

EGA Renewables Infrastructure

From the EGA Portfolio Management Team

Your Grandkid's IRA

It has been a few months since President Biden signed the Inflation Reduction Act (IRA) into law and since we published our initial review (<https://www.eagleglobal.com/renewables-infrastructure-quick-note-august-2022/>). With additional time to reflect, we have identified some weaknesses, however it remains an overwhelming positive for Renewables Infrastructure. Last quarter we referenced a Pew Research survey that showed a significant majority of the country favored prioritizing alternative energy like solar and wind. (<https://www.eagleglobal.com/renewables-infrastructure-commentary/>). The IRA delivers on those priorities, providing a framework and economic incentives to drive carbon emissions lower. Hopefully in the decades ahead our grandkids will credit the IRA for delivering a cleaner tomorrow like grandparents credit the other kind of IRA for delivering financial security today.



Re-Evaluating The Winners And Weaknesses Of The IRA

The following is by no means a comprehensive list of what we believe are the winners and weaknesses of the IRA, and is based on our better understanding of the bill itself as well as the many conversations we've had with industry experts, management teams, and others. To summarize, we believe the following are the big winners:

- Large, diversified companies
- Utility-scale solar
- Offshore wind
- Energy storage
- Nuclear

Meanwhile, we consider the following weaknesses that will need to be overcome:

- Regulatory/Permitting roadblocks
- Supply chain growing pains
- Inflation
- Grid reliability and affordability

Large, diversified companies. Our expectation from the IRA is that this big bill is meant to move the needle in a big way by delivering big projects, which implies the largest, most diversified companies are in prime position to benefit. If true, then size and cash flow diversification matter. Lenders will lend capital to a large company at lower rates than a smaller company, which means the biggest and most lucrative projects that deliver massive economies of scale are open to few players. We highlight companies like Nextera, ENEL, and Iberdrola as the best set up for this, but also believe smaller companies that are creative and smart can also be huge IRA beneficiaries. Energy transition and the IRA are generational events that have the capacity to mint new behemoths. In other words, while the Nextera's of today are in pole position, it will be a footrace over the next several decades as to who is the big winner. Stock selection is critical. It's entirely possible the next trillion dollar company will get there by way of Renewables Infrastructure.

Utility-scale solar. The addition of production tax credits (PTCs) provides the sector with additional flexibility that wasn't there before. Previously, solar developers could only use investment tax credits (ITC) where tax benefits were realized upfront during the construction build. It is our view that large developers in general prefer the PTC, and therefore expect utility-scale solar projects will move forward with the PTC that wouldn't have done so with the ITC. We believe rooftop solar benefits, but not as much as utility-scale solar. Big solar is a big winner.



Offshore wind. Offshore wind is much more expensive than onshore wind for a variety of reasons mostly related to engineering and installation complexity. The IRA extended the sunset of renewable tax credits, which gives time and provides visibility to offshore wind developers. These projects take multiple years and multiple billions to finance and build, and without this visibility offshore wind developers simply don't move forward with projects. It's worth noting that while more expensive than onshore wind, the wind blows more consistently offshore and to the extent it's pushed over the horizon limits local opposition. Big wind, along with big solar and big companies, is a winner.



Energy storage. Next to the big benefits of being big, tax credits for stand-alone energy storage is a really big deal. One of the biggest weaknesses of the energy transition is grid reliability (see more below). Previously, energy storage could take advantage of tax credits only if it was tied to a renewable energy facility. However, energy storage is most efficiently located in demand centers (e.g., cities) themselves and at supply junctions, not tied to a specific facility. Allowing energy storage to be built independently of anything else encourages the development of this necessary infrastructure in the areas that make the most sense. Combined with economies of scale it will be easier for developers to make these projects economic, all thanks to the IRA separating energy storage into its own independent class. Furthermore, competition among energy storage providers is intense and wide-ranging (e.g., lithium-ion, pumped storage, kinetic, iron-oxide, etc.), which combined with the IRA should push the technology to advance more quickly.



Nuclear. Adjustments to the tax code allow new production tax credits for existing nuclear power plants. Acceptance of nuclear energy ebbs and flows with rare but highly publicized nuclear accidents. The ongoing energy crisis has many believing once again in the benefits of nuclear power, which we believe is critical to grid reliability as society weans itself off fossil fuels. This means that nuclear power plants scheduled for de-commissioning could stay open for many more decades and opens the door for potential newbuild plants. The way we think about nuclear power may change over time, but to the extent these plants can deliver a steady stream of carbon free energy and cash flow that can be used to finance other forms of clean energy is welcome.



We were careful to label the next section “weaknesses” and not “losers”, because we believe “weaknesses” are just in need of a solution. Some will take time and others will require legislative action, but all can be solved.

Regulatory/Permitting roadblocks. “Hold your horses!” While a large majority of the population supports renewable energy development, that doesn’t mean they want it in their backyard. In fact, there is a large and growing contingent of the population that is pushing back against renewable energy. Onshore wind farms make noise and can produce “flicker” that irritate neighbors. Solar fields can take valuable land out of operation, and both solar and wind are considered an eyesore by many. There will be litigation and delays on almost every project, and as we’ve seen in other areas of energy infrastructure the delays can last years, drive up costs, and lower returns. As part of securing passage of the IRA, West Virginia Senator Joe Manchin was allowed to attach a permitting reform bill that would make it easier to construct infrastructure. However, the bill was removed from the continuing resolution at the end of September, though we believe there is bipartisan support for regulatory/permitting reform and see a higher probability of passage after the midterm elections. *This reform is not necessary to the IRA’s success, but passing it will greatly facilitate it.*

Supply chain growing pains. The world is still feeling the effects of the pandemic, and geopolitics is making global trade more unreliable. Add on top of this that the IRA turbocharges demand for renewables related goods – especially raw materials – and you’re left with significant uncertainty on not only where developers will procure their components but the price they will have to pay for them. Let’s use lithium-ion batteries as an example. Electric vehicles and other storage devices are flying off the shelves, but lithium isn’t the easiest mineral to get. As a result, the price of lithium has gone through the roof, and there doesn’t seem to be a near-term solution for closing the supply-demand gap outside of a recession. Once again the solution will be time. The market will solve this issue by opening up more mines, or in the case of other goods more factories to manufacture components. This may slow the impact of the IRA in the early years.

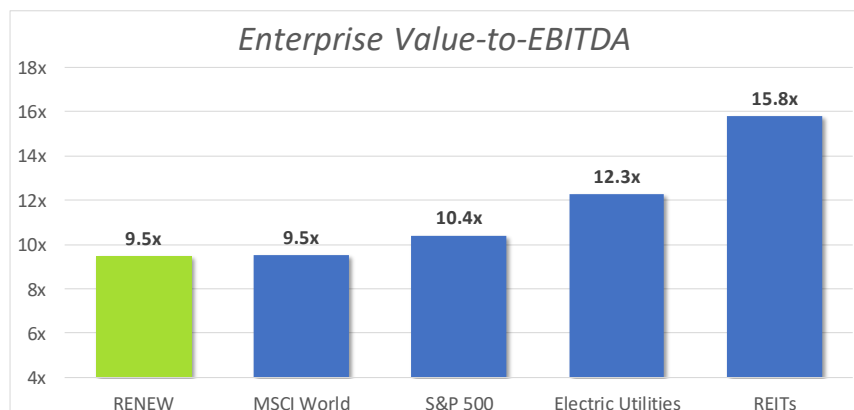
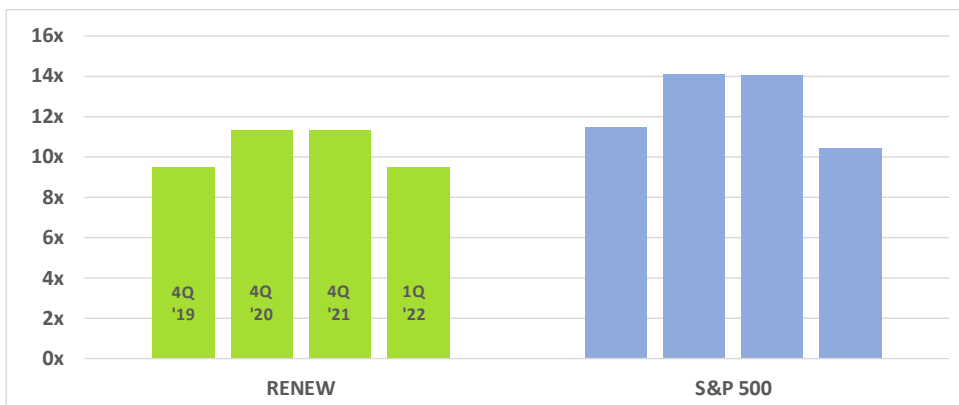
Inflation. Prices for everything have jumped, and the antidote for inflation seems to be higher interest rates. More demand centric than supply chain issues, inflation is already weighing on energy consumers used to getting what they want at a reasonable price. The problem here is that without observable differences in carbon reduction the public may turn sour on the IRA if it first leads to a high financial burden. The benefits of the IRA may be more than five years out, while the costs may be more immediate. Unlike supply chain issues that can be managed to some extent, we're not sure there is a painless solution. The good news is this issue is across the board and not specifically related to renewable energy.

Grid reliability and affordability. Finally, grid reliability and affordability are critical over the next several years. There is widespread expectation that energy prices are going and staying higher, and also a higher probability that grids will have to be managed via rolling blackouts (not just in California!). For this problem there is a solution, though rational energy policy that balances the benefits of fossil fuels (reliability) with the future (renewable energy) has eluded society for a long time. Coming full circle, we believe permitting/regulatory reform is critical. Making it easier to construct energy infrastructure could help solve reliability and affordability issues until renewable energy technology is ready to complete the energy transition.

Going forward, we expect the IRA will need to be tweaked over time as it becomes more operational. Looked at holistically though it gives a tremendous boost to energy transition, and we believe the biggest winner will be Renewables Infrastructure.

Recession Fears Weigh On Renewables And The Broader Market

Following the passage of the IRA and the long-term tailwind that comes with it we believe the RENEW Index should trade at parity or a premium to the broader market given its connection to the energy transition. Despite this, the EV/EBITDA of the Eagle Global Renewables Infrastructure Index (Bloomberg ticker: RENEW; Factset ticker: RENEW-INDEX) trades at an 8.6% discount to the S&P 500. Furthermore, the RENEW Index trades at a material discount to other income-oriented, value-focused investment opportunities, like Electric Utilities and REITs. We believe the IRA and project execution will not only close these gaps but drive the sector to premium valuations that account for its tremendous growth potential.



Source: Bloomberg

Renewables Infrastructure Team Update

There were no significant team related news items to highlight this quarter. We continue to focus on the research and portfolio execution effort as well as our indexing initiative and are in constant dialogue with industry experts and management teams, both domestically and in Europe. We see the energy transition or de-carbonization megatrend continuing to gain traction among investors, supporting our view societal and political support are making Renewables Infrastructure increasingly inelastic to market forces.

We look forward to communicating the results of your investment next quarter and thank you for your continued patronage and confidence in Eagle Global Advisors.

- The Eagle Renewables Infrastructure Team

Disclosures

The indices shown are for informational purposes only and are not reflective of any investment. They are unmanaged and shown for illustrative purposes only. The volatility of the indices are likely materially different than the strategy depicted. Eagle Global's Renewables Infrastructure Strategy includes buying and selling various renewables infrastructure companies. Holdings will vary from period to period and renewables infrastructure companies can have a material impact on the performance.

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EGA Renewables Income Composite

October 1, 2017 through June 30, 2022

	2Q22	1Q22	2021	2020	2019	2018	2017
Total Return (%) Gross	(10.95)	(0.95)	2.01	55.79	33.87	(7.63)	4.96
Total Return (%) Net	(11.12)	(1.13)	1.25	54.67	32.89	(8.32)	4.76
Eagle Renewables Infrastructure Benchmark Total Return (%)*	(11.36)	(1.50)	(3.60)	35.50	33.06	0.08	0.65
Composite 3 Year Std. Dev.	21.24	20.21	19.67	18.95	N/A	N/A	N/A
Benchmark 3 Year Std. Dev.	19.23	18.36	18.12	16.88	N/A	N/A	N/A
Number of Portfolios	9	9	7	<6	<6	<6	<6
Composite Dispersion (%)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Composite Assets at End of Period (US\$ 000)	3,322	3,747	3,541	1,340	862	646	702
Total Firm Assets (US\$ 000)	1,616,669	1,925,262	1,911,969	1,571,232	2,279,115	2,632,277	3,561,407

* Benchmark: Eagle Renewables Infrastructure

EGA Renewables Income Composite - The EGA Renewables Income composite consists of those equity-only portfolios invested in a concentrated portfolio of renewable infrastructure companies.

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- The composite start date is October 1, 2017 and was created in 2020. The composite consists of separate accounts where the firm has full investment discretion, the portfolio contains over \$100,000 in renewable infrastructure companies, and the portfolio properly represented the intended strategy at the end of the calendar quarter. All performance returns assume the reinvestment of dividends, interest, and capital gains.
- The benchmark is the Renewables Infrastructure Index and is designed to track the performance of renewable infrastructure or renewable-related infrastructure assets, primarily wind, solar, hydro, biomass and electric transmission lines. Constituents are companies whose stocks trade globally in OECD countries. The index is a capped, float-adjusted, capitalization-weighted index developed by Eagle Global Advisors and disseminated real-time on a price-return basis (RENEW) and on a total-return basis (RENEWTR).
- The indices shown are for informational purposes only and are not reflective of any investment. As it is not possible to invest in the indices, the data shown does not reflect or compare features of an actual investment, such as its objectives, costs and expenses, liquidity, safety, guarantees or insurance, fluctuation of principal or return, or tax features. Indices do not include fees or operating expenses and are not available for actual investment. Indices presented are representative of various broad based asset classes. They are unmanaged and shown for illustrative purposes only. The volatility of the indices is likely materially different than the strategy depicted. Eagle Global's Renewables Infrastructure strategy include buying and selling various renewables infrastructure companies. Holdings will vary from period to period and non-renewables companies can have a material impact on the performance.
- The Eagle list of composite descriptions is available upon request. Eagle policies for valuing portfolios, calculating performance and preparing compliant presentations are available upon request.

Renewables Income Fee Schedule (minimum annual fee: \$2,500)			
Account Size	Under \$5 million	\$5 to 25 million	Over \$25 million
Annual Fee	0.95%	0.85%	0.75%