Agreement (103 pages long); TEPPCO LP Agreement (43 pages long)).

272. Jennifer Henzler & Ken Milani, *The Master Limited Partnership: A Hybrid Structure for Natural Resource Firms*, TAXES, Apr. 2014, at 53, 54.

273. Mattingly, *supra* note 257, at 128.

274. Roberts, *supra* note 254, at 104 (“The units are easily acquired and sold because they are fungible and traded on a public exchange.”).

275. Mattingly, *supra* note 257, at 123.

276. Mormann, *supra* note 18, at 350.

277. *Id.* at 349.

278. *Id.*

279. *See discussion supra* pp. 166–67.

a project's technological reliability, resource quality, off-take risk, and other critical characteristics."²⁸⁰ But according to a leading global asset manager, "no corner of the US equity market is more inefficiently valued than [sic] MLPs."²⁸¹ This is because investors focus mainly on the current yield and do a poor job distinguishing between high- and low-growth MLPs.²⁸² The MLPs' unique valuation methodology—based on multiples of cash flow rather than net income²⁸³—make accurate valuations particularly difficult for individual investors.

Irrational MLP investors also inhibit market transparency. Consider, for example, the following trend. Energy MLPs within the midstream sector are traditionally insulated from commodity-price risk and typically enjoy modest, consistent returns. Yet, in its 2017 investor bulletin for Master Limited Partnerships, the SEC disclosed that MLPs are subject to "[i]ndustry risk and concentrated exposure."²⁸⁴ While midstream companies are not directly affected by downturns in energy prices, their customers (upstream companies) suffer when prices are low. Pipeline companies are subject to credit risk associated with customers that may declare bankruptcy and refuse to pay for services. For this reason, midstream MLPs are somewhat sensitive to industry-wide trends.

But credit risk does not fully explain the relationship. The Alerian MLP index—an exchange-traded fund representing a portfolio of most large MLPs—is correlated with the price of crude oil.²⁸⁵ While some upstream energy companies use this structure, the vast majority of MLPs are in the midstream sector.²⁸⁶ The most likely explanation for the correlation is that investors (irrationally) assume that *all* MLPs are exposed to volatility in oil and gas prices and alter their investing strategy accordingly.²⁸⁷ According to Alerian's research analysts, "investor sentiment play[ed] a huge role" in the

280. Mormann, *supra* note 18, at 350.

281. Chris Flood, *Energy MLPs Tap into US Shale Boom*, FIN. TIMES (July 20, 2013), <https://www.ft.com/content/a23a84a4-ee31-11e2-816e-00144feabdc0> [<https://perma.cc/E29N-TT3X>] (quoting Chris Eades, director of research at ClearBridge Investments).

282. *Id.*

283. Peacock, *supra* note 72, at 403.

284. *Updated Investor Bulletin: Master Limited Partnerships – An Introduction*, U.S. SEC. & EXCHANGE COMMISSION (Nov. 3, 2017), https://www.sec.gov/oiea/investor-alerts-bulletins/ib_mlpintro.html [<https://perma.cc/268Q-R4FN>].

285. Collin Martin, *An Introduction to Master Limited Partnerships*, CHARLES SCHWAB (May 30, 2018), <https://www.schwab.com/resource-center/insights/content/introduction-to-master-limited-partnerships> [<https://perma.cc/V2BA-Y5DN>]. The Alerian MLP index currently tracks thirty-four large and midcap energy MLPs. *Alerian MLP Index*, ALERIAN, <https://www.alerian.com/indices/amz-index/> [<https://perma.cc/S8VV-2W4M>] (last updated Aug. 30, 2019).

286. See *supra* Part II (discussing the success of MLPs in the midstream industry).

287. See Peacock, *supra* note 72, at 413 (recognizing that "not all MLP assets are created equal").

MLP sell-off estimated at tens of billions of dollars.²⁸⁸ Recent bankruptcies of upstream MLPs may be contributing to such investor wariness, distorting market valuations for the rest of the sector.²⁸⁹ Market transparency in the context of MLPs is a myth.

4. Renewables Must Raise Equity Capital Through Classic Corporate Structures that Are Doubly Taxed at the Entity and Individual Levels.—The federal tax code exempts MLPs from paying the entity-level income taxes that other publicly traded companies must pay.²⁹⁰ Proponents claim that subjecting corporate renewable energy companies to a double layer of taxation increases their cost of capital above that of MLPs.²⁹¹ Because only fossil fuel companies are eligible to structure as MLPs, renewable energy generators are perceived to be at a competitive disadvantage.

Before 2018, MLPs had a tax advantage of 8.4% over corporations, assuming the investor resides in the highest tax bracket.²⁹² In December 2017, President Trump signed the Tax Cuts and Jobs Act into law.²⁹³ While it did not repeal § 7704(c) of the Internal Revenue Code—which allows the qualifying income exception—it had two significant effects.

First, the corporate tax rate was substantially lowered. The tax-reform law dropped the corporate income-tax rate from 35% to 21%.²⁹⁴ While this is great for corporations, it significantly reduces the key advantage held by MLPs. The tax rate for corporate dividends remained at 20%, for a new effective rate of 36.8%.²⁹⁵

This was partially offset by a lowering of the individual tax rate. Under the new law, pass-through income is taxed at the investor's ordinary income

288. Oller, *supra* note 129 (“When they saw oil prices falling . . . they got rid of all of their energy exposure in total, which included their MLP exposure, even though it’s a different business model.” (quoting Maria Halmo, Alerian’s director of research)).

289. *See, e.g.*, Gallon, *supra* note 245 (arguing that upstream MLPs fail due to high leverage, low liquidity, and high insolvency risk as compared to similarly sized upstream C corporations).

290. 26 U.S.C. § 7704(a)–(c) (2018). A corporation is taxed first at the entity level and then again at the distribution level. *Id.* § 11(a) (imposing a tax on corporate income); *id.* § 1(h)(1) (imposing an individual tax on dividends received from corporations).

291. Massey, *supra* note 68, at 1037 (“While they retain their corporate entity form, they have the ability to raise capital at cheaper rates due to their preferable tax attributes.”).

292. Maria Halmo, *What the New Tax Law Means for MLPs in 2018*, ALERIAN (Jan. 30, 2018), <https://www.alerian.com/what-the-new-tax-law-means-for-mlps-in-2018/> [https://perma.cc/ZRG7-636B].

293. Tax Cuts and Jobs Act, Pub. L. No. 115-97, 131 Stat. 2054 (2017).

294. *Compare* Omnibus Budget Reconciliation Act of 1993, Pub. L. No. 103-66, § 13221, 107 Stat. 312, 447 (1993) (35% rate), *with* Pub. L. No. 115-97, § 13001, 131 Stat. at 2096 (2017) (codified at 26 U.S.C. § 11(b)) (21% rate).

295. Halmo, *supra* note 292.

tax rate of 37%.²⁹⁶ But the law also includes a temporary 20% deduction of pass-through income²⁹⁷ that takes the new effective rate to 29.6%.²⁹⁸

The overall result is an MLP tax advantage of 7.2%, which is lower than before. It is also noteworthy that the additional 20% deduction that MLP investors are receiving sunsets in 2025, at which time corporations will have a *more* favorable tax treatment than MLPs.²⁹⁹ Going forward, these factors are likely to reduce the popularity of MLP investments. Yet, this is unsurprising; in 2011, the Congressional Research Service recognized that subjecting MLPs to corporate taxation “could place greater capital constraints on, and potentially reduce investment in, industries currently able to use the MLP structure.”³⁰⁰ Academics agree with this conclusion.³⁰¹ The Senate Committee on Energy and Natural Resources has heard evidence that the cost-of-capital benefits associated with the MLP are better attributed to lower financing costs in the public markets, rather than the tax advantages.³⁰²

5. MLPs Have a Proven Track Record for Rising Capital.—Proponents’ final claim is that the MLP’s success in the oil and gas industry is indicative of its success for renewable energy projects.³⁰³ Because of the tax arbitrage of holding these assets in the partnership structure, there was a transition of MLP-qualifying assets from corporations to MLPs, proving their popularity

296. Pub. L. No. 115-97 § 11001, 131 Stat. at 2054–55.

297. 26 U.S.C. § 199A (2018). Texas Republican Senator John Cornyn slipped this last-minute amendment that preserved the MLP’s tax benefit into Trump’s tax reform package. Arthur Delaney, *Oil and Gas Firms Got a Last-Minute Goody in Senate Tax Bill*, HUFFINGTON POST (Dec. 5, 2017, 11:52 AM), https://www.huffingtonpost.com/entry/oil-and-gas-firms-got-a-last-minute-goody-in-senate-tax-bill_us_5a26b4f0e4b06d807b4f5de7 [<https://perma.cc/P2UA-EWP4>].

298. Halmo, *supra* note 292.

299. *Tax Reform Act - Impact on Master Limited Partnerships*, BAKER BOTTS (Dec. 20, 2017), <https://www.bakerbotts.com/insights/publications/2017/12/tax-reform-act---mlp> [<https://perma.cc/WHV8-HKKF>].

300. SHERLOCK & KEIGHTLEY, *supra* note 64, at 10; *see also* PHILLIP SWAGEL & ROBERT CARROLL, *THE IMPACT OF CHANGES TO THE TAX TREATMENT OF MASTER LIMITED PARTNERSHIPS 2* (2012), https://www.mlpassociation.org/wp-content/uploads/2015/08/Changes_to_theTax_Treatment_of_MLPs-FINAL.pdf [<https://perma.cc/6JS4-AT8M>] (suggesting that subjecting MLPs to corporate taxation would result in an initial decline in pipeline investment of 28% or more).

301. *E.g.*, Wells, *supra* note 150, at 3–4 (hypothesizing that lowering the corporate tax rate below the pass-through entity rate would cause businesses to reincorporate).

302. Statement of Richard Kauffman, Chairman for Energy and Finance for New York State, *Hearing on Clean Energy Financing Before the S. Natural Res. & Energy Comm.*, 113th Cong. 7 (2013), http://www.energy.senate.gov/public/index.cfm/files/serve?File_id=0488fbd8-d2b9-4fae-962f-04833e7f78d5 [<https://perma.cc/6XCF-Q32J>] (“[T]he benefit in the cost of capital is less about the tax benefits of MLPs and REITs and more about the fact that the cost of equity is less in the stock market than in private equity.”).

303. *See* Mormann, *supra* note 18, at 355–56 (“With risk-and-return profiles that meet or, potentially, exceed the requirements of these investors, MLPs and REITs for renewables have the potential to be game changers and raise billions of lower-cost capital.”).

among companies.³⁰⁴ And the market value of the MLP sector grew from just \$8 billion in 1996 to around \$480 billion in 2013, evidencing investor support.³⁰⁵ Proponents assert that strong historic growth in the market capitalization of MLPs—despite modest dividend payments—suggests that investor demand for MLPs exceeds the supply.³⁰⁶

But the MLP's success is largely unfounded. There has been a systematic decline in MLP popularity over the past few years, including a recent movement for MLPs to simplify and restructure their ownership models.³⁰⁷ In 2014, Kinder Morgan stunned the corporate world by abandoning the Master Limited Partnership structure that it helped to popularize throughout the early twenty-first century.³⁰⁸ This trend is now spreading throughout the industry. In 2017, ONEOK's parent corporation acquired its MLP.³⁰⁹ In 2018, Enbridge Energy Partners,³¹⁰ Energy Transfer Partners,³¹¹ and Williams Partners³¹² underwent similar transformations. And there has been a sharp decline in the number of MLP IPOs; only one has occurred since 2017.³¹³

The reasons proffered for these restructurings includes “the MLPs’ prohibitively high costs of capital and the need to lower the cost of capital to pursue more investments.”³¹⁴ These explanations are surprising, considering

304. Peacock, *supra* note 72, at 407–09.

305. Flood, *supra* note 281.

306. Mormann, *supra* note 18, at 356.

307. Carpenter, *supra* note 81, at 402–11.

308. David Gelles, *Kinder Morgan’s Reorganization Puts Master Limited Partnerships in Question*, N.Y. TIMES (Aug. 11, 2014, 9:10 AM), <https://dealbook.nytimes.com/2014/08/11/kinder-morgans-reorganization-puts-master-limited-partnerships-in-question/> [https://perma.cc/M5EG-4QAW].

309. Michael Blankenship & Eric Johnson, *Market Trends 2017/18: Master Limited Partnerships*, LEXISNEXIS: PRAC. ADVISOR 3 (May 8, 2018), https://www.lockelord.com/~media/Files/NewsandEvents/Publications/2018/06/Market%20Trends%202017_18_%20Master%20Limited%20Partnerships.pdf [https://perma.cc/MGQ7-JCUX].

310. *Enbridge Announces Simplification of Corporate Structure with Proposals to Acquire All of the Outstanding Sponsored Vehicle Equity Securities*, ENBRIDGE (May 17, 2018), <https://www.enbridge.com/media-center/news/details?id=123513> [https://perma.cc/HWZ8-L4GU].

311. *Ownership Structure*, ENERGY TRANSFER, <https://www.energytransfer.com/ownership-structure/> [https://perma.cc/8RNQ-MUFL].

312. *Williams Announces Agreement to Acquire All Public Equity of Williams Partners L.P.*, WILLIAMS (May 17, 2018), <https://investor.williams.com/press-release/williams/williams-announces-agreement-acquire-all-public-equity-williams-partners-lp> [https://perma.cc/9AQK-Y2PM].

313. *Figures and Tables*, ALERIAN, <https://www.alerian.com/education/figures-and-tables/> [https://perma.cc/6F4L-5JTQ]; *Drilling Down into the Biggest Energy IPO of 2019*, MOTLEY FOOL (July 16, 2019), <https://www.fool.com/investing/2019/07/16/drilling-down-into-the-biggest-energy-ipo-of-2019.aspx> [https://perma.cc/44MA-4GCE] (acknowledging that Rattler Midstream is the first MLP IPO in more than a year).

314. Matthew J. McCabe, Note, *Master Limited Partnerships’ Cost of Capital Conundrum*, 17 U. PA. J. BUS. L. 319, 343 (2014).

the MLP's tax advantages. Rating agencies and legal scholars note that ineffective corporate governance is prohibitively raising the MLP's cost of capital beyond that of a comparable corporate entity.³¹⁵ These problems are inherent in the MLP structure and unlikely to be avoided by renewable energy generators.³¹⁶

Empirical evidence demonstrates that the S&P 500 has consistently outperformed pipeline companies over the past ten years.³¹⁷ And this data does not consider the full extent of the tax changes, which took effect only last year.³¹⁸

Commentators predicted the MLP to be an important player in facilitating infrastructure growth in the wake of the shale boom,³¹⁹ and for a time, they were correct. The oil and gas industry in the United States was growing rapidly until very recently. The increased supply of oil and gas created a need for additional infrastructure to ship and store the minerals.

315. See MOODY'S INVESTORS SERVICE, CORPORATE GOVERNANCE STRUCTURE OF MASTER LIMITED PARTNERSHIPS CARRIES CREDIT RISK 1 (2007), <https://www.moodys.com/sites/products/aboutmoodysratingsattachments/2006600000441511.pdf> [<https://perma.cc/S36W-RQRF>] (“The central governance risk is that the general partner (GP) could use its control to extract value from the MLP to the detriment of common unitholders and bondholders.”). Governance of an MLP differs dramatically from that of a traditional corporation. The MLP does not have a board of directors of its own; rather, the sponsor appoints the general partner's board of directors, giving it immense control over the MLP's operations. *Updated Investor Bulletin*, *supra* note 284. Delaware law permits the general partner to limit its fiduciary duties to the MLP and the unitholders. See DEL. CODE ANN. tit. 6, § 17-1101(d) (2013) (allowing partnership agreements to restrict or eliminate duties to others, provided the contract abides by the implied contractual requirements of good faith and fair dealing). MLP partnership agreements will usually waive fiduciary duties; therefore, an MLP's common unitholders do not enjoy traditional legal protections, and the general partner may consider its own interests ahead of the interests of the MLP. Mohsen Manesh, *Contractual Freedom Under Delaware Alternative Entity Law: Evidence from Publicly Traded LPs and LLCs*, 37 J. CORP. L. 555, 590–91 (2012). Finally, partnership agreements create perverse distribution incentives, raising the cost of debt and equity capital. McCabe, *supra* note 314, at 341 (“The effect of ‘compelled distributions’ has been attacked as ‘dubious’ since MLP managers have the discretion to determine what constitutes ‘available cash.’”).

316. One exception to the MLP governance issues has been Enterprise Products Partners. See Goodgame, *supra* note 271, at 504 (including an explanation of the decision to cap Enterprise's distributions made by its CEO, in which he referenced a reduced “cash cost of capital, which should enable us to provide our limited partners with greater economic returns on capital investments”).

317. Compare *Vanguard 500 Index Fund Investor Shares*, VANGUARD, <https://investor.vanguard.com/mutual-funds/profile/performance/vfinx> [<https://perma.cc/ZHR4-LHS3>] (last updated Dec. 31, 2018) (ten-year annualized returns of 12.97%), with *Alerian MLP Index*, ALERIAN, <http://www.alerian.com/insight.html> [<https://perma.cc/VR6N-YQ58>] (ten-year annualized returns of 9.2%).

318. See *supra* subpart III(B).

319. See, e.g., McCabe, *supra* note 314, at 320 (recognizing the role MLPs played in promoting infrastructure growth in the wake of the shale boom); Jeffrey Oliver, *Master Limited Partnerships and Merger Review: A Unique Form Meriting Careful Analysis*, 9 TEX. J. OIL GAS & ENERGY L. 357, 358 (2014) (“U.S. energy infrastructure will require massive capital expenditures in the coming decades. . . . That infrastructure will largely be built by MLPs.”).

Consequently, processing facilities and pipelines were built across the country.³²⁰

While MLP proponents contend that the MLP structure facilitated the buildout of energy infrastructure, this Note suggests the opposite. Perhaps the increased need for infrastructure created a demand for more MLPs, causing them to increase in popularity. The shale boom fueled the growth of MLPs, but when energy prices bottomed out, their popularity declined. It might have been the market that was making the MLP successful—not the inverse. There can be no assurance that renewable energy MLPs would experience any more success than MLPs in the midstream oil and gas sector.

6. Tax Credits Will Continue To Be Inefficient Incentives.—Those who wish to eliminate the tax credits cite the difficulty that developers face in monetizing them. But the shortage of eligible investors associated with tax equity financing may not persist. Corporate investors are beginning to play a more prominent role in the financing of renewable-infrastructure projects. Socially responsible investing is a new theme in the capital markets.³²¹ Companies that want access to renewable energy are some of utilities' largest customers.³²² Corporations such as Google and Apple have been initiating their own generation projects for several years.³²³ And now, nontech companies such as Budweiser, Gap, and MGM Resorts are entering the mix.³²⁴ Tax credits can still be a workable incentive for profitable corporate entities; corporations can utilize credits by sponsoring their own renewable generation project or participating in the financing of an independent power producer.

7. Result: MLPs Would Not Be Superior to Tax Credits.—Despite the costs associated with private-equity financing, renewable energy companies still pursue tax equity investment as the preferred financing tool. The logical conclusion is that tax credits do incentivize investment. It is unlikely that the MLP—without the benefit of tax credits—would have more success than the current arrangement. This subpart explained that the market considers

320. Massey, *supra* note 68, at 1025.

321. See Uma Outka, "100 Percent Renewable": *Company Pledges and State Energy Law*, 2019 UTAH L. REV. 661, 671–72 (noting the corporate shift towards renewable energy, in part reflecting company corporate culture and values, public image concerns, and shareholder pressure).

322. *Electricity Explained*, U.S. ENERGY INFO. ADMIN., <https://www.eia.gov/energyexplained/electricity/use-of-electricity.php> [<https://perma.cc/9BAR-S3KX>] (last updated Apr. 29, 2019) (noting that the percentage of electricity sales to commercial classes was 36.6%, and to industrial classes was 25.7%).

323. Marcacci, *supra* note 16.

324. Timothy Puko, *From Beer to Casinos, Businesses Turn to Solar, Wind Power*, WALL ST. J. (Jan. 30, 2019, 7:00 AM), <https://www.wsj.com/articles/climate-change-pushes-companies-to-buy-renewables-11548849602> [<https://perma.cc/L4LQ-6L9G>].

corporations to be superior to MLPs in the oil and gas industry, which already do not enjoy the benefits of the ITC and PTC. And the market has also chosen private-equity financing (with credits) over corporate financing in the public markets. Therefore, the corporation's superiority over the MLP suggests that expansion of the MLP structure is disfavored by the market.

One concern, though, is the longevity of these tax credits. The PTC is only available through 2019, and has been phasing down since 2017.³²⁵ The ITC is also phasing down toward its terminal credit value of 10%.³²⁶ While Congress has a history of renewing these credits, the Trump Administration has not demonstrated a commitment to renewable energy.³²⁷ The expiration of these credits would provide a more compelling reason to expand the Master Limited Partnership to renewable energy sources.³²⁸

The decrease in the corporate tax rate from 35% to 21% is also expected to reduce the impact of renewable energy tax benefits. A 2017 analysis estimated that tax equity investments in new wind projects would fall from 68% of total capital to around 60% in 2018.³²⁹ Similarly, investment in new solar projects was expected to fall from around 45% to 37% in 2018.³³⁰ This is because each tax equity investor "has 40% less tax appetite than they did before."³³¹ And on top of that, the depreciation benefits of renewable energy projects are worth less because of the reduced rate.³³² The Tax Cuts and Jobs Act has both crippled the MLP and reduced the value of renewable tax credits.

B. The Financing Our Energy Future Act's Effect on Decarbonization

Subpart III(A) identified many of the flaws in the MLP structure as a tool for raising capital. But the Financing Our Energy Future Act maintains bipartisan support and has been reintroduced in the most recent Congressional session.³³³ If the bill does pass, and is able to incentivize investment, what would be its effect on decarbonization in the United States? The analysis from Part II can help in forming a prediction.

325. Graetz, *supra* note 33, at 49.

326. *See id.*; 26 U.S.C. § 48(a)(6)(B) (mandating phaseout for commercial solar energy).

327. "Despite evidence that human activities are contributing to climate change, President Donald Trump has repeatedly cast doubt on the conclusions and announced he was withdrawing the U.S. from the Paris climate agreement." Lardieri, *supra* note 2.

328. *But see* Mormann, *supra* note 18, at 354 n.378 (admitting that "the choice between partnership and corporate structure might be more challenging if the current system of tax credits and the resulting need for tax equity were eliminated").

329. Graetz, *supra* note 33, at 51.

330. *Id.*

331. David Burton, *Tax Equity Roundtable 2018*, POWER FIN. & RISK (Nov. 2, 2018).

332. *Id.* ("[I]nstead of a depreciation [sic] benefit being multiplied by 35%, it's only multiplied by 21% . . .").

333. *See supra* section II(B)(2).

First, the principal effects of the FOEF Act would be limited to decarbonization of the electricity market. The Act expands the MLP structure to renewable-energy-generation activities, comprising 27.5% of national emissions.³³⁴ It does not, however, solve emissions problems associated with transportation activities (28.7%), industry (22.4%), and agriculture (9.0%).³³⁵ These other economic sectors are emitting a significant amount of the country's greenhouse gasses.

The FOEF Act may, however, indirectly affect emissions within other economic sectors. For example, increased electricity generation could advance the country's movement toward electric vehicles in the transportation sector. While the U.S. transportation sector is still highly dependent on oil over other forms of energy, efforts to power vehicles with ethanol, biofuels, and electricity are underway.³³⁶ Each of these sources is included as a qualifying source under the FOEF Act.³³⁷

Second, the FOEF Act would be most effective in deregulated energy markets. The Act is intended to benefit independent power producers, and vertically integrated utilities are unlikely to satisfy the qualifying income requirements. But a significant number of Americans continue to live in regulated electricity markets. The following diagram illustrates the current state of the U.S. electricity market:

334. U.S. ENVTL. PROT. AGENCY, *supra* note 5, at ES-24.

335. *Id.*

336. Schizer, *supra* note 19, at 262.

337. Financing Our Energy Future Act, S. 1841, 116th Cong. (2019).

Third, promoting only renewable-generation capacity, without the accompanying transmission infrastructure, is problematic. Renewable energy generation frequently occurs in locations far from where the electricity is eventually consumed. For example, wind energy is plentiful in the Midwestern United States, far from major cities.³⁴¹ Solar energy is most available in the deserts of the southwestern United States, which are also sparsely populated. Transmission lines are needed to bring electric power to population centers and often do not keep pace with new generation.³⁴²

Transmission congestion is already a problem.³⁴³ And it is only expected to get worse. Generation capacity is currently growing faster than transmission, and big transmission upgrades require the coordination of multiple states and cooperation among the companies that own the grid.³⁴⁴ As a result, renewable energy projects that rely on interconnections with the transmission grid may experience increased expense and regulatory delay associated with the installation of new transmission lines needed to transmit the newly produced energy.³⁴⁵ The FOEF Act might be improved by permitting the transmission of renewable electricity as a qualifying activity.

Several other effects of the FOEF Act deserve note. A serious concern in the transition to green electricity is the operability of the U.S. electric system. At high levels of renewable-electricity penetration, challenges arise related to variability and uncertainty in output.³⁴⁶ Nuclear energy is often mentioned as a possible solution to intermittency.³⁴⁷ But the Act does not

341. Coleman, *supra* note 120, at 265.

342. *Id.* at 264–65.

343. Alexandra B. Klass & Jim Rossi, *Revitalizing Dormant Commerce Clause Review for Interstate Coordination*, 100 MINN. L. REV. 129, 142 (2015) (“[I]n order to maintain even current levels of grid reliability, the electric industry must make . . . investments in transmission and distribution alone of nearly \$900 billion.”).

344. *Id.* at 140–41 (“The U.S. electric grid constitutes an \$876 billion asset managed by over 3,000 utilities serving nearly 300 million customers.”). This problem is especially true for long-distance transmission crossing multiple states. Coleman, *supra* note 120, at 265.

345. Wiseman et al., *supra* note 201. State regulatory agencies generally regulate the siting and construction of transmission facilities. *Id.* Each affected state’s public utilities commission must authorize construction of a facility. *Id.* States have different rules, regulations, and guidelines concerning the siting and development of transmission facilities. *Id.* A state’s review of transmission projects may include public hearings for affected landowners, environmental-impact studies, and consideration of whether eminent domain is warranted. *Id.*

346. NAT’L RENEWABLE ENERGY LAB., RENEWABLE ELECTRICITY FUTURES STUDY: EXECUTIVE SUMMARY 1 (2012), <https://www.nrel.gov/docs/fy13osti/52409-ES.pdf> [<https://perma.cc/ZX3N-B3FK>].

347. Mike Mueller, *Nuclear Power Is the Most Reliable Energy Source and It’s Not Even Close*, U.S. DEP’T OF ENERGY, OFFICE OF NUCLEAR ENERGY (Feb. 27, 2018), <https://www.energy.gov/ne/articles/nuclear-power-most-reliable-energy-source-and-its-not-even-close> [<https://perma.cc/9SMT-565H>]. Thirty states have a nuclear power plant, with nuclear power accounting for 19.5% of electricity nationwide. See *Nuclear Explained*, U.S. ENERGY INFO. ADMIN., https://www.eia.gov/energyexplained/index.php?page=nuclear_power_plants [<https://perma.cc/U6AC-S8ZQ>] (last updated June 18, 2019).

incentivize nuclear; it is omitted as a qualifying source of income.³⁴⁸ Rather, it includes energy storage as a solution for inconsistent generation by renewables.³⁴⁹

In 2018, FERC Order 841 created a structure for energy storage companies to participate in U.S. wholesale capacity, energy, and ancillary-services markets.³⁵⁰ Order 841 directs RTOs and ISOs to come up with market rules for energy storage to participate in the wholesale energy markets.³⁵¹ This Order is expected to provide certainty for investors, accelerate renewable energy development, and counteract intermittency.³⁵² Storage is especially relevant to areas where there is already a large amount of renewable energy generation because excess energy production is more likely to occur in these areas.³⁵³ But because fossil fuels are cheaper forms of storage themselves, these technologies are not yet widely used. The Act is unlikely to affect storage technologies in the near future.³⁵⁴

Conclusion

Renewable energy tax credits are problematic because of the mismatch between the economic benefits enjoyed by a small group of high-income tax investors and the costs across American taxpayers.³⁵⁵ These challenges are not unique to renewable energy companies. Startup companies and other projects with high up-front costs and modest returns over a long period of time also struggle to monetize tax incentives.³⁵⁶ The efficiency of tax credits

348. Financing Our Energy Future Act, S. 1841, 116th Cong. (2019).

349. *Id.* (including “Energy Storage Property” that uses “mechanical, chemical, electrochemical, hydroelectric, or thermal processes to store energy that was generated at one time for conversion to electricity at a later time”).

350. Electric Storage Participation in Markets Operated by Regional Transmission Organizations and Independent System Operators, 162 FERC ¶ 61,127 (Feb. 15, 2018).

351. Peter Maloney, *FERC Order Opens ‘Floodgates’ for Energy Storage in Wholesale Markets*, UTILITY DIVE (Feb. 20, 2018), <https://www.utilitydive.com/news/ferc-order-opens-floodgates-for-energy-storage-in-wholesale-markets/517326/> [<https://perma.cc/UBY7-C7CJ>].

352. Outka, *supra* note 321, at 693.

353. *Id.* (“Global growth for utility-scale energy storage is expected to double six times by 2030, driven by the demand for higher renewable energy portfolios . . .”).

354. This Note does not discuss several other components of the bill that are expected to have only a minimal effect. For example, only one commercial-scale carbon-sequestration electric generation plant is currently in operation in the United States. Wiseman et al., *supra* note 201.

355. Mormann, *supra* note 57, at 375.

356. See Alvin C. Warren & Alan J. Auerbach, *Transferability of Tax Incentives and the Fiction of Safe Harbor Leasing*, 95 HARV. L. REV. 1752, 1758–61 (1982) (“Even unlimited carryover of deductions and credits would not put a start-up company in the same position as a profitable company, because the profitable company would receive its benefits earlier than would the start-up company.”).

would be improved significantly if the ITC and PTC were made refundable, thereby eliminating the need for costly tax equity investment structures.³⁵⁷

This Note assessed whether the Financing Our Energy Future Act can facilitate America's clean energy transition. It did so by evaluating the Master Limited Partnership's ability to incentivize investment in renewable energy. The analysis provided the following six takeaways:

Economic conditions in the United States are markedly different than those in 1986, when Congress established the Master Limited Partnership to promote the development of oil and gas infrastructure. However, national security may still be a valid reason for expanding the MLP structure to renewable energy resources.

The Financing Our Energy Future Act is short and would require interpretative guidance by either Congress or the Internal Revenue Service. Guidance issued by the IRS in 2017 indicates that MLP expansion would be limited to the generation of electricity from renewable sources.

The Master Limited Partnership has been used to promote the development of midstream oil and gas infrastructure. Differences between the renewable energy industry and the midstream industry suggest that renewable energy generation may not be a perfect fit for the MLP structure.

The Financing Our Energy Future Act would primarily benefit independent power producers in deregulated energy markets. Vertically integrated utilities are unlikely to meet the qualifying income requirements.

Amending the FOEF Act to include transmission of renewable electricity might make the bill more effective.

The Master Limited Partnership is not likely to be an effective replacement for tax credits. The preference for private-equity investors over the corporate structure evidences the effectiveness of credits. The advantages of the corporation over the MLP indicate that it will be even less popular.

Renewable energy advocates have lined up to support the Financing Our Energy Future Act. They point to the inequity between government incentives; subsidies for wind and solar (tax credits) are temporary while subsidies for oil and gas (MLPs) are permanent.³⁵⁸ But, contrary to popular opinion, the Master Limited Partnership is unlikely to finance America's green-energy future.

357. Mormann, *supra* note 57, at 376. The tax code already recognizes other refundable tax credits, such as the Child Tax Credit and the Earned Income Tax Credit. *Id.* at n.230; *see also* Lily L. Batchelder et al., *Efficiency and Tax Incentives: The Case for Refundable Tax Credits*, 59 STAN. L. REV. 23, 55 (2006) ("[T]he value of a tax incentive generally should not vary by the size of one's lifetime earnings, whether one earns more earlier or later in the life cycle, or whether one's earnings are more smooth or more volatile over time.").

358. Grandoni, *supra* note 104; *see generally* Powers, *supra* note 106 (observing how successful lobbying permitted the oil and gas industry to take advantage of tax benefits unavailable to the renewable energy industry).