The Value of Yieldcos

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ABSTRACT

This thesis seeks to explore the value proposition of yield cos (yield corporations) within the renewable energy space that have recently emerged in the past few years. Due to the relatively low number of publicly traded yield cos, the analysis will focus on six individual yield cos based in the United States on a case by case basis. Each case study will examine the history of the yield cos and the consequent performance and yield of each. At the end, generalizations will be drawn from the sample that will help guide the reason for and subsequent development of the yield co industry specifically with regard to renewable financing.

INTRODUCTION

A yield corporation (yield co) is a publicly traded company that is formed to hold operating assets that generate stable cash flow. A large majority of the cash flows are then distributed to shareholders. In many cases, a large tax break can be achieved through the yield co structure by utilizing net operating losses that were created during development and other regulatory incentives. In recent years, the structure of yield cos has found a new use in the renewable energy space.

Renewable Energy Market

The current renewable energy market in the United States has seen tremendous growth over the past decade. For 2015, the expected growth of renewable generation is expected to hit around 3.4%[1]. A large part of this growth stems from conventional hydropower which is expected to grow at 6.3%, while conventional nonhydropower renewables are expected to grow 1.9%. Today, hydropower still constitutes the largest supply of renewable energy as one of the cheaper and more easily scalable energy sources. Other large sources of renewable energy include wood biomass, liquid biomass, and wind power. Wind power has seen extraordinary progress, growing 8.1% in 2014 and expected to grow another 13.1% in 2015 and 10.9% in 2016. In generation terms, wind is expected to see another 17 GW of installed generation capacity from 2014 to 2016.

Solar still holds a relatively small percentage of the total generation in the United States. Utility-scale solar is averaging only .7% of total expected generation in 2016. It is expected to grow at a rate of 75% from the end of 2014 to 2016, about half of which is to be built in

[1] http://www.eia.gov/forecasts/steo/report/renew_co2.cfm

California. This growth may even taper due to the regulation changes starting in 2017 where investment tax credits (ITC) will be reduced from their current level of 30% to 10% of the cost basis. As such, more development is expected to occur before the policy change goes into effect[2].

Total renewable generation currently is 14% of the total generation in the United States, representing 1591 GWh/day relative to the total of 11,345 GWh/day[3]. While the non-renewable generation has been stagnating, renewables have seen continued growth. Much of this can be attributable to favorable legislation and policy that has aided the development and consequent growth of the renewable sector. The public policy mechanisms come in the forms of investment tax credits, cash grants, loan guarantees, accelerated depreciation, renewable portfolio standards, and carbon trading plans. *Refer to Appendix for more detailed charts.*

Investment Tax Credits

The ITC exists as an incentive for renewable developers to continue to install more capacity. Currently, a 30% ITC is given for solar, fuel cells, small wind, and PTC-eligible technologies[4]. PTC's are production tax credits that were discontinued in 2014 but served much the same purpose as ITC's. The definition included such renewable resources as landfill gas and wave power. In addition, a 10% ITC is given for geothermal, microturbines, and combined heat and power (CHP). The ITC was extended by the Energy Improvement and Extension Act in October 2008 for another eight years to end on December 31, 2016. In all cases, the tax credit is given with relation to the expenditures of the project.

[2] http://energy.gov/savings/business-energy-investment-tax-credit-itc
[3] http://www.eia.gov/forecasts/steo/tables/?tableNumber=22#
[4] http://energy.gov/savings/business-energy-investment-tax-credit-itc

Cash Grants

In 2005, the Department of Energy began the Loan Guarantee Program to help spur the development of renewable assets by providing an affordable long-term financing opportunity[5]. The program guarantees private loans to developers so that in the case of default, the lender is paid back for its financing. By doing so, financing is spurred by the removal of risk from the process.

Accelerated Depreciation

The Modified Accelerated Cost Recovery System was implemented in 1986 and allows for a five year cost recovery period for investments in qualified tangible assets. In the renewable space, solar, wind, geothermal, fuel cells, and CHP qualify for the five year recovery period. This accelerated depreciation allows for a significantly reduces the tax liability for the company which subsequently increases the rate of return for the project. For projects that also claim investment tax credits, half of the ITC must be reduced from the depreciable basis of the asset[6].

Renewable Portfolio Standards

In many states, renewable portfolio standards have emerged as renewable energy generation targets as a percentage of total capacity. Much of the progress made under these standards has been accomplished in the private sector. Renewable energy certificates (REC) and solar renewable energy certificates (SREC) are generated per unit created and must be redeemed

[5] http://www.seia.org/policy/finance-tax/loan-guarantee-program
[6] http://www.seia.org/policy/finance-tax/depreciation-solar-energy-property-macrs

to the state to prove eligibility under the program. A market has also emerged for these certificates that allows companies to trade these credits or otherwise store them to meet current or future obligations. Today 30 states and the District of Columbia have adopted RPS programs and seven states have set goals to support renewable energy. The goals set vary, but in general most states have requirements for energy providers to have 20-25% of their retail sales to come from renewable sources by 2025[7].

Carbon Trading

Similar to the concept of REC trading, carbon or emissions trading has also become a strong driver for renewable generation. In essence, carbon emissions are capped at a certain limit for fossil fuel based generation. The cap is enforced by carbon allowances that give the right to a certain amount of pollution. For those that cannot uphold the cap, carbon allowances can be purchased from other energy providers that had leftover allowances and thus a market is created for carbon trading. This incentivizes generation that does not cause emissions and forces a premium onto those who go over the emissions limit.

History of Yield Corporations

The closest relatives to the yield corporation are real estate investment trusts (REIT) and master limited partnerships (MLP). They both serve as financing vehicles that have boomed over the past few years in terms of market size. In many ways, they serve the same underlying purpose as the yield co – to minimize taxes for the investor and to create a market for the developer.

[7] http://www.eia.gov/todayinenergy/detail.cfm?id=4850

Real estate investment trusts are used specifically in the real estate space. They create an opportunity for investors to buy into commercial or residential properties while spreading out the risk. Generally, the trust will purchase properties and manage them, while collecting a small fee. Rent payments are then collected and redistributed to shareholders. Typically 90% of the taxable income is paid out in the form of a dividend[8]. The dividends are only taxed at the shareholder level which creates value in the form of a lower cost of capital to the shareholder. Today, REITs have a market cap of more than $900 billion[9].

Master limited partnerships share many of the same qualities as the REIT but are used specifically for fossil fuels. Originally created in 1981, master limited partnerships were able to hold any asset as a form of qualifying income at their inception. This was quickly changed by the Tax Reform Act of 1986 and Revenue Act of 1987 which changed the definition to only include "qualified sources" of income[10]. Today, only depletable finite resources (fossil fuels) qualify. MLPs are taxed as a partnership and traded like a stock. Similarly to the REIT, income is not taxed at the corporate level but rather at the shareholder level in the form of dividends. The avoidance of double taxation lowers the cost of capital and creates an incentive for investment which subsequently increases the amount of financing and price achieved.

Why Yield Cos?

In the current law for master limited partnerships and real estate investment trusts, renewable assets are not considered a form of qualifying income. As such, a new financial vehicle was needed to fill the void for renewable operating assets. The yield co structure exists as

[8] http://www.eia.gov/todayinenergy/detail.cfm?id=4850
[9] https://www.reit.com/data-research/data/industry-snapshot
[10] https://www.williamblair.com/Research-and-Insights/Insights/~/media/Downloads/Insights/PWR%20Assets/2014/Master%20Limited%20Partnerships%20101.pdf

a tool that keeps the tax advantages of its counterparts, provides liquidity, and offers a lower cost of capital for developers of renewable energy assets.

In general, renewable assets have a much different profile from fossil fuels. For one, fossil fuels have a more volatile income stream as the prices are tied to commodity prices particularly oil among other things. Renewable assets on the other hand are initiated with 20 year power purchase agreements (PPA's) that lock in a fixed payment schedule over the contracts life. The reliability of energy is not based on fluctuating commodities but rather solar power. Additionally, for residential setups, energy generation is not tied to the grid. Excess energy can then be sold back to the grid or to corporations through the use of Solar Renewable Energy Certificates (SREC)[11]. The net amount of energy used after the redistribution is then charged to the consumer under net metering policies[12].

Because the asset profile of most yield cos consists of fully operational projects, the cost of capital is significantly lowered due to the mostly de-risked assets. Much of the risk of developing a green project exists in the development phase. Typically, the parent will retain projects still in the pipeline and sell them to their yield co under a rights of first offering agreement (ROFO). The agreement gives the yield co the right to negotiate a sale with the parent or sponsor before the project can be sold elsewhere. The valuation of the assets is significantly benefited through the yield co structure. Investors are more incentivized by the consistent cash flows, operational status, market liquidity, and significant reduction of tax for the first few years of operation, typically the first five to ten years. As such, costs of capital can be closer to debt levels as much of the volatility has been removed from the investment. This in turn aids

[11] http://apps3.eere.energy.gov/greenpower/pdfs/52868.pdf
[12] http://www.seia.org/policy/distributed-solar/net-metering

developers as they have a reliable buyer which can offer them higher prices for their developed projects. Additionally, the sponsor can drive more volume and free up its balance sheet as it is able to convert projects into cash so long as a market exists for the asset.

Typical Yield Co Holdings

Most yield cos consist of renewable energy assets including solar, wind, and hydro-electricity facilities. In addition, many also hold conventional energy assets in order to generate a tax basis to offset taxable income. As many of the tax credits and NOL's are significantly larger than the profit and earnings of a single year, conventional generation provides an income source to utilize tax reductions. In essence, the conventional assets serve as a substitute for tax equity investors. For the projects that the firm chooses to purchase, many are already fully operational projects. As such, all of the developmental risk of failure is removed which allows for a steady cash flow generation. Some yield cos do hold projects under development, but these typically tend to be projects in the later stages of development right before commercialization.

Yield Co Structure (NYLD 10-K FY 2014)

Yield cos first and foremost are publicly traded companies that hold portfolios of operating renewable assets. They pay dividends of up to 80% of their cash available for distribution. The typical structure can be quite complex and usually involves numerous holding companies. As a basis, NRG Yield's structure will be used for illustrative purposes. The yield co itself exists as a holding company that serves the sole purpose of a financing vehicle. In general, the public shareholders will own a minority stake in the yield co of class A shares. The remainder will be owned by the parent or sponsor in the form of class B shares. The yield co then has a holding company beneath it typically in the form of an LLC which typically is wholly

owned by the yield co and managed by it. Then beneath the second holding company is an operating holding company that manages the project subsidiaries and is wholly owned by the LLC. Distributions start from the operating subsidiaries and are passed to the operating company which then passes them to the partnership, yield co, and ultimately the sponsor and public shareholders.

CASE STUDIES (All information except daily stock data trends were pulled from the 10-K and S-1 filings)

NRG Yield – NYLD

Introduction

NRG Yield serves as the vehicle for its parent company NRG Energy, Inc. NRG Yield owns a diversified portfolio of contracted renewable and conventional generation, along with thermal infrastructure assets. The company completed its initial public offering on July 22, 2013 and raised approximately $468 million. The company paid a $0.39 dividend on March 16, 2015 representing a $1.56 annualized dividend.

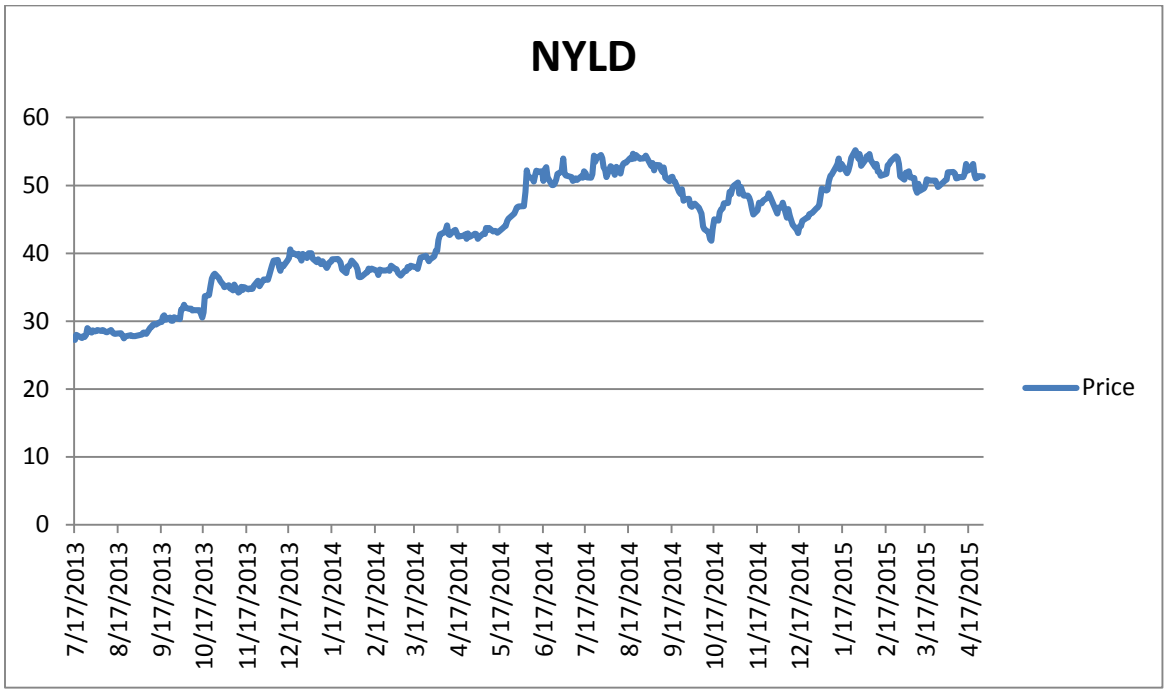
Asset Profile

At the time of the initial public offering, the company's asset portfolio of contracted generation consisted of 1324 net MW of renewable, conventional, and thermal assets. Specifically, the portfolio consisted of three natural gas or dual-fired facilities, eight utility-scale solar and wind generation facilities, and two portfolios of distributed solar facilities. All of these facilities are engaged in offtake agreements where most of the future production is guaranteed to a third party under a fixed price offtake agreement. The company also owns thermal

infrastructure assets that generate 1346 net MWt of steam and chilled water capacity alongside 123 net MW of electric generation. These thermal assets primarily service commercial, business, university, and governmental buildings under long-term contracts at rates regulated by the state utility commissions.

The company also has a Right of First Offering (ROFO) agreement with NRG Energy that guarantees them the first right to bid on assets under the agreement. NRG Energy has stated that additional acquisition opportunities will also arise that are not explicitly stated within the agreement. Below is a table of the ROFO assets covered by the agreement.

Stock Price Reactions



NRG Yield offered its shares at a price of $22/share in its IPO. Due to the fact that the offering was heavily oversubscribed, the price enjoyed a closing price of $27.25 on its first trading day representing a pop of approximately 24%. In its first full fourth quarter of 2013 on November 27,

2013, the stock closed at a price of $40.01 with a dividend of $0.23 per share. On an annualized basis, this represented a 2.3% yield not including any price appreciation achieved. The lowest price during the quarter was $30.07 which would have represented a 3.07% yield and if taken off the IPO price a 4.2% yield. In its latest quarter on February 26, 2015, the stock closed at $53.14 with a dividend of $0.39/share, representing a 2.93% annualized yield. The stock to date has generated returns of 81.5% based on its closing price on April 30, 2015 of $49.20 relative to its close on its first trading day of $27.25. As can be seen, the yield co has enjoyed significant performance signaling a confidence and interest in renewable financing from investors.

**For a complete dividend chart, refer to appendix*

Asset Acquisition/Sale

To see if value is created by asset sales/acquisitions, the prices of NYLD and its parent NRG will be examined under the event study format. Due to the small sample size, the results will not be significantly significant but still can offer insight as to how the market reacts to asset sales/acquisitions and whether value is created. The methodology and format will be the same for the following cases.

Daily stock prices were pulled for NYLD from its IPO to the current date. The same subset of dates was also pulled for the parent to see whether the parent benefited from an asset sale from its ROFO projects. It is important to note that many other factors can also affect the price especially for the parent so the results are more for illustrative purposes.

NYLD	*(* third party purchase)*			Return (Days relative to announcement)		
		Capacity Acquired	Ticker	-3 to -1	0	1 to 3
30-Jun-14	El Segundo	550 MW	NYLD	4.2%	1.4%	-1.5%
	TA High Desert	20 MW	NRG	0.9%	0.4%	-4.8%
	RE Kansas South	20 MW				
12-Aug-14	Alta Wind*	947 MW	NYLD	2.7%	1.7%	-0.3%
			NRG	-2.8%	-0.5%	-0.5%

From the June 30, 2014 transactions, it can be seen that NYLD enjoyed gains leading up to the announcement perhaps due to leakage. On the day of the announcement it also enjoyed a strong return. However, following the announcement most of the returns gained on the announcement date were given back. The parent company, NRG did not have much movement prior to and on the announcement date and suffered a rather large loss in the days following.

The Alta Wind transaction was purchased from a third party and not as a ROFO drop-down. A very similar effect occurred for NYLD as the aforementioned transaction. For NRG, losses were recorded throughout the announcement window. These losses may have nothing to do with the asset purchase and very easily could be caused by outside factors.

Hannon Armstrong Sustainable Infrastructure – HASI

Introduction

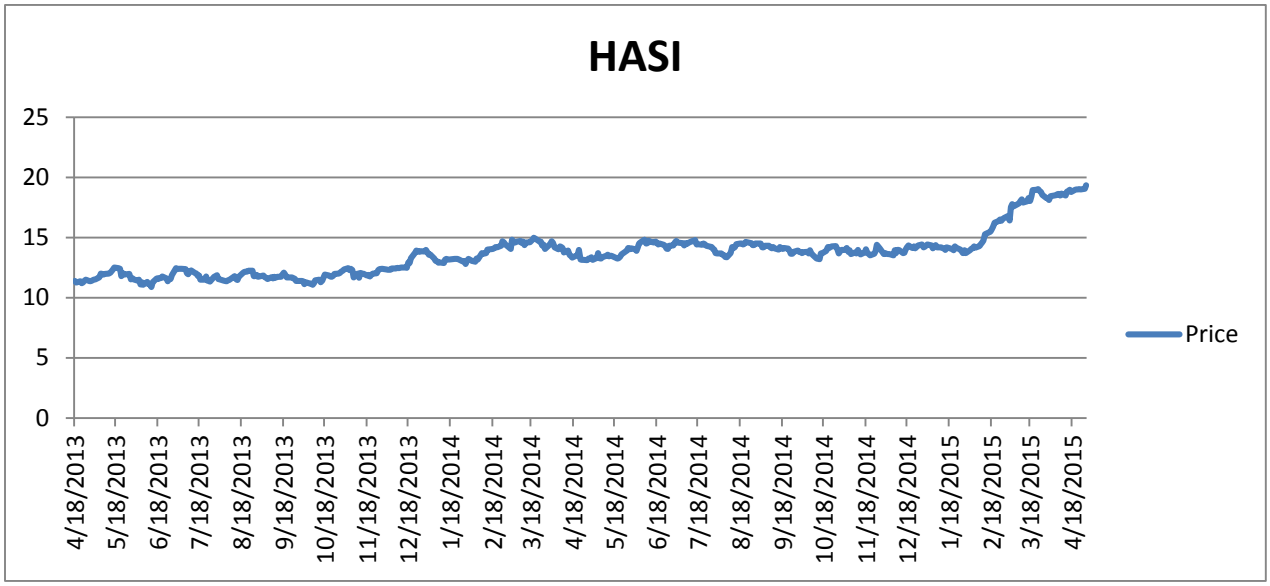
Hannon Armstrong has a much different business structure from the typical yield co. It completed its initial public offering in April 2013 raising approximately $160 million. Since then, it has completed two bolt-on offerings that resulted in an additional $70 and $59 million in April 2014 and October 2014, respectively. It is structured as a REIT that provides debt and equity financing for energy efficiency projects and the renewable market. The company manages a portfolio of approximately $2.5 billion of assets as of December 31, 2014 and has a pipeline of another $2 billion. Its investments consist of debt financings consist of receivables financing,

project loans, direct financing of leases, and debt securities. Its equity investments typically are made to tangible properties as well as other yield cos. On March 26, 2015 Hannon paid a $0.26 quarterly dividend which represents a $1.04 annualized dividend.

Asset Profile

Besides Hannon's debt financing operations, it also invests heavily in real estate. In May 2014, the company acquired AWCC for $107 million which gave them ownership of over 10,500 acres of land that are currently under long-term lease agreements with 20 solar projects. In October 2014, they invested $144 million to acquire non-controlling stakes in 10 operating wind farms. The company holds $900 million of transactions. Approximately 71% of the portfolio consists of loans, financing receivables, direct financing leases, and debt securities. Approximately 13% of the portfolio exists as real estate with long term leases and 16% represents ownership in wind projects. The company has the U.S. Federal, state, or local governments as obligors to 46% of its investments excluding equity investments.

Stock Price Reactions



HASI sold its shares in its IPO at a price of $12.50 per share. It closed down on its first trading day at $11.40 representing a loss of approximately 8%. On August 29, 2013, the company announced a dividend of $0.06/share at a price of $11.90 which represented an annualized yield of approximately 2% falling in line with NYLD. This dividend calculated off the initial offering price produces a yield of 1.92%. In its most recent quarter on March 26, 2015, HASI paid a $0.26 dividend at a closing price of $18.78 representing a yield of 5.5%. To date, the stock has generated returns of approximately 67% based on a closing price of $19.00 on April 30, 2015 and its closing price of $11.40 on its first trading session.

**For a complete dividend chart, refer to appendix*

Asset Acquisition/Sale

HASI	*(* third party purchase)*			**Return (Days relative to announcement)**		
		Capacity Acquired	Ticker	-3 to -1	0	1 to 3
28-May-14	American Wind Capital Company*	Member Interest	HASI	5.1%	1.4%	-1.3%

HASI does not have a direct sponsor as it is a REIT that makes its own investment decisions. However, it is still interesting to know how asset purchases or investments affect the company's performance. The American Wind Capital Company purchase gave HASI all of the outstanding member interests. The target is a corporation focused on the purchase of renewable energy real estate assets, power plant developments, and finance and construction of over 1000 MW of installed renewable capacity. Upon completing the acquisition, the stock enjoyed a positive return on its announcement date. There was a significant move up in the days leading up to the announcement date that could be a result of leakage. However, following the announcement, most of the gains achieved were given back.

Pattern Energy Group – PEGI

Introduction

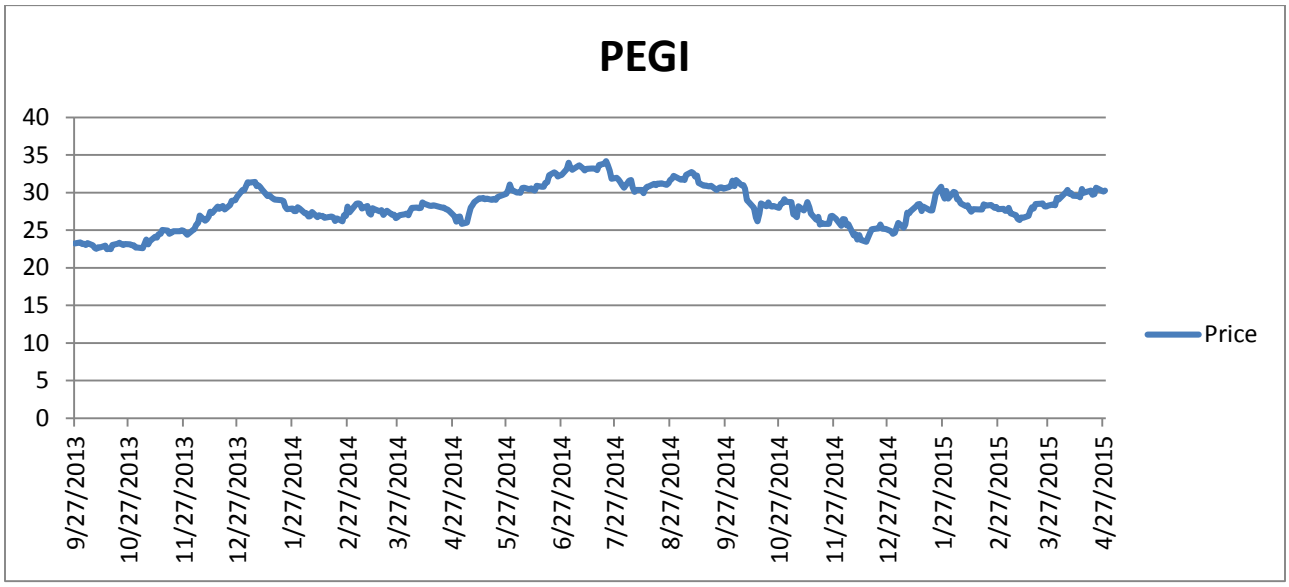
Pattern Energy Group is an independent power company that owns and operates twelve wind power projects across the United States, Canada, and Chile. The company completed its initial public offering on October 2, 2013 producing $232.6 million in net proceeds and $352 in gross proceeds at a price of $22.00/share. The assets have a combined capacity of 1,636 MW. The company will rely on Pattern Development for future asset drop-downs but is also open to purchasing from third party developers. The dividend policy pays out approximately 80% of the expected sustainable cash flow of the operations. Today the dividend sits at $0.342 per quarter or $1.368 on an annualized basis.

Interestingly, Pattern has a Management Services Agreement that states that when the company's market capitalization surpasses $2.5 billion and remains above it for a period of 20 consecutive trading days, the company will absorb a portion of Pattern Development's employees. Upon integration, the company will focus on owning operational and under-development construction power projects. The employees being absorbed will be from the administrative, technical, and other service providers that were originally provided by Pattern Development.

Asset Profile

Pattern's current asset profile consists entirely of wind power projects. Although there is not a stated focus on wind assets, the company's ROFO projects consist largely of wind assets. However, there are also solar projects within it so it can be seen that the company is willing to hold other renewable projects. The 104 MW Conejo Solar photovoltaic project in Chile was the first solar project to be added on September 2014, to the ROFO list.

Stock Price Reactions



PEGI closed on its first trading day at a price of $23.27 representing a slight increase of 5.7% from its IPO price of $22. On December 27, 2013, the company had a dividend of $0.313/share at a price of $29.48 representing a yield of 4.24% on an annualized basis. In relation to its IPO price, this would be a yield of 5.7%. In its most recent quarter, PEGI declared a dividend of $0.342 on March 27, 2015 at a price of $28.29 resulting in an annual yield of 4.83%. To date the stock has generated returns of 24.5% based on a closing price of $29.98 on April 30, 2015 and its close on its first trading day of $23.27.

**For a complete dividend chart, refer to appendix*

Terraform Power – TERP

Introduction

Terraform Power is a dividend growth-oriented company that was formed to own and operate clean power generation assets acquired from SunEdison, Inc. The company's primary

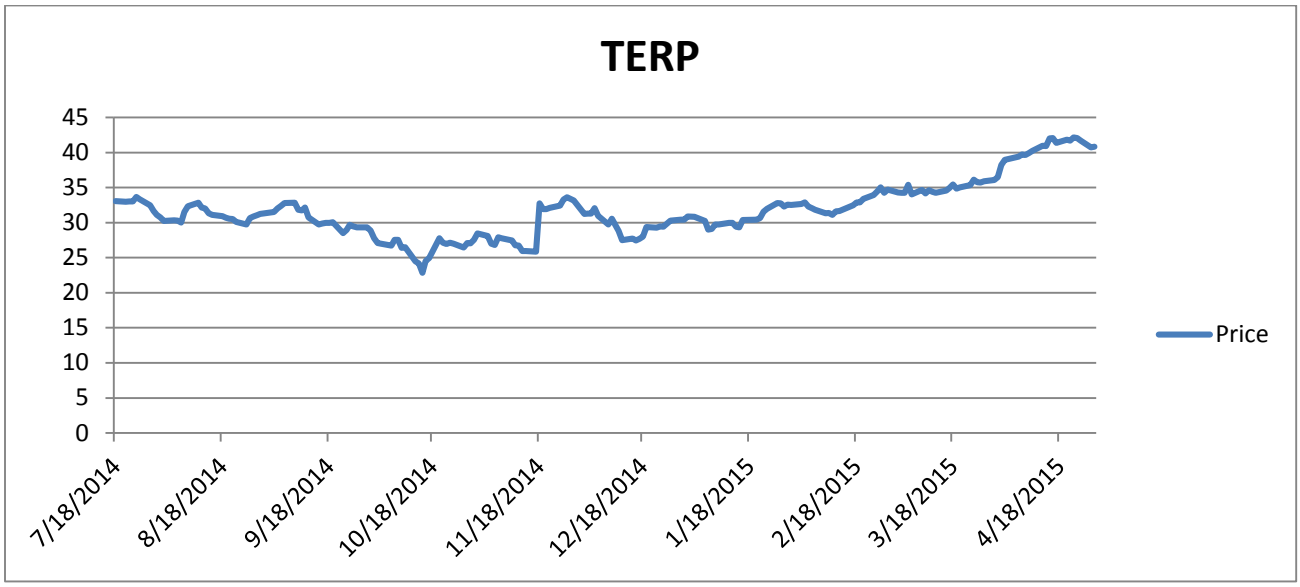
focus is on solar and wind power assets with the eventual inclusion of natural gas and hydro-electricity facilities. The current portfolio of assets are located in Chile, United States, Canada, and the United Kingdom with an aggregate capacity of 1507.3 MW of capacity as of February 20, 2015. Originally formed as SunEdison Yieldco, the name was changed to Terraform Power on May 22, 2014. The company completed its initial public offering of approximately $533.5 million at a share price of $25/share on July 23, 2014 as a holding company whose sole asset was an equity interest in Terraform Power LLC. Terraform Power LLC owns all the assets of Terraform Power Operating, LLC which serves as the primary manager of the operating assets of the company. The company also completed a follow on offering on January 22, 2015 and received additional net proceeds of $390.6 million. A portion of both offerings' proceeds was used to repurchase shares from SunEdison and to pay off outstanding debt on its term loan.

The company currently adheres to distributing 85% of its cash available for distribution as a dividend each quarter. Growth and acquisitions will be funded primarily by external financing including debt and equity issuances in addition to the revolver that they currently employ. In its latest fourth quarter, the company paid a $0.27 dividend or $1.08 annualized dividend on March 16, 2015. The company also employs incentive distribution rights that give SunEdison a right to the cash flows once certain distribution levels have been achieved. Currently, the company has a stated minimum distribution of $0.2257 per unit. As distributions rise above each threshold, the IDR holder (SunEdison) is entitled to an increasing share of the cash flows. Refer to the appendix for a more detailed explanation.

Asset Profile

The company's current portfolio of 1507.3 MW operates in 412 sites with an average remaining life of 16 years. The initial portfolio consisted of 807.6 MW of power and subsequently grew due to 6 follow on acquisitions. The company currently enjoys call rights on 3.4 GW of capacity from SunEdison as well as the right to other ROFO assets.

Stock Price Reactions



TERP had its shares priced at $25 on July 18, 2014. The stock closed at $33.09 on its first trading session representing a return of 32.3%. On November 26, 2014, TERP declared a $0.172 dividend on a share price of $33.64 representing a yield of 2.04%. If calculated based on its IPO price, the yield would be 2.75%. In its most recent quarter on February 26, 2015, the company declared a dividend of $0.27 on a price of $34.28 representing a yield increase to 3.15%. To date, the company has generated returns of 19.5% based on its closing price on April 30, 2015 of $39.53 and its closing price on its first trading session.

**For a complete dividend chart, refer to appendix*

Asset Acquisition/Sale

TERP	*(* third party purchase)*			**Return (Days relative to announcement)**		
		Capacity Acquired	Ticker	-3 to -1	0	1 to 3
4-Nov-14	Hudson Energy Solar *	25.3 MW	TERP	4.1%	-3.4%	4.2%
	Fairwinds	50 MW	SUNE	6.2%	-1.0%	-9.9%
	Crundale	Combined				
18-Dec-14	Capital Dynamics*	77.6 MW	TERP	-3.2%	-0.1%	4.5%
			SUNE	2.4%	-1.3%	-0.7%
29-Jan-15	First Wind	521.1 MW	TERP	0.6%	0.1%	1.5%
			SUNE	-2.0%	0.4%	7.6%

TERP operates as a subsidiary of SunEdison. In the past two years, five significant transactions occurred for asset transfers to the company. On the first announcement date, three projects were announced to be acquired by TERP. The Fairwinds and Crundale projects were directly taken from the call rights agreement that the company holds with SunEdison while the Hudson Energy Solar project was purchased from a third party. TERP had a strong lead up to the announcement date, fell on the announcement, and then recovered shortly after. SunEdison suffered a loss on the announcement date with an even sharper decline afterwards. The Capital Dynamics transaction showed TERP having a similar reaction, gaining traction post-announcement while SunEdison continued to fall. Interestingly, the First Wind acquisition which was a joint investment from TERP and SUNE resulted in a strong showing for both companies. The size of the portfolio may play a role in the more positive reaction from the market.

Nextera Energy Partners – NEP

Introduction

Nextera Energy Partners completed its initial public offering on July 1, 2014. It is a limited partnership formed in Delaware and an indirectly wholly-owned subsidiary of Nextera Energy (NEE). The company raised $438 million at a price of $25/share which was used to purchase additional shares in NEP OpCo, the operating subsidiary of the yieldco. Nextera primarily focuses on the U.S. and Canadian markets for contracted generation and will rely on NEE for future acquisitions to grow its cash flows. NEP currently owns a controlling interest in NEP OpCo and also has a 20.1% limited partnership interest. The remainder,79.9%, is owned by the parent company NEE as a noncontrolling interest. NEP paid a $0.195 dividend on February 13, 2015 representing a $0.78 dividend on an annualized basis.

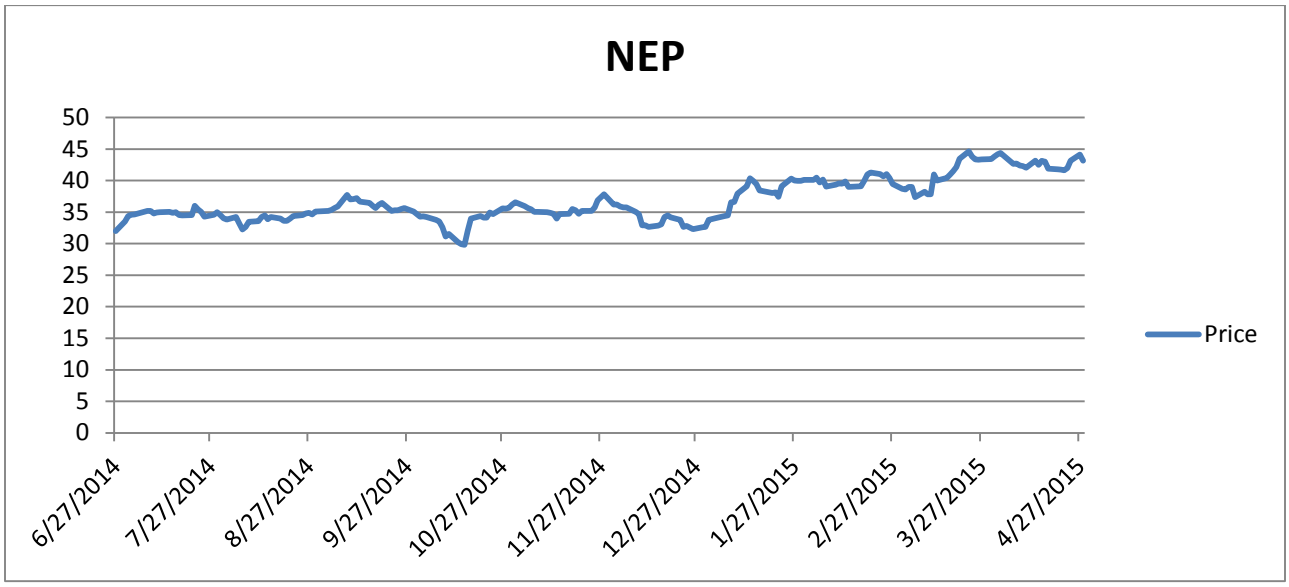
Asset Profile

NEP currently holds a mixture of wind and solar projects that total 989 MW of generation capacity. It has a pipeline of ROFO assets that consist entirely of wind and solar generation that totals 1,549 MW of generation.

Distribution Policy

NEP has incentive distribution rights (IDR) that return cash to the general partner as cash flows increase through certain cash flow targets. The current minimum distribution per quarter is $0.1875 which goes directly to shareholders. Following this, cash flows begin to flow to the general partners (NEE) at a proportionately higher level as distributions increase. For a more detailed look, please refer to the appendix.

Stock Price Reactions



NEP priced its shares at $25/share in its IPO on July 1, 2014. On its first trading day, the stock jumped to $32 representing a return of 28% in its first session. On November 3, 2014, the company paid its first dividend of $0.188/share at a price of $35.94 representing a yield of 2.1% on an annualized basis. If calculated from its IPO price, the yield would be 3%. In its latest dividend on February 2, 2015, the company declared a $0.195/share dividend at a price of $40.09 representing a yield of 1.94%, a slight decrease from the previous quarter. To date, the stock has generated returns of 32.4% based on its closing price of $42.37 on April 30, 2015 and its close on its first trading day.

**For a complete dividend chart, refer to appendix*

Asset Acquisition/Sale

NEP	*(* third party purchase)*			Return (Days relative to announcement)		
		Capacity Acquired	Ticker	-3 to -1	0	1 to 3
31-Oct-14	Shafter Solar Acquisition announcement	20 MW	NEP	1.2%	0.2%	-4.7%
			NEE	1.5%	-0.3%	4.5%
9-Jan-15	Palo Duro*	250 MW	NEP	6.1%	2.0%	5.0%
			NEE	1.6%	-1.0%	0.9%

NEP seemed to suffer polar reactions to each of the transactions listed above. The Shafter Solar Acquisition was not a completed transaction as it is to be completed in the second quarter of this year. Rather, it was an additional ROFO project that was added to the pipeline. The announcement still moved the price, ultimately pushing it down approximately 5% post-announcement. Nextera Energy (NEE) seemed to benefit from the announcement of an additional project being added to their pipeline for future sale. In the Palo Duro third party transaction, NEP saw significant gains showing strong market support of the purchase. NEE did not respond significantly which may be in large part due to the lack of a relationship to the project.

Abengoa Yield - ABY

Introduction

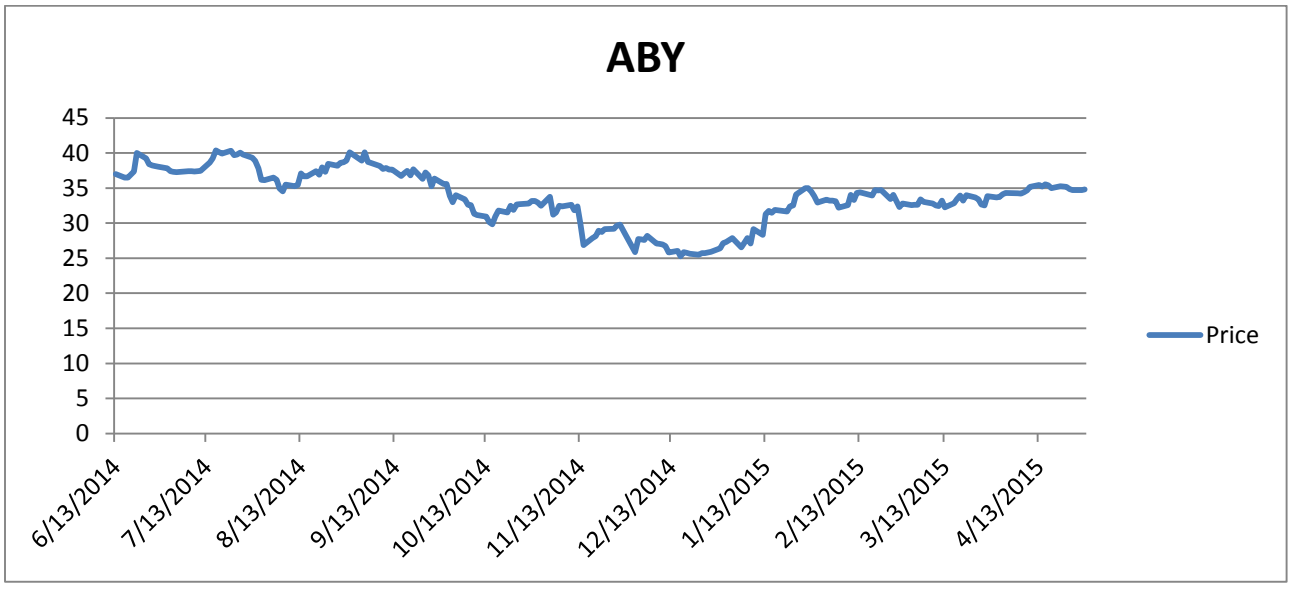
Abengoa Yield completed its initial public offering on June 12, 2014 and received gross proceeds of approximately $720 million at a price of $29/share. Its parent company, Abengoa, provided the company with its portfolio through an asset transfer prior to its IPO. The portfolio consisted of 710 MW of renewable generation, 300 MW of conventional generation, and 1,018 miles of electric transmission lines The company currently operates in the United States, Mexico, Peru, Chile, Uruguay, Brazil, and Spain with a minor presence in Africa. On January 22, 2015, the company completed a follow on offering for approximately $328 million. With this follow on

offering, Abengoa's ownership in ABY was reduced from 64.3% to 51.1%. The company paid a dividend of $0.2592 per share or $1.04 on an annualized basis on March 16, 2015 and will attempt to adhere to a 90% payout ratio of CAFD less reserves.

Asset Profile

In addition to the initial portfolio transferred by Abengoa, the company has completed two successful drop-down transactions from the ROFO pipeline that they have in place with Abengoa. The first drop-down occurred in September 2014 for 131 MW of solar generation and 50 MW of wind power generation. In February 2015, the company acquired another 200 MW of solar power generation along with 10.5 M ft3 per day of water desalination and an 81-mile transmission line which cost the company $142 million, which was financed by balance sheet cash and their line of credit.

Stock Price Reactions



ABY's IPO priced its shares at $29/share on June 12, 2014. It closed at $37 in its first trading day representing a return of 27.6%. In its latest quarter on February 25, 2015, the company announced a dividend of $0.259/share at a price of $33.10 representing a yield of 3.13%. Based on its first trading session closing price this represents a yield of 3.6%. To date, the stock has traded relatively sideways only generating total returns of -8.35% based on its April 30, 2015 closing price of $33.91 and its close on its first trading session.

**For a complete dividend chart, refer to appendix*

Asset Acquisition/Sale

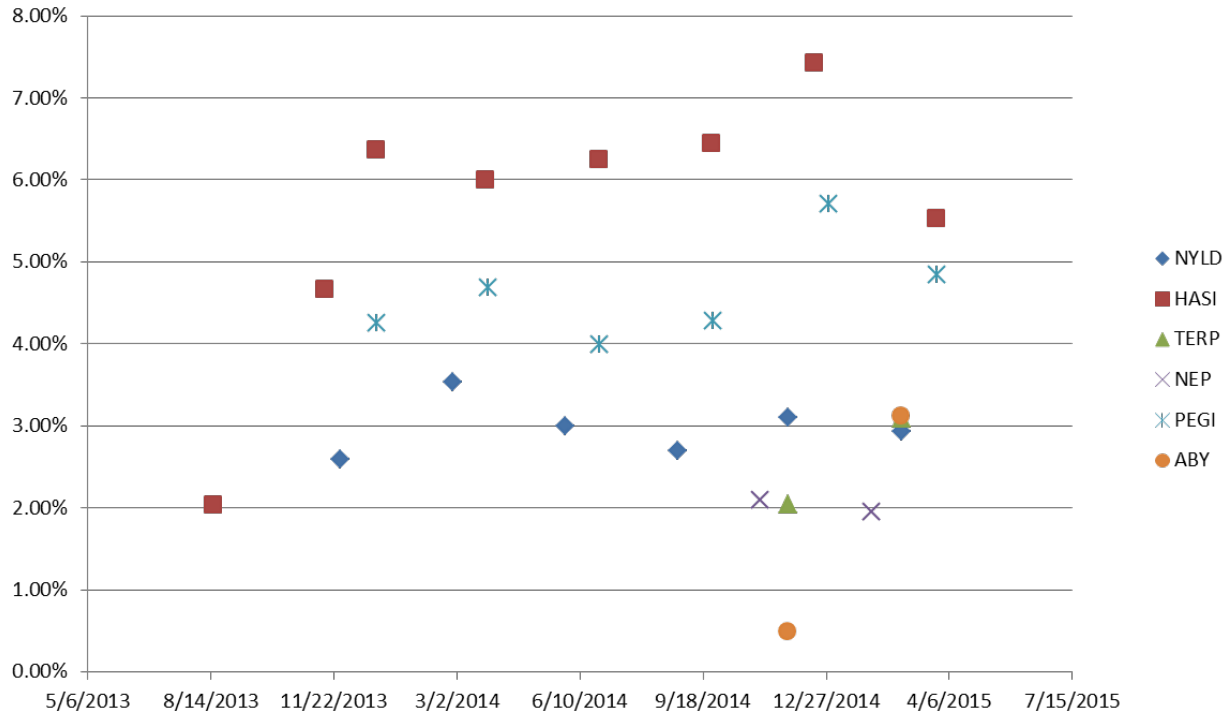
ABY	*(* third party purchase)*			**Return (Days relative to announcement)**		
		Capacity Acquired	Ticker	-3 to -1	0	1 to 3
22-Sep-14	ROFO Assets First Dropdown	131 MW solar,	ABY	1.9%	-2.7%	-2.7%
		50 MW wind	ABGB	-3.2%	-2.3%	-3.4%
3-Feb-15	ROFO Assets Second Dropdown	200 MW solar	ABY	-3.7%	-1.5%	-2.7%
			ABGB	2.1%	0.7%	-0.1%

ABY is the ideal candidate as its only transactions were both sourced from the ROFO project list. ABY reacted negatively to the asset purchases in both cases perhaps due to a lack of liquidity after the purchases were made. Abengoa (ABGB) surprisingly also suffered in the first drop down and had lack luster results in the second. This could be attributable to declining oil prices and the subsequent negative impact to their conventional generation business.

Yield Convergence of Yield Cos

From what we have seen, many of the yield cos hold very similar assets in their portfolios or otherwise will soon hold them upon achieving transactions from their ROFO agreements. It would be expected that the yield cos would have a relatively similar range of yield offerings due

to their purpose as yield vehicles that provide a better yield than risk-free returns. Below is a yield plot that shows each dividend release along with its subsequent yield at that time:



As can be seen, very little convergence has occurred within the small sample provided. The market may not have matured enough to fully price in each respective yield co's difference in yield. Another reason could simply be the lack of competition in the market which would otherwise cause the lower yielding stocks to be sold and the higher yielding ones to be bought. By doing so, the relative yields would converge. With time and increased volume in trades and the number of yield cos in the sample, a convergence of the yields would be expected. As for now, it seems that the yield cos trade in a very large band.

Conclusion

The yield co market offers many exciting opportunities for the renewable energy space to grow. As can be seen by the strong performance exhibited by all the United States listed yield

cos, there is a strong trend towards increased renewable financing as renewable prices edge closer to grid parity. In addition, cheapening costs for development and RPS programs will provide a strong push for further development. Despite regulatory changes to go into effect in 2017 with regard to the reduction in ITC's, renewable energy still has many regulatory incentives that encourage the continued development of our renewable capacity. There does not seem to be much convergence in the yields currently offered by the existing yield cos discussed; however that may change as the industry and the product matures and gains traction. Additionally, there does not seem to be a uniform reaction to ROFO or third-party related asset sales/acquisitions. As the yield corporation is still a nascent product for investors, time will be the best indicator of market sentiment and increased investment. As the renewable space continues to expand, it is not unlikely that yield cos will continue to expand in number and in size as one of the leading drivers for clean energy supply.

Bibliography

NYLD S-1 Prospectus

NYLD 10-K FY 2014

ABY F-1 Prospectus

ABY 20-F FY 2015

PEGI S-1 Prospectus

PEGI 10-K FY 2014

TERP S-1 Prospectus

TERP 10-K FY 2014

NEP S-1 Prospectus

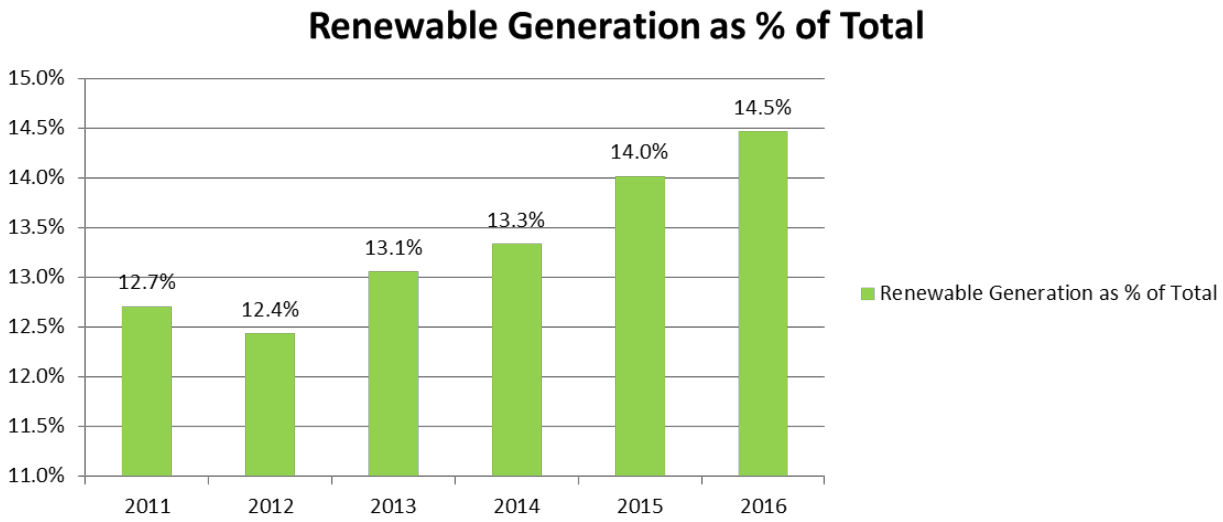
NEP 10-K FY 2014

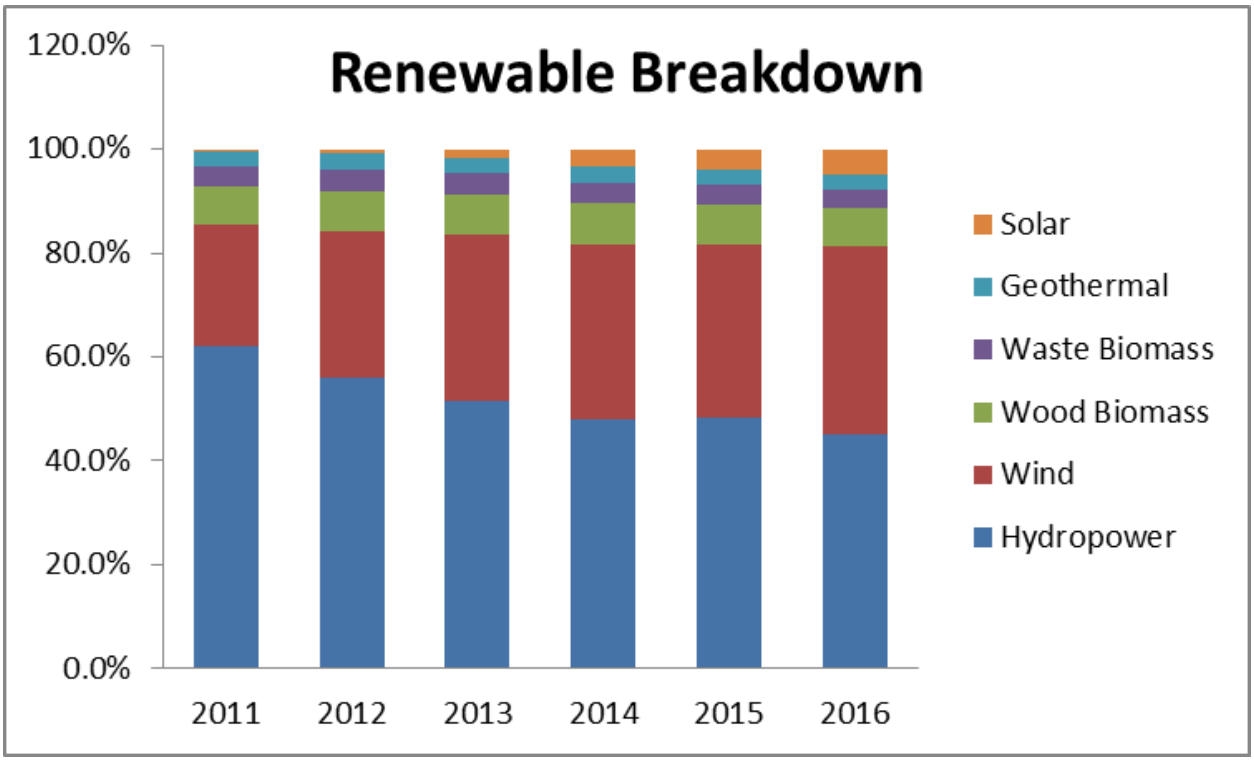
HASI S-1 Prospectus

HASI` 10-K FY 2014

Appendix

A.


Renewable Generation as % of Total
15.0%
14.5%
14.0%
13.5%
13.0%
12.5%
12.0%
11.5%
11.0%
12.7%
12.4%
13.1%
13.3%
14.0%
14.5%
2011
2012
2013
2014
2015
2016
Renewable Generation as % of Total


Renewable Breakdown
120.0%
100.0%
80.0%
60.0%
40.0%
20.0%
0.0%
2011
2012
2013
2014
2015
2016
Solar
Geothermal
Waste Biomass
Wood Biomass
Wind
Hydropower

B.

Yield Chart										
Date	**8/16/2013**	**11/14/2013**	**11/27/2013**	**12/26/2013**	**12/27/2013**	**2/27/2014**	**3/25/2014**	**3/27/2014**	**5/29/2014**	**6/25/2014**	**6/26/2014**
NYLD											
Price			$ 35.49			$ 37.42			$ 46.75		
Dividend			$ 0.230			$ 0.330			$ 0.350		
Yield (annualized)			***2.59%***			***3.53%***			***2.99%***		
HASI											
Price	$ 11.73	$ 11.98		$ 13.80			$ 14.66			$ 14.07	
Dividend	$ 0.060	$ 0.140		$ 0.220			$ 0.220			$ 0.220	
Yield (annualized)	***2.05%***	***4.67%***		***6.38%***			***6.00%***			***6.25%***	
TERP											
Price											
Dividend											
Yield (annualized)											
NEP											
Price											
Dividend											
Yield (annualized)											
PEGI											
Price					$ 29.48			$ 26.74			$ 32.28
Dividend					$ 0.313			$ 0.313			$ 0.322
Yield (annualized)					***4.25%***			***4.68%***			***3.99%***
ABY											
Price											
Dividend											
Yield (annualized)											

8/28/2014	9/24/2014	9/26/2014	11/3/2014	11/25/2014	11/26/2014	12/17/2014	12/29/2014	2/2/2015	2/25/2015	2/26/2015	3/26/2015	3/27/2015
$ 54.03					$ 48.29					$ 53.14		
$ 0.365					$ 0.375					$ 0.390		
2.70%					***3.11%***					***2.94%***		
	$ 13.64					$ 14.00					$ 18.78	
	$ 0.220					$ 0.260					$ 0.260	
	6.45%					***7.43%***					***5.54%***	
					$ 33.64					$ 35.02		
					$ 0.172					$ 0.270		
					2.05%					***3.08%***		
			$ 35.94					$ 40.09				
			$ 0.188					$ 0.195				
			2.09%					***1.95%***				
		$ 30.68					$ 24.88					$ 28.29
		$ 0.328					$ 0.355					$ 0.342
		4.28%					***5.71%***					***4.84%***
				$ 29.66					$ 33.10			
				$ 0.037					$ 0.259			
				0.50%					***3.13%***			