MASTER LIMITED PARTNERSHIPS:
A PIPELINE TO RENEWABLE
ENERGY DEVELOPMENT

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Master Limited Partnerships (MLPs) are partnership entities that can be publicly traded on a national stock exchange if they meet certain criteria in the Internal Revenue Code. These criteria include a qualifying income test where most of the partnership’s income must be derived from non-renewable natural resources. These partnerships have become very popular since their creation in the 1980s and have allowed for vast amounts of capital to be spent on infrastructure for non-renewable natural resource extraction and transportation in the United States. First, this Comment explores the history of the MLP and how MLPs currently are structured. Second, this Comment looks at the current capital structure for renewable resources, including geothermal, wind, and solar. Finally, this Comment explores how the MLP structure could be applied to renewable resources in the United States and why those efforts have not worked well thus far.

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INTRODUCTION

Master limited partnerships (MLPs) are an important part of the United States economy—yet most people have probably never heard of them. Nevertheless, these entities are the backbone of the energy industry in the United States. Since the 1980s, MLPs have been used to finance much of the country’s infrastructure for transporting and processing oil and natural gas.

MLPs are popular entities due to their tax attributes. They retain partnership characterization and thus are not taxed as a corporation. This means that MLPs qualify for flow-through taxation, whereby the MLP’s income flows to each partner or owner who then pay the taxes on their individual income tax.

return for their share of the profits. This is a great benefit of MLPs, as most publicly traded entities are corporations that face double taxation. Double taxation means that corporations pay tax on their profits at the corporate level, and then the dividends paid to shareholders are taxed again on each shareholder’s tax return. Due to the ability to pass taxes through to the individual partners, MLPs can raise more capital than a corporation typically could. Because there is one less level of taxation, there is typically a higher profit margin for MLPs, which allows them to return more capital to investors through quarterly distributions (similar to dividends).

Due to their beneficial tax attributes, MLPs are constrained in how they can produce revenue. The Internal Revenue Code (IRC) restricts their sources of income to those related to conventional energy sources, such as oil and natural gas. The restrictions have been lessened modestly over the years to include some nontraditional energy sources, such as certain biofuels, but MLPs still generate most of their revenue from conventional energy sources.

There is great potential for the use of MLPs to incentivize expansion of renewable energy in the United States. Energy from renewable resources—such as solar, wind, and geothermal—is becoming an important part of the United States economy, but current government incentives are not enough to fuel adequate development. Concerns over climate change and the policy goal of reducing dependence on foreign oil have made renewable energy an important topic of national discussion and development. The current incentive system uses a combination of tax credits and favorable depreciation rates to incentivize investment in renewable energy. This

3. See infra Section II.B.
4. See infra Section II.B.
5. See infra Section II.C.
6. See infra Section II.C.
7. See infra Section I.A; I.R.C. § 7704 (2012).
8. See infra Section II.B.
9. See infra Section III.C.
11. See infra Sections III.A, III.B.
complicated system has produced gains in renewable energy investment, but not to the level that is required to make renewable energy a significant part of the United States energy portfolio. New methods of financing renewable energy—such as MLPs—must be utilized to meet the goals of reducing dependence on foreign oil and creating cleaner energy sources.

This Comment is divided into four parts. Part I describes the history of MLPs and explains how they have become such a large component of the United States conventional energy economy. This Part also explains why the popularity of MLPs has led to legislative restrictions on their use.

Part II explains how MLPs are structured today, and why that structure has allowed them to flourish. Additionally, it discusses the conventional energy limitations that are placed on MLPs.

Part III examines current incentives for renewable energy sources in the United States. This Part discusses the efficacy of the tax credits and accelerated depreciation system that are currently in place. It also explores the challenges with this system and why it has hindered large-scale investment in renewable energy.

Finally, Part IV explains how MLPs might work with renewable energy and how efforts to do so have fared thus far. This Part also discusses potential issues with the expansion of MLPs and the challenges of applying the MLP structure to renewable energy.

I. HISTORY OF MASTER LIMITED PARTNERSHIPS

MLPs did not exist prior to 1981 because tax laws favored corporations by offering them more favorable rates.12 There was a large spread between the maximum corporate tax rate (46%) and the maximum individual tax rate (70%), making it more efficient to put available capital into corporations.13 This dynamic shifted when the Economic Recovery Act of 198114 was enacted. This legislation reduced individual tax rates across the board and reduced the maximum individual tax rate to

13. See id.
The lowered individual tax rates made noncorporate investments, such as partnerships, more beneficial; thus, companies and individuals started looking for new ways to invest. 

Apache Corporation introduced the first MLP in 1981. Apache, an independent oil and gas producer, was one of many corporations looking to reduce its taxes due to the comparatively higher corporate tax rates. It wanted to create an investment vehicle that not only would have the advantages of publicly traded stock but the tax benefits of a partnership as well. Thus, Apache consolidated some of its oil and gas drilling partnerships into an MLP known as Apache Petroleum Company. Since the creation of Apache Petroleum Company, MLPs have become an important part of the United States economy. Section A explains the initial expansion of MLPs and how the federal government restricted MLPs due to their popularity. Section B explores the recent expansion of MLPs, the changing set of restrictions placed on them, and the modern structure of MLPs.

A. Boom and Bust in the 1980s and 1990s

Soon after Apache Petroleum Company was created, other companies took notice and created their own MLPs. The first MLPs were oil and gas companies, followed by real estate companies. As the number of MLPs increased, the number of industries involved expanded as well. MLPs were formed for


16. See id.


19. Apache Corporation: Timeline, supra note 17.

20. Id.


22. Id. at 9.

23. Id.
hotels (e.g., Red Lion and Motel 6), restaurants (e.g., Burger King), cable television systems, amusement parks, and even professional sports teams.\textsuperscript{24}

With the growing popularity of MLPs, Congress worried that too many companies would take advantage of this structure as a shelter to avoid corporate taxes.\textsuperscript{25} As a result, Congress enacted legislation in 1987 that defined and limited what constituted a publicly traded partnership (PTP).\textsuperscript{26} For example, section 7704 of the IRC restricted new PTPs to those earning income from natural resource activities.\textsuperscript{27} These natural resource activities included those resulting in income and capital gains from oil, natural gas, coal, timber, and other non-renewable resources.\textsuperscript{28} MLPs are a type of publicly traded partnership and thus fall within these PTP laws.\textsuperscript{29} All existing MLPs were allowed to continue as MLPs, but most outside the natural resource realm eventually became private or were converted into other structures.\textsuperscript{30}

During the late 1980s, MLPs were forced to focus on more stable transportation and processing assets\textsuperscript{31} because the United States oil and natural gas market suffered due to low oil prices.\textsuperscript{32} A period of broad industry contraction followed, which caused many MLPs to stop their operations or restructure away from the MLP form, as they were also dependent on higher oil prices.\textsuperscript{33} The exodus of existing MLPs,

\begin{itemize}
\item \textsuperscript{25} MASTER LTD. P’SHP ASS’N, \textit{supra} note 21, at 10.
\item \textsuperscript{26} Id. at 11.
\item \textsuperscript{27} Id. at 11–12.
\item \textsuperscript{28} I.R.C. § 7704 (2012).
\item \textsuperscript{29} MASTER LTD. P’SHP ASS’N, \textit{supra} note 21, at 11.
\item \textsuperscript{30} Id.
\item \textsuperscript{31} Stability here refers to the sources of revenue received by the various assets. MLPs that consisted of oil and gas exploration assets were not stable during this time due to the volatility in oil prices during the late 1980s—crude oil prices dropped by 67% in less than one year. \textit{See} Russell Gold, \textit{Back to the Future? Oil Replays 1980s Bust}, WALL STREET J. (Jan. 13, 2015, 7:46 PM), http://www.wsj.com/articles/back-to-the-future-oil-replays-1980s-bust-1421196361 [https://perma.cc/G8ZH-SC7E].
\item \textsuperscript{32} MASTER LTD. P’SHP ASS’N, \textit{supra} note 21, at 14.
\item \textsuperscript{33} \textit{See} ERNST & YOUNG, MASTER LIMITED PARTNERSHIP ACCOUNTING AND REPORTING GUIDE 3 (2011), http://www.ey.com/publication/vwassetsdld/master_limited_partnership_accounting_and_reporting_guide/8file/mlp_bb1889_3

november2011.pdf [https://perma.cc/ACS8-CUC2] (discussing how adverse economic conditions prevented many MLPs from surviving into the 1990s).
combined with the new regulation on PTPs, led to a severe drop in MLP activity during the 1990s. 34 Due to the changing market dynamics, many large oil and gas companies that were involved in both drilling operations and transportation decided to either sell their transportation assets or split them into a separate entity. 35 These transportation assets are known as “midstream” assets because they exist to serve as the middleman between those who produce oil or natural gas and those who sell it. 36 Examples of midstream assets include oil and natural gas pipelines, terminals, and associated processing plants where natural gas is converted into a saleable product. 37 MLPs that focus on midstream assets make up the majority of the MLP market today. 38

B. Another Period of Expansion in the 2000s

The number of midstream MLPs increased steadily during the 2000s due to stable cash flows and increasing oil and natural gas prices. 39 There were also new MLPs that expanded beyond the traditional midstream business into offshore pipelines, propane distribution, and coal assets. 40 Some exploration and production companies that had been forced to sell off their midstream assets in the 1980s and 1990s due to low oil prices also returned to using MLPs by purchasing or building new midstream assets. 41 Additionally, MLPs were created to hold “downstream” assets, 42 those that are on the

34. Id.
35. MASTER LTD. P'SHIP ASS'N, supra note 21, at 14.
38. MASTER LTD. P'SHIP ASS'N, supra note 21, at 28. Midstream MLPs continue to dominate the MLP market because midstream assets are typically a great fit for MLPs. This is mostly due to their relatively stable and predictable cash flow streams. See infra Section II.D.
39. ERNST & YOUNG, supra note 33, at 4.
40. See MASTER LTD. P'SHIP ASS'N, supra note 21, at 14–15.
41. Id.
42. "Downstream" typically refers to the refining of oil or natural gas and then the marketing and sale of the refined products to end-users. Consumers would recognize downstream assets as the place they go to fill up their vehicles with gasoline. See BRADY ET AL., supra note 36.
sales end of the market rather than in the middle. Various MLPs were also created that dealt with fertilizer, sand, and trona ore rather than oil and natural gas.

In 2008, Congress changed its historical course of limiting MLPs. For the first time since 1987, Congress passed legislation that expanded the sources of income available for entities seeking to maintain MLP status. This was the first step towards the expansion of MLPs into the nonconventional natural resources sector. Congress added to the definition of “natural resources activities” the transportation of various biofuels, including ethanol, biodiesel, liquefied hydrogen, and liquefied natural gas. These expanded rules govern MLPs today.

II. MASTER LIMITED PARTNERSHIPS IN TODAY’S MARKET

MLPs are currently a significant part of the United States economy. As of August 28, 2015, there were approximately 150 MLPs being traded on the public markets. The majority (50%) of these MLPs are focused on midstream and downstream activities with most of the others in exploration and production activities, coal, and fertilizers. Overall, 84% were involved in natural resources of some type. Total market capital for MLPs was approximately $481 billion, of which $393 billion was related to natural-resource focused MLPs.

The many reasons why MLPs are an important and popular part of the United States economy merits further discussion. Section A explores the typical structure of an MLP and how it differs from a publicly traded corporation. Section B discusses how MLPs are taxed, why this system is beneficial,

43. See MASTER LTD. P’SHIP ASS’N, supra note 21, at 15.
44. Id. These products are considered qualifying natural resources for section 7704, as they are depletable resources. See I.R.C. § 7704 (2012).
45. See infra Section II.B.
46. I.R.C. § 7704.
47. Id.
48. Id.
49. See MASTER LTD. P’SHIP ASS’N, supra note 21, at 23.
50. Id.
51. Id. at 25. The remaining 16% of MLPs were in the financial services or real estate sectors. In order to qualify as MLPs, they had to meet one of the other passive-type income requirements, such as receiving most of their income from interest, dividends, or real property rents. See id.; see also I.R.C. § 7704.
52. MASTER LTD. P’SHIP ASS’N, supra note 21, at 28.
and what restrictions are placed on MLPs by the IRC. Section C examines why MLPs are so popular with investors and how this allows MLPs to raise large amounts of capital. Finally, Section D explains why conventional energy sources work well with the MLP structure.

A. Structural Components

Like a public corporation’s shares of common stock, MLP interests trade on stock markets. The similarities end there, however. Rather than selling shares of common stock, MLPs sell partnership units, which are a stake in the ownership of the MLP. MLPs are typically structured as limited partnerships with one or more general partners and a large number of limited partners. The general partner typically owns 2% of the partnership and manages all of its operations. A separate limited liability company (LLC) is typically created to hold the general partner units. In some instances, a corporation will own the general partner units, and this corporation may also go public at a later date. The limited

54. See id.
55. Id.
56. Master Ltd. P’Ship Ass’n, supra note 21, at 33. Limited partnerships are created by state statute. A limited partnership is an association that consists of two or more persons or entities carrying on a venture as co-owners for profit with one or more general partners and one or more limited partners. Under limited partnership statutes, limited partners can participate in the partnership’s profits while also having protection from personal liability for the limited partnership’s obligations. The general partners of a limited partnership are governed by general partnership statutes, which give the general partner much more latitude in decision-making. This broad management power can be costly, though, as general partners have no personal limited liability for the partnership’s debts. See J. William Callison & Maureen A. Sullivan, Partnership Law & Practice: General and Limited Partnerships § 18:1, Westlaw (database updated Oct. 2015).
57. Master Ltd. P’Ship Ass’n, supra note 21, at 33.
58. Id. at 34.
partners own the remaining units of the partnership.\textsuperscript{60}

While the limited partners typically own around 98% of the MLP, they have almost no say in the operations of the partnership due to restrictions in the partnership agreement and state limited partnership statutes.\textsuperscript{61} Nevertheless, when an MLP goes public, it is the limited partnership units that are sold to the public and traded on a stock market.\textsuperscript{62} The sale of these partnership units to the public provides capital to the MLP.\textsuperscript{63} In exchange for ownership in the partnership, the limited partners receive a quarterly cash distribution, which is similar to a dividend except in its tax treatment, as explained below.\textsuperscript{64}

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\textit{B. Taxation Aspects}
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MLPs are attractive chiefly because of their ability to enjoy flow-through taxation. Subsection 1 discusses how MLPs have a tax advantage by avoiding double taxation. Subsection 2 examines how an MLP qualifies for flow-through taxation under section 7704 of the IRC.

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\textit{1. Tax Benefits of Investing in MLPs}
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Flow-through taxation permits MLPs to avoid double taxation because partnerships are not subject to corporate taxes at the entity level.\textsuperscript{65} Instead, the owner of the partnership unit reports his proportionate share of partnership income and expenses on his individual income tax return and, thus, bears any resulting taxes.\textsuperscript{66} This lack of double taxation

\begin{footnotes}
\textsuperscript{60} \textit{MASTER LTD. P'SHIP ASS'N}, supra note 21, at 33.
\textsuperscript{61} \textit{Id.}
\textsuperscript{62} See \textit{id.} (noting that the limited partnership units are being publicly traded).
\textsuperscript{63} \textit{Id.}
\textsuperscript{64} \textit{Id.}
\textsuperscript{65} \textit{Id.} at 40. MLPs are not the only type of entity that qualifies for flow-through taxation. Any entity that has two or more partners, including general partnerships, limited partnerships, and limited liability companies, is automatically taxed as a partnership under the IRC unless it affirmatively elects to be taxed as a corporation. 26 C.F.R. \textsection 301.7704-2 (2014).
\textsuperscript{66} \textit{MASTER LTD. P'SHIP ASS'N}, supra note 21, at 40.
\end{footnotes}
allows for a much lower cost of capital compared to traditional publicly traded corporations. The cost of capital is reduced for MLPs because investors know that any capital they provide to the MLP will be returned to them through the MLP’s profits, and these profits will only be taxed once. Since MLPs are used for capital-intensive businesses, they realize an even greater benefit from their ability to acquire cheap capital. Additionally, flow-through taxation allows MLPs to successfully operate assets that may not otherwise have a high return rate because their profit margin does not include the additional layer of taxation.

2. Qualifying as an MLP Under the IRC

Section 7704 of the IRC establishes the qualifying criteria for all PTPs, which includes MLPs and real estate investment trusts (REITs). The first criterion to qualify as a PTP is that “interests in such partnership are traded on an established securities market, or interests in such partnership are readily tradable on a secondary market (or the substantial equivalent thereof).” The next criterion is that “90 percent or more of the gross income of such partnership for such taxable year consists of qualifying income.” Qualifying income includes some general income categories such as interest, dividends, and real property rents. Before 2008, qualifying income outside of the general categories included only “income and gains derived from the exploration, development, mining or production, processing, refining, transportation (including pipelines (67. MLPs are capital-intensive since they build, and subsequently maintain, very expensive assets. These assets typically include large intrastate pipelines, processing plants, and terminals. 68. MASTER LTD. P'SHIP ASS'N, supra note 21, at 42. 69. See id. 70. I.R.C. § 7704 (2012). 71. Id. § 7704(b). The ability to trade on a secondary market opens up other opportunities to raise capital, rather than just established securities markets (such as the New York Stock Exchange). The regulations for the IRC provide a better idea of what the IRS believes a secondary market is: “interests in a partnership that are not traded on an established securities market . . . are readily tradable on a secondary market or the substantial equivalent thereof if . . . the partners are readily able to buy, sell, or exchange their partnership interests in a manner that is comparable, economically, to trading on an established securities market.” 26 C.F.R. § 1.7704-1(c)(1) (2014). 72. I.R.C. § 7704(c)(2). 73. Id. § 7704(d)(1).
transporting gas, oil, or products thereof), or the marketing of any mineral or natural resource (including fertilizer, geothermal energy, and timber).”

The flush language of section 7704(d)(1) limited what qualified as a mineral or natural resource to “any product of a character with respect to which a deduction for depletion is allowable under section 611; except that such term shall not include any product described in subparagraph (A) or (B) of section 613(b)(7).” Section 611 includes “mines, oil and gas wells, other natural deposits, and timber.” The limited items under section 613(b)(7) are “soil, sod, dirt, turf, water, or mosses” and “minerals from sea water, the air, or similar inexhaustible sources.”

Congress has made minor changes to section 7704 in recent years to expand available income sources for MLPs. For example, Congress passed the Energy Improvement and Extension Act of 2008, which took the first step towards expanding MLPs past conventional natural resources by adding new sources of qualifying income. It added the transportation or storage of various products including ethanol, biodiesel, liquefied natural gas, and other alternative fuels.

There can be severe consequences should an MLP fail to meet the qualifying income requirement. In the past, many companies sought private letter rulings from the IRS to confirm their income streams met the requirements of section 7704. To further clarify this requirement, the IRS issued proposed regulations in May 2015 to provide further guidance on qualifying income. If an MLP does fail to meet the qualifying income threshold, the partnership is treated as a corporation and 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

75. Id.
76. I.R.C. § 611(a) (2012).
77. Id. § 613(b)(7).
79. Id.
81. Id.
distributed “such stock to its partners in liquidation of their interests in the partnership.”\textsuperscript{82} Conversion into a corporation would be very detrimental to the company because it would be subject to double taxation going forward.\textsuperscript{83} The only way to return to MLP status once a conversion has occurred is to prove to the IRS that the failure to qualify was inadvertent and that “no later than a reasonable time after the discovery of such failure, steps [were] taken so that such partnership once more [met] such gross income requirements.”\textsuperscript{84}

\textbf{C. Popular Investment Structures}

Investors like MLPs for many reasons. In addition to the structural components noted above, MLPs can be very profitable investments. It is said that cash is king; this is especially so with MLPs,\textsuperscript{85} as their modern structure is based almost entirely on cash flows.\textsuperscript{86} All “available cash” is distributed to unitholders quarterly according to how the partnership agreement is structured.\textsuperscript{87} Distributions of all available cash are not required by the tax code, or even securities laws, but have become the standard practice for MLPs.\textsuperscript{88} Thus, MLP limited partner units are traded based on a multiple of the MLPs cash flows rather than the traditional metric of earnings.\textsuperscript{89} Most partnership agreements require the distribution of all available cash based on a calculation known as “distributable cash flow.”\textsuperscript{90} Distributable cash flow is based on the particular partnership agreement and not standardized

\begin{itemize}
\item \textsuperscript{82} I.R.C. § 7704(e), (f).
\item \textsuperscript{83} See id. § 7704(f).
\item \textsuperscript{84} Id. § 7704(e).
\item \textsuperscript{85} FENN, supra note 53, at 2.
\item \textsuperscript{86} Id.
\item \textsuperscript{87} Distributions by MLPs are similar to dividends on corporate stock in some regards but have different tax treatment. Partnership tax laws require that each partner (or unitholder) receive a K-1 that lists the income and expenses allocated to each of his units. The partner then pays taxes on that share of income and expenses at his ordinary tax rates rather than the reduced tax rates for which some dividends may qualify. See Phil DeMuth, \textit{You Haven't Really Considered MLPs, Have You?}, FORBES (Aug. 27, 2013, 10:59 AM), http://www.forbes.com/sites/phildemuth/2013/08/27/you-havent-really-considered-mlps-have-you/ [https://perma.cc/3LHS-XT9W].
\item \textsuperscript{88} See MASTER LTD. P'SHIP ASS'N, supra note 21, at 48.
\item \textsuperscript{89} FENN, supra note 53, at 3.
\item \textsuperscript{90} Id.
\end{itemize}
across the industry.\footnote{Id. at 6.} One method of calculating distributable cash flow is to deduct from all cash on hand any reserves established by the general partner, any cash necessary to comply with debt covenants, any reserves necessary to provide for future distributions, and certain borrowings after the end of quarter.\footnote{Id. at 5.} While the flexibility within this calculation enables the partnership to keep cash on hand, MLPs are incentivized to return most of their cash to the unitholders in order to keep the trading price high.\footnote{Id. at 5. – 16.}

Another incentive for returning as much cash as possible to the unitholders is the presence of subordinated units.\footnote{Id. at 15. – 16.} These units can be likened to preferred shares of a typical corporation,\footnote{P AUL HASTINGS LLP, MASTER LIMITED PARTNERSHIP OVERVIEW 15 (Aug. 2013), http://www.paulhastings.com/docs/default-source/pdfs/mlp-primer.pdf [https://perma.cc/YG4F-T5AP].} except that subordinated unitholders only receive cash after the nonsubordinated common unitholders have been paid.\footnote{Id. at 17.} Subordinated units are usually held by the general partner and are built into the partnership agreement as a way of keeping incentives aligned with the common unitholders.\footnote{Id. at 17.} Typically, around one half of the common units are subordinated, so the total entity cash flow would have to reduce dramatically before the common unitholders would notice any change in their distributions.\footnote{Id. at 17.}

When MLPs file for an initial public offering with the US Securities and Exchange Commission in order to sell their limited partner units to the public, they typically note in the prospectus a minimum amount the MLP expects to distribute each quarter.\footnote{Id. at 17.} The common unitholders are the first to receive

\footnote{Id. at 6.}
\footnote{Id.}
\footnote{Id. at 5.}
\footnote{Preferred shares in a corporation typically offer investors different rights than common stock. These shares are created by contract, so many of their attributes can change, such as control, voting, and preferences upon liquidation. Here, the reference to preferred shares is used as an example to show that the subordinated units carry different rights and attributes than common units.}
\footnote{PAUL HASTINGS LLP, supra note 94, at 15.}
\footnote{Id. at 15–16.}
\footnote{Id. at 17.}
\footnote{Id. A prospectus is "[a] printed document that describes the main features of an enterprise (often a corporation’s business) and that is distributed to prospective buyers or investors . . . . Under SEC regulations, a publicly traded corporation must provide a prospectus before offering to sell stock in the corporation." Prospectus, BLACK’S LAW DICTIONARY (10th ed. 2014).}
cash distributions up to the specified minimum level, and only after those distributions have been made can the subordinated units receive any distributions. If there is sufficient cash available to pay the minimum distribution to both the common and subordinated units, then any remaining cash would be shared across both classes on a pro rata basis.

Subordinated units are also similar to preferred shares in that they can be converted into common units. Conversion may occur after a stated period of time (between one and five years), which can be reduced if the MLP’s performance hits certain economic targets. These targets include the ability to earn sufficient revenue to distribute 150% of the minimum level of distributions for a certain stated period of time, after which automatic conversion occurs. The rationale for the conversion is two-fold. First, it allows the general partner to “monetize the bulk of [its] retained limited partner interests.” Second, if the MLP “has been able to grow its distribution dramatically, the common unitholders have a large cash buffer and the sponsor has clearly shown that it is able to successfully operate the MLP in a way that the subordinated units are no longer necessary.”

A unique component of MLPs is the concept of an incentive distribution right (IDR). The general partner holds IDRs in addition to its 2% general partnership interest. IDR s are really a form of “carried interest,” which permit the general partner to further benefit if the operations are going well. IDR s allow the general partner’s rights to the cash flows, including the 2% general partner ownership interest, to swell from 2% to 15%, then to 25%, and finally to 50% as the cash

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100. Fenn, supra note 53, at 7.
101. Id.
102. Id. at 8.
103. Id.
104. Id.
105. Id.
106. Id.
108. Id.
109. Carried interest is “a mechanism employed by many investment funds to compensate fund managers for delivering strong fund-level investment performance. It is generally an allocation to the fund managers of a percentage of partnership income without a corresponding interest in the partnership’s capital.” Jason Sacks, Effective Taxation of Carried Interest: A Comprehensive Pass-Through Approach, 89 Wash. U. L. Rev. 449, 455 (2011).
distributions to the limited partners increase. This is yet another incentive for the general partner to increase cash distributions paid to the common unitholders. IDR.s also operate to compensate the general partner for taking on the risk of losing its investment since it is taking a position that is subordinate to the common unitholders. Effectively, “the general partner takes a disproportionate amount of the downside risk at the outset of the MLP and, therefore, the general partner should take a disproportionate share of the upside, too.” Due to the various structural components noted above, as well as the incentive alignment between the interests of the general and limited partners, MLPs have become a popular investment vehicle.

D. Application to Conventional Energy

There are many reasons why MLPs work well for conventional energy sources—in particular, midstream assets—but the overarching reason is cash flows. Traditional oil and gas activities are known for their high levels of income and, thus, cash flow. This is due in large part to the spread between the costs of production and the market price of oil.

Due to the pressures of keeping a constant, if not increasing, quarterly cash distribution, stability of cash flows is key for MLPs. Midstream assets are very well suited for MLPs for this reason. Midstream pipelines are essentially toll roads that move oil and gas products from one location to another. Typically, in order to fund the construction of these pipelines, long-term contracts must be in place. These contracts typically create a reservation system whereby the

111. Id.
112. Id.
113. FENN, supra note 53, at 9.
114. Id.
116. Id.
117. Id.
118. Id.
119. Id.
pipelines sell a certain amount of their daily capacity to shippers of oil and gas products for a term of years. The shippers are then obligated to pay the reservation rate regardless of whether they actually ship the gas. The MLP does not face much risk of diminishing commodity prices as it does not typically take title to the products being transported. In addition to the reservation income, pipelines often impose surcharges or commodity fees based on the quantity of gas transported, which also support the cash flows. This revenue model provides a relatively stable and predictable cash flow stream, which allows for successful, predictable cash distributions.

The oil and gas industry in the United States was growing at a rapid pace until very recently. Much of this growth came from what has been called the “shale revolution” and the introduction of hydraulic fracturing. Since 1998, hydraulic fracturing has been used across the country in order to produce large amounts of natural gas from shale formations. Increased natural gas supply created a need for much more infrastructure to ship and store the natural gas. As a result, processing facilities and pipelines were built across the country in order to deliver the natural gas to the end consumer. The increased need for infrastructure created a demand for more (or larger) MLPs, causing them to increase in popularity.

While oil and natural gas prices have recently declined, infrastructure construction has not stalled. For example, TransCanada has not wavered in its efforts to build the 1,179-mile Keystone XL oil pipeline—even after President Obama

121. UNDERHILL, supra note 119, at 84.
122. Id.
123. Id.
124. Id. at 84–85.
125. See id.
127. Id.
128. Id.
130. Id.
131. Id.
132. See id.
133. See Coral Davenport, Senate Approves Keystone XL Pipeline Bill, Testing
denied a permit for the project. Additionally, as of October 2014, developers proposed four new pipelines at a cost of $15 billion in the Appalachian region alone. These projects have faced political opposition for environmental reasons; however, the fact they were proposed at all demonstrates a continued need for more infrastructure to service the conventional energy industry. With increased demand for infrastructure, there is greater need for new or existing MLPs to raise capital to build it.

MLPs are in high demand, but they cannot participate in a growing sector of the economy—renewable energy. Along with the increasing demand for conventional energy, there is also increasing demand for renewable energy sources. MLPs are unable to meet this demand because they are precluded from raising capital for renewable energy infrastructure. The next Part will explore incentives for renewable energy and consider whether MLPs can or should play a role in developing these incentives.

III. CURRENT INCENTIVES FOR RENEWABLE ENERGY SOURCES

The United States government incentivizes the development and production of energy from renewable resources, including wind, solar, and other green energy sources. Similar to the tax treatment of MLPs, these incentives are found in the IRC, but their structure is much different. Rather than allowing the same tax benefits that come from being a PTP, the current system utilizes tax incentives, such as tax credits and accelerated depreciation, to achieve its

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goals.\textsuperscript{138} Section A discusses how the combination of the production tax credit and investment tax credit has been used as an incentive to start building infrastructure. Section B examines other incentives in the IRC, including accumulated depreciation and section 1603 grants. Section C explores why these various incentives have not been successful in producing large amounts of renewable energy infrastructure. Finally, Section D discusses potential solutions for the current system of incentives, including the potential expansion of MLPs into this area.

\textbf{A. Federal Tax Credits}

There are two major federal tax credits for renewable energy sources: one that encourages the generation of green energy, and one that encourages investment in renewable power generation assets.\textsuperscript{139} These credits are not mutually exclusive but have different characteristics and goals. Subsection 1 discusses the “production tax credit,” which allows a credit for actual energy produced from renewable energy sources. Subsection 2 examines the “investment tax credit,” which encourages the investment in infrastructure.

1. Production Tax Credit

The IRC has offered the production tax credit for a range of green energy production types, including, wind, geothermal, biomass, hydropower, and others.\textsuperscript{140} Under section 45 of the IRC, tax credits are provided in proportion to the amount of qualified energy produced by renewable energy generation facilities.\textsuperscript{141} The credits are inflation indexed, and the amount of the credit is currently $11 or $23 per megawatt-hour (MWh), depending on how the electricity is produced.\textsuperscript{142} These credits are supplemental to the income that facilities receive when they sell power onto the grid.\textsuperscript{143} The credits can be taken for

\begin{itemize}
  \item \textsuperscript{138} Id. at 307.
  \item \textsuperscript{139} Id. at 308.
  \item \textsuperscript{140} I.R.C. § 45 (2012) (amended 2015).
  \item \textsuperscript{141} Id.
  \item \textsuperscript{142} Mormann, supra note 137, at 313–14. Wind, geothermal, and closed-loop biomass get the higher credit amount and all other eligible sources get the lower credit amount. Id.
  \item \textsuperscript{143} Id. The grid is “the interconnected group of power lines and associated
ten years from the date “the facility was originally placed in service,” and the electricity must be sold to an unrelated third party by the energy producer.\textsuperscript{144} Also, if more than one person owns the facility, “production from the facility shall be allocated among such persons in proportion to their respective ownership interests in the gross sales from such facility.”\textsuperscript{145}

Since its origination in 1992,\textsuperscript{146} the production tax credit has been an easy political target; depending on which political party has control, it has both expired and been extended multiple times.\textsuperscript{147} The credit most recently expired in 2013, and there is proposed legislation to reinstate it.\textsuperscript{148} The production tax credit has been very important for increasing renewable energy infrastructure, but the volatility of the credit has become an issue for many companies hoping to utilize it. The volatility leads to periods of uneven development, which do not support the long-term goal of renewable energy growth. Other credits, such as the investment tax credit, have been much more stable and useful to the industry.

2. Investment Tax Credit

The investment tax credit, found in section 48 of the IRC, was originally created in 1978 and has not yet expired.\textsuperscript{149} This credit is available for various green energy technologies, including solar, geothermal, fuel cells, combined heat and power, and small wind projects.\textsuperscript{150} Production of electricity is not a qualifier for this credit; instead, the credit encourages investment in the physical assets necessary for production.\textsuperscript{151} “Solar, fuel cells, and small wind projects receive tax credits equal to thirty percent of the project’s qualifying investment

\footnotesize{equipment for moving electric energy at high voltage between points of supply and points at which it is delivered to other electric systems or transformed to a lower voltage for delivery to customers.” Office of Electricity Delivery & Energy Reliability, \textit{Electricity 101}, U.S. DEPT OF ENERGY, \url{http://energy.gov/oe/information-center/educational-resources/electricity-101} [https://perma.cc/SZ27-HP2C].

\textsuperscript{144} I.R.C. § 45.
\textsuperscript{145} \textit{Id.} § 45(e)(3).
\textsuperscript{146} Mormann, \textit{supra} note 137, at 313–14.
\textsuperscript{147} \textit{Id.} at 314.
\textsuperscript{148} \textit{Id}.
\textsuperscript{149} \textit{Id}.
\textsuperscript{151} \textit{See id}.}
costs, whereas all other eligible technologies receive tax credits worth ten percent of their qualifying costs.”  

The investment tax credit can be taken as soon as a project begins commercial operations. However, since the credit vests in a straight-line fashion over five years, there are situations in which a recapture of the credit by the IRS could occur. The main way this recapture would come about is through a transfer of ownership in the assets before the end of the five-year period. If this occurs, the unvested portion of the credit would be recaptured. For example, “if a project owner sells her assets after two years, she will need to pay back sixty percent of the investment tax credit she received when the project was placed in service.”  

While this credit has been more stable over the years, it will be phased down to 10% of qualifying costs (from 30%) on January 1, 2017. This phase down was enacted “to anticipate and encourage the industry’s continuous technology learning and cost improvements.” Unless other incentives are put into place, the phase down of the credit will probably have a negative effect on renewable energy investment and development.

B. Other Incentives for Renewable Energy

Tax credits are the largest incentive for renewable energy growth, but there are two other incentives that are part of the broader incentive structure: accelerated depreciation and section 1603 grants. Subsection 1 discusses how the IRC provides favorable accelerated depreciation rates to renewable energy infrastructure. Subsection 2 examines section 1603 grants, which provided a very successful incentive while they

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152. Mormann, supra note 137, at 314–15.
153. Id. at 315.
154. I.R.C. § 50. As the credit vests, the company would have full ownership over that portion of the credit. Suppose, for example, that a company receives a $100 tax credit in year the 2000. The straight-line vesting takes place over five years, so 20% of the credit would vest each year (100% divided by 5 years). Thus, in 2001, $20 of the credit has vested, and in 2002, $40 of the credit has vested. Any portion that has not vested is subject to recapture under the IRC.
155. Id.
156. Id.
157. Mormann, supra note 137, at 315.
158. Id.
159. Id.
were in place.

1. Accelerated Depreciation

Accelerated depreciation has existed in the IRC for many years to encourage businesses to invest in equipment and infrastructure.\(^\text{160}\) Renewable energy is one of the many industries that is able to benefit from depreciation due to the industry’s capital-intensive nature.\(^\text{161}\) Depreciation allows owners of capital assets to distribute their costs over the life of the asset and recover those costs each year by taking a deduction from their income.\(^\text{162}\) The IRC standardizes the life of most assets through a system known as the Accelerated Cost Recovery System (ACRS).\(^\text{163}\) While most renewable energy production assets actually have long lives, the ACRS system classifies solar, wind, and a range of other renewable power generation assets as five-year property.\(^\text{164}\) This allows a much shorter cost recovery than would occur if depreciation was taken in a “straight-line” fashion over the actual, useful life of the asset.

In addition to accelerated depreciation, the IRC has been modified over the years to allow “bonus depreciation” for certain assets.\(^\text{165}\) Bonus depreciation allows owners to deduct a larger portion of the depreciation in the first year and then smaller amounts over the next four years.\(^\text{166}\) The amount of the deduction allowed has been between 50% and 100% of the total asset cost based on overall economic conditions.\(^\text{167}\) Accelerated and bonus depreciation provide important tax incentives for those thinking of investing in renewable energy infrastructure.

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161. Id.
162. Id. Straight-line depreciation is the most common form of depreciation. This method calculates depreciation by dividing an asset’s cost by the number of years it is expected to be used. PAMELA P. PETERSON & FRANK J. FABOZZI, ANALYSIS OF FINANCIAL STATEMENTS 59 (1999).
164. Id. § 168(e)(3)(B).
165. Mormann, supra note 137, at 312–13.
166. Id.
167. Id. at 313.
2. Section 1603 Grants

During the Great Recession of 2008 and 2009, tax credits and accelerated depreciation were not enough to encourage investment in renewable resource energy production.168 This was largely due to the fact that renewable energy companies were not generating enough income to offset the credits, and if the credits were not usable then the investment was unprofitable.169 Due to these concerns, the American Recovery and Reinvestment Act of 2009 included section 1603 cash grants.170 Their purpose was to “temporarily fill the gap created by the diminished investor demand for tax credits”171 and to expand the use of renewable energy to decrease foreign dependency on oil.172 Eligible renewable energy developers had the option of receiving cash grants for up to 30% of their qualifying costs instead of taking the production and investment tax credits.173 These grants could be utilized for projects put in place or for which construction had started before 2011.174 While the grants were very popular and effective, it is unclear if they will return due to Congress’s preference for tax credits. Renewable energy production and investment has grown in the United States due to the incentive system currently in place, but it is not a perfect system, as discussed further in the next Section.

C. Issues with the Current Incentives

The current system of incentives has been popular with renewable resource energy developers and others, but the system faces many criticisms as well. The largest issue with tax credits is that they can only be used to offset income.175 “It typically takes ten or more years before a renewable power plant has recovered [its] expenditures and begins to generate the necessary profits and tax liability to use its tax credits.”176

168. Id. at 315–16.
169. Id.
170. Id. at 316.
171. Id.
172. Id.
173. Id.
174. Id. at 316–17.
176. Mormann, supra note 137, at 315.
Thus, projects are hard to develop because the tax credits cannot be monetized for at least ten years and there are large up-front costs associated with construction. Ideally, a developer would be able to sell these tax credits to another party, which could use them to offset its own income. The developer would likely have to take a discount on the value of the credits, but the sale would allow for more immediate monetization.\textsuperscript{177} Unfortunately, the IRC does not allow such sales of tax credits.\textsuperscript{178}

Using tax equity to cover up-front costs is one solution to this problem. To use tax equity, the owner of a project brings in an investor with tax attributes that can be used against the tax credits in a timely fashion.\textsuperscript{179} However, potential investors can, and often do, charge a premium for making an investment that involves the use of their tax attributes. In other words, tax equity has become quite expensive due to the demand for the useable tax attributes, which has prevented small developers from being able to use it.

Section 1603 cash grants were a more effective solution to this problem.\textsuperscript{180} They provided cash up front so that there was no requirement of offsetting income and, thus, no need for tax equity partnerships. This made the deals economically viable from the beginning and actually encouraged investment in renewable energy.\textsuperscript{181} The Congressional Research Service has noted that cash grants “may be a more economically efficient mechanism than tax credits for delivering benefits to the renewable energy sector.”\textsuperscript{182}

The substitution of the section 1603 grants for tax credits revealed the true issue with tax credits—"tax credits deliver a significantly lower level of support to renewable energy developers than a cash grant subsidy of equal face value.”\textsuperscript{183} This issue affects the developers directly but, more importantly, shows the inefficiency of the system the federal government has created to incentivize renewable energy investment. This inefficiency indirectly affects all taxpayers.\textsuperscript{184}

\begin{itemize}
\item \textsuperscript{177} \textit{Id.} at 308–09.
\item \textsuperscript{178} \textit{Id.}
\item \textsuperscript{179} \textit{Id.} at 309.
\item \textsuperscript{180} \textit{Id.} at 317–18.
\item \textsuperscript{181} \textit{Id.}
\item \textsuperscript{182} \textit{Id.} at 318.
\item \textsuperscript{183} \textit{Id.} at 324.
\item \textsuperscript{184} \textit{Id.}
\end{itemize}
The main issue with the current system of renewable energy incentives is the frequent inability to actually use the credits. Additionally, the IRC does not allow developers to sell these tax credits, so if they cannot be used they are completely wasted. Finally, the use of section 1603 grants highlights the fact that up-front cash payments to developers of renewable energy are more effective than tax credits due to the immediate impact on the developer’s bottom line. Addressing these issues is essential to effectively incentivize renewable energy.

D. Proposals for Fixing the Issues in the Current System

Various ideas have been proposed in recent years to solve the issues with the current system of incentives. Most of the proposals call for some sort of federal cap-and-trade system. Such a system would limit the amount of emissions from non-renewable resource energy production by capping the total number of emissions permits granted to energy producers. Once the permits are allocated, a secondary market would be created in which the permits could be bought and sold, thus allowing the permits to be shifted to the emitters who need them the most. Due to the cap on the number of permits, they could become quite expensive in the secondary markets. The limited supply of available permits would be artificial and based on policy objectives, and it would result in increased demand for renewable energy sources. As renewable sources would not be subject to any sort of cap, the economics of making an investment in renewable energy production would become much more viable as less money is invested in conventional energy production. Cap-and-trade programs have been discussed for many years, but proponents have been unable to make headway at the federal level.

Renewable energy tax credits continue to be popular with

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185. Id. at 336.
187. Id.
188. Id.
189. Id.
190. Id.
191. Id.
Congress, mostly due to their approval process.\textsuperscript{192} Tax expenditures, which include renewable energy tax credits, do not require annual review and thus do not become political issues as frequently as discretionary spending items.\textsuperscript{193} Discretionary spending items must be added to the budget each year, and both Congress and the President must approve them. The funding for these items must also be approved by a separate piece of legislation.\textsuperscript{194} This two-step process creates more opportunities for the discretionary spending to become derailed, especially in a gridlocked Congress.\textsuperscript{195}

Another potential solution would be to allow renewable energy tax credits to be sold to those that can actually use them.\textsuperscript{196} Additionally, the credits could be made refundable so that the taxpayer would receive a cash payment from the Department of the Treasury equal to the unusable portion of the credit.\textsuperscript{197} Either of these options would create a more sustainable system where renewable energy production and investment would be a viable option for more developers and entrepreneurs.

Though, these proposals would certainly face challenges. It would be difficult to overcome the IRC’s general prohibition against selling tax credits for fear that such sales would have a destabilizing effect on the tax system.\textsuperscript{198} Additionally, some fear that making the tax credits refundable would create a sort of welfare system where renewable energy was viewed as being completely funded by the federal government.\textsuperscript{199}

An alternative proposal, and the one advocated by this Comment, would permit the application of MLP status to entities engaged in the development of renewable energy. This would allow large amounts of capital to flow into renewable energy while limiting some of the inefficiencies that exist in the current system.

\textsuperscript{192} See Mormann, supra note 137, at 338–39.
\textsuperscript{193} Id.
\textsuperscript{194} Id.
\textsuperscript{195} Id.
\textsuperscript{196} Id.
\textsuperscript{197} See id. at 338.
\textsuperscript{198} See id. at 328.
\textsuperscript{199} Id. at 338–39.
IV. APPLYING THE MASTER LIMITED PARTNERSHIP CONCEPT TO RENEWABLE ENERGY

On the whole, MLPs have been quite successful in creating growth in a capital-intensive industry.\textsuperscript{200} While MLPs are a creature of the tax code, there are almost no similarities between the way renewable energy is currently funded and the way MLPs are funded. Rather than using any tax credits, MLPs promote growth by simply removing a layer of taxation on profits.\textsuperscript{201} Section A examines the proposed Master Limited Partnerships Parity Act, which is the most recent attempt to apply the MLP structure to renewable energy. Section B discusses a new structure known as a yieldco, which mimics an MLP. Section C explores potential issues with the expansion of MLPs beyond conventional energy and into renewable energy.

A. Master Limited Partnerships Parity Act

Congress acted in 2008 to add a limited number of additional energy sources to those that could generate “qualified income” for an MLP.\textsuperscript{202} A similar congressional action would most likely be necessary for the further expansion advocated by this Comment. A piece of legislation with almost that exact goal was introduced in the Senate in 2013.\textsuperscript{203} The Master Limited Partnerships Parity Act, was sponsored by Senator Chris Coons and had broad support, but not enough to pass.\textsuperscript{204}

The Act was short (only about 600 words) and to the point.\textsuperscript{205} Essentially, it proposed adding to the definition of qualifying income “those energy technologies that qualify under sections 45 and 48 of the tax code, including wind, closed and open loop biomass, geothermal, solar, municipal solid waste, hydropower, marine and hydrokinetic, fuel cells, and combined heat and power.”\textsuperscript{206} The Act would have increased

\textsuperscript{200} See supra Subsection II.B.1.
\textsuperscript{201} Id.
\textsuperscript{202} See supra Subsection II.B.2.
\textsuperscript{203} Master Limited Partnerships Parity Act, S. 795, 113th Cong. (2013).
\textsuperscript{204} Id.
\textsuperscript{205} See id.
the transportation fuels that qualify by adding “cellulosic, ethanol, biodiesel, and algae-based fuels, as well as energy-efficient buildings, electricity storage, carbon capture and storage, renewable chemicals, and waste-heat-to-power technologies.” Adding such an array of new options to qualifying income would encourage the creation of new MLPs and allow current MLPs to diversify into new technologies.

The Act had broad support from the business community and those interested in renewable energy. In fact, a group of 236 interested businesses sent Senator Coons a letter supporting his legislation. Unfortunately, the bill did not have enough support in the Senate, and it never left the Senate Finance Committee. While there is no definitive explanation for why the Act did not pass, it was most likely due to the fiscal impact of the bill. The Act would have had a negative fiscal impact on the federal budget because it would have resulted in lower corporate tax revenues. Regrettably, it does not seem that Congress weighed the current negative impact against the future positive impacts of more clean energy and reduced reliance on foreign oil. In addition to the fiscal impact, Congress may have been concerned that MLP treatment may not be the best way to incentivize growth in renewable energy.

B. Development of Yieldcos

In recent years, renewable energy companies have found a way to achieve similar results to that of an MLP without having to use the MLP structure. These new structures are called “yieldcos” due to their ability to produce similar yields to that of an MLP. In order to create comparable yields, yieldcos are set up to achieve a stable cash flow and generate

207. Id.
large tax losses to offset revenue.\textsuperscript{211}

Successful yieldcos require a predictable cash flow. In order to reach a stable cash flow, yieldcos typically combine renewable energy generation assets with assets that have long-term contracts in place.\textsuperscript{212} These long-term contracts will usually be for conventional energy assets that are known to produce predictable cash flows.\textsuperscript{213}

In order to produce similar results to an MLP, corporate taxes must be avoided as much as possible. Yieldcos reduce or remove their corporate tax burden by incurring taxable expenses that are greater than their income.\textsuperscript{214} One of the largest sources of taxable expense is accelerated depreciation,\textsuperscript{215} which is described above.\textsuperscript{216} Therefore, when a yieldco is being created, careful planning is utilized to achieve a combination of assets that have stable cash flows and large annual depreciation.\textsuperscript{217}

Net operating losses are created when taxable expenses are greater than taxable income.\textsuperscript{218} In years where a net operating loss is created, there is no taxable income and, thus, no corporate tax due, which is the ultimate goal. Even if a yieldco has taxable income, it will ideally be low enough to qualify for lower rates, or it can be offset by net operating losses from prior years to reduce any taxes due.\textsuperscript{219}

Due to their many similarities to MLPs, yieldcos have been characterized as synthetic MLPs.\textsuperscript{220} While they retain their corporate entity form, they have the ability to raise capital at cheaper rates due to their preferable tax attributes.\textsuperscript{221} Reduced taxes then allow a yieldco to pay more cash to investors, which creates higher yield investments.\textsuperscript{222}

Yieldcos are not a perfect substitute for MLPs. As noted above, yieldcos require a very carefully balanced mix of

\begin{footnotesize}
\begin{enumerate}
    \item Id.
    \item Id.
    \item Id.
    \item Id.
    \item Id.
    \item See supra Subsection III.B.1.
    \item Urdanick, supra note 210.
    \item Id.
    \item Id.
    \item Id.
    \item Id.
    \item Id.
    \item Id.
    \item Id.
\end{enumerate}
\end{footnotesize}
renewable energy assets and assets with a stable cash flow.\textsuperscript{223} This asset combination is tough to achieve unless the company or individuals forming the yieldco have a sufficiently large number of assets from which they can create the right mix.\textsuperscript{224} Additionally, a certain amount of expertise is required to achieve the correct proportion of income to taxable expenses to make the yieldco sustainable.\textsuperscript{225} In light of these challenges, the MLP structure is more likely to achieve broad expansion of renewable energy, pending a change in the law as advocated by this Comment.

C. Other Potential Issues with the Expansion of Master Limited Partnerships

There are some downsides to MLPs, including a potential lack of sufficient cash flows from renewable energy sources. Stable cash flows are a key component to a successful MLP.\textsuperscript{226} While midstream and other oil and gas assets effectively produce stable cash flows, renewable resources do not.\textsuperscript{227} Due to the nature of renewable resources, their ability to generate power is limited by factors including daily hours of sun, wind speed, or water pressure.\textsuperscript{228} The volatile nature of these factors causes energy production to vary on a daily basis, which prevents a stable cash flow from developing.\textsuperscript{229} As these technologies continue to develop, their cash flows may stabilize, but until then, there may be limits on the number of investors in a renewable resource MLP.

Completely replacing the current system of incentives with an MLP structure could also be problematic. For example, some current renewable energy projects would not be profitable without the subsidies and credits they presently receive.\textsuperscript{230} An

\textsuperscript{223} \textit{See id.}
\textsuperscript{224} \textit{See id.}
\textsuperscript{225} \textit{Id.}
\textsuperscript{226} \textit{See supra Part II.}
\textsuperscript{228} \textit{Id.}
\textsuperscript{229} \textit{Id.}
\textsuperscript{230} \textit{Larry Bell, Loss of Production Tax Credits Brings Big Wind Chill to Cooling Subsidy-Dependent Market, FORBES (Feb. 9, 2014, 9:00 AM), http://www.forbes.com/sites/larrybell/2014/02/09/loss-of-production-tax-credits-}
unprofitable project funded by an MLP would not serve the purpose of incentivizing the industry, as there would be very little investor interest in the MLP, preventing it from raising any capital.

Other potential issues with MLPs are the interest rate risk and the disincentive to accumulate capital. Other potential issues with MLPs are the interest rate risk and the disincentive to accumulate capital.231 MLPs are very attractive to investors when interest rates are low because of their minimum cash distributions. Minimum distributions typically have a higher yield than most publicly traded corporations (since they avoid the extra layer of taxation) and government bonds. When interest rates rise, MLPs become less attractive unless they can also raise their cash distributions. The disincentive to accumulate capital results from the amount of cash that must be distributed to unitholders. Thus, saving cash to make large capital investments is a challenge. The only way, then, that MLPs can effectively make these types of investments is through selling more equity or increasing debt financing. These issues have existed since the inception of MLPs, and they have not been very detrimental to continued investment; but they are worth noting as they could create issues with the expansion into renewable resources.

CONCLUSION

Renewable energy finance will continue to be an important topic in the United States as environmental concerns and climate change are increasingly pressing issues. By promoting renewable energy, the country will become less dependent upon fossil fuels. This serves the dual purpose of helping combat climate change and making us less dependent on foreign oil. Effective incentives for financing and developing renewable energy would help solve each of these issues.

There are many potential avenues for attacking these issues, as discussed above. Whether the best solution is to

232 Id.
233 Id.
234 Id.
235 Id.
236 Id.
allow for the trade or sale of tax credits, or even to make them refundable, is yet to be determined. One thing is certain though—MLPs have a proven track record and are a great solution for raising capital. They may not be the perfect solution, but they should certainly be part of the discussion going forward.