



Tipping Point: Global Renewable Energy Leaders Outperform on Global Equity Markets

Meanwhile Fossil Fuel Stalwarts Lag Substantially in 2019

The world could well look back on 2019 as the tipping point when global capital markets accepted the technology-driven inevitability and grid parity cross-over from polluting thermal coal and the increased uptake of sustainable clean renewable energy.

The largest listed fossil fuel companies still toying with thermal coal and coking coal, and even oil and gas, have been massively down-rated, and shareholder wealth destruction has been staggering, in absolute terms and relative to the overall market rise.

At the same time, more light has been shining on renewable energy, the world's largest listed renewable energy asset owners/investors outperforming the equity market, those best looking to embrace the opportunities in the current technology-led disruption of the global electricity sector.

The International Energy Agency says unabated coal use must cease in the OECD by 2030 and globally by 2050 for the Paris Agreement to be met.

With [global capital fleeing thermal coal](#) and coal-fired power generation – the largest, most dirty, most emissions intensive sector, IEEFA suggests financial markets are not waiting to see if Paris targets might be met.

Indeed, signs suggest 2019/20 is a tipping point for thermal coal in [global capital markets](#).

In this note, IEEFA examines the performance of eight of the world's largest listed, private renewable energy asset owners/investors committed to a progressive/aggressive decarbonisation strategy (see Figure 1).

While not exhaustive, IEEFA includes NextEra Energy of the U.S., Brookfield Energy Partners of Canada, ENEL of Italy, ENGIE of France, Iberdrola of Spain, EDP Renovaveis SA (EDPR) of Portugal, Orsted of Denmark and, (unusually), Macquarie Group of Australia.¹

¹ Macquarie Group is an investor/asset manager, not an owner/operator like the other seven. We include Macquarie given its [plans](#) to be one of the top three investors in the world over the next five years.

These companies have each articulated medium-term strategy plans that involve adding an average 2.7 gigawatts (GW) of renewable energy annually to their existing infrastructure portfolios. With the exception of Macquarie Group and Orsted, each firm is already amongst the world's largest private renewable energy asset owners,² and has demonstrated a long-term track record of delivery against targets and leadership in decarbonisation.

ENGIE, Iberdrola, ENEL, Orsted and NextEra all had their genesis in thermal and/or nuclear energy.

Yet these leading global utilities have illustrated a rapid rate of electricity sector decarbonisation can be achieved if the right ambition is directed from the top.

Figure 1: Eight Leading Listed Renewable Energy Firms

<u>Top listed global private investors in RE - 2019</u>						
	Home market	Total portfolio	Existing RE portfolio GW	RE share of total capacity	Additions of RE GW pa	Medium term strategy
Brookfield Renewables	Canada	19.9	19.9	100% ¹	1.0	To deploy ~6GW over the next 5-7 years
EDP Renovaveis SA	Portugal	11.8	11.8	100% ²	1.8	7 GW over 2019-2022, €2.9bn pa
ENEL	Italy	82.0	46.0	56%	4.7	Total capex of €28.7bn over 2020-2022, 14GW of RE
ENGIE	France	70.4	26.0	37% ³	3.0	Total capex of €21bn over 2019-2021, 9GW of RE
Iberdrola	Spain	50.1	30.9	62% ⁴	2.3	Total capex of €34bn over 2018-2022, 9GW of RE
Macquarie Group	Australia	n.a.	9.0	n.a.	4.0	20GW over 2019-2024
NextEra Energy	U.S.	50.3	18.4	37% ⁵	3.8	Total capex of US\$23-25bn over 2019-2022, 12-18GW of RE
Orsted	Denmark	8.5	8.5	100%	1.4	Total capex of DKK200bn/US\$30bn over 2019-2025, 8GW of RE
<u>Average annual install targeted</u>					<u>2.7</u>	

Source: Company Reports, IEEFA Calculations

Notes

1. Includes 7.9GW of hydro and 2.7GW of storage
2. EDP owns 83% of the listed EDPR
3. This is ENGIE's equity share of electricity capacity, 12GW is hydro & 3.4GW is PHS
4. This includes Avangrid US (Iberdrola owns 82% of the shares)
This includes Iberdrola's 12.4GW of hydro (equity share) and 3GW of PHS
5. This includes 62% of NextEra Energy Partners 5.3GW RE portfolio

Case Study One: ENGIE

At the start of this decade, ENGIE (then known as GDP Suez) was wedded to a fossil fuel strategy, acquiring International Power in 2012 in a move massively expanding its thermal coal power portfolio.

Since then, most has been progressively closed or sold off, such as the unexpected and rushed closure of the Hazelwood 1.6GW lignite power plant in Victoria, Australia in March 2017. To date, ENGIE's thermal coal capacity is down to 5.3GW (equity share), a fraction of the 26GW of renewable energy ENGIE has built.

² China General Nuclear Power and China Longyuan Power are also in the top 10 owners globally, but we have excluded state owned enterprises from this review.

ENGIE’s change of heart came in 2015 when they announced a new strategy of “Turning Away From Coal”, updated in 2018 to “Major Green Energy Provider”, and followed by targeting “Zero-Carbon Solutions Leader” by 2021.

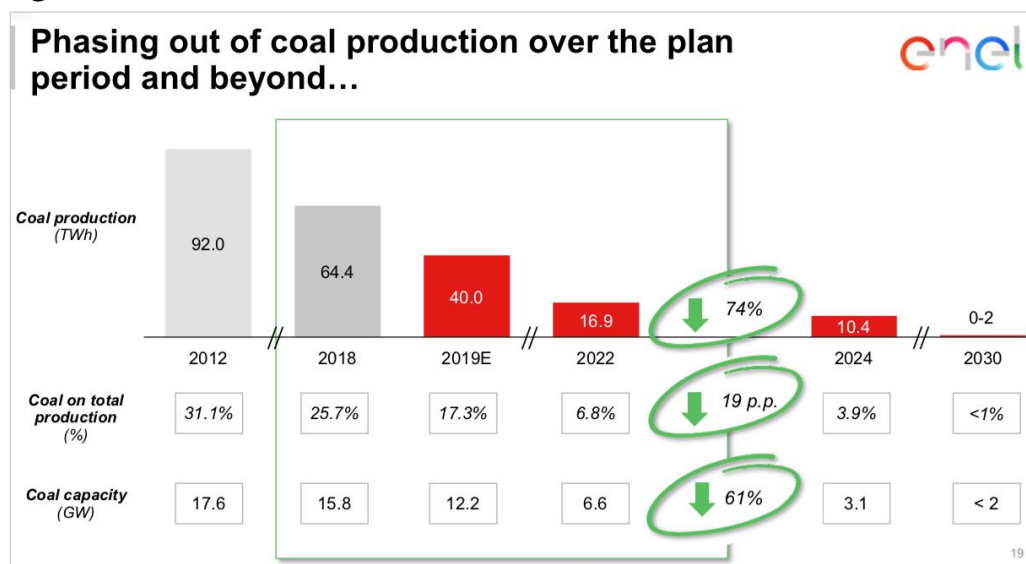
While ENGIE’s remaining thermal power exposure has been a massive drag on shareholder returns for the last five years, its more recent performance in renewable energy (year-to-date (YTD) 2019) suggests this is gradually being overcome.

Case Study Two: ENEL

ENEL has achieved an unprecedented rate of decarbonisation since 2012 (Figure 2), when coal-fired power generation was 31.1% of ENEL’s total. Just seven years later, this has been almost halved to 17.3% in 2019. Just seven years later, this has been almost halved to 17.3% in 2019.

ENEL targets a 74% reduction in coal-fired power generation in the decade to 2022 and further, targets being virtually coal-free by 2030.

Figure 2: ENEL Decarbonisation



Source: ENEL Capital Markets Day.

Share Price Performance of European Renewable Energy Leaders

European renewable energy leaders are ahead of the curve (see Figure 3).

Four companies including EDPR (+29%, red), Orsted (+45%, purple), ENEL (+32%, green) and Iberdrola (+24%, pink) have all outperformed the European market (+21%, the STOXX, blue). ENGIE (+15%, black) has done reasonably in absolute terms, but underperformed the STOXX by 6% YTD.

Figure 3: Share Price Performance of European Renewable Energy Leaders (Year to Date 2019)



In terms of the share price performance of European renewable energy leaders for the previous five years to 2019 (see figure 4), EDPR (+90%, red), Orsted (+217%, purple), ENEL (+86%, green) and Iberdrola (+90%, pink) have all massively outperformed the European market (+22%, the STOXX, blue).

ENGIE's (-24%, black) results really illustrate the enormous shareholder wealth destruction which resulted from its acquisition of International Power in 2012.

Figure 4: Share Price Performance of European Renewable Energy Leaders, Five Years to 2019



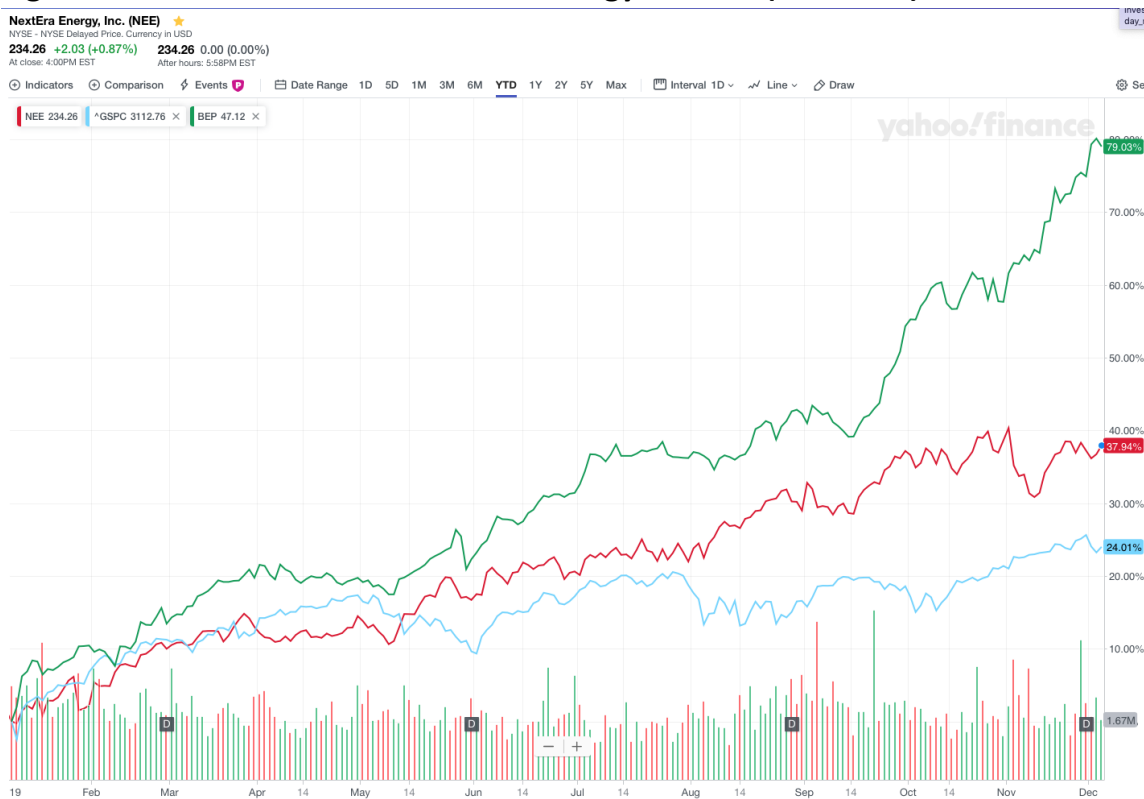
Share Price Performance of North American Renewable Energy Leaders

North American renewable energy leaders have also outperformed.

NextEra Energy (+38%, red) and Brookfield Renewable Partners (+79%, green) have performed very well against the S&P500 (+24%, blue) year to date 2019 (see Figure 5).

On a five-year view, NextEra Energy (+129%) has massively outperformed both Brookfield (+63%) and the U.S. S&P 500 (+53%).

Figure 5: North American Renewable Energy Leaders (YTD 2019)



Share Price Performance of Australia's Renewable Leader

Macquarie Group's +129% rise (red) in the last five years is four times the +28% for the Australian equity market overall (blue) (see Figure 6). Macquarie is +25% vs the market +20% YTD 2019.

Figure 6: Macquarie Group (Five Years to 2019)



Source: All share price charts accessed from *Yahoo Finance*.

Fossil Fuel Stocks Continue Underperforming

The largest listed fossil fuel companies have had a year best to forget in 2019.

Peabody Energy (thermal coal, down 71%, red), Chesapeake Energy (fracking, -66%, purple), Contura coal (coking coal, -91%, black), and ExxonMobil (oil & gas, -1%, yellow) have all destroyed shareholder value again in 2019 (see Figure 7).

The largest thermal power generator in the U.S. is Duke Energy (+5%, pink). While its shares are up in absolute terms, it has again materially underperformed the S&P 500 index (+24%, blue).

Figure 7: U.S. Fossil Fuel Leaders (Year to Date 2019 Share Price Performance)



Australian Coal Firms Continue to Underperform (YTD 2019)

Australia's four listed coal majors – Whitehaven Coal (-37%, red), Yancoal Australia (-18%, purple), New Hope Corp (-37%, black) and Coronado Coal (coking coal focussed, -32%, yellow) have similarly destroyed significant shareholder value over 2019 to-date (see Figure 8).

In one of the ironies of fossil fuel climate science denial, Whitehaven Coal in December 2019 saw its stock drop 10% in a single day as it warned that its inability to recruit/retain skilled staff combined with increasing production disruptions due to the ongoing unprecedented extreme weather events in Australia (particularly with respect to drought and hence water shortages³).

Against this, the overall Australian equity market is +20% (blue).

IEEFA also included Wesfarmers (+27%, green) given it exited its last coal mine ownership in 2018 and pivoted into lithium mining, seeing the global growth opportunities in lithium ion batteries and electric vehicles as the decarbonisation trend sees a technology convergence in the transport and stationary energy sectors.

Figure 8: Australian Coal Mining Majors (Year to Date 2019 Share Price Performance)



³ Australian Financial Review, [Whitehaven Coal hammered as drought and fires hit production](#), 5 December 2019

Conclusion

Coal use in power generation will continue for a couple of decades to come, mainly in China, India and emerging markets where brand new coal-fired power plants are still be commissioned today, with engineering life expectations of 40 plus years. If the trends in the U.S., Europe, China and Australia are any guide, this latest round of investors are investing in stranded assets, banking on two questionable premises: firstly, that governments will not put a substantial price on carbon emissions or pollution any time in the coming few decades; and secondly, that the double digit deflation evident in renewable energy and battery technologies will cease.

China illustrates the folly of government policy inconsistencies. China for the last three years has continued to complete one new, *idle* coal-fired power plant every week, even as it leads the world investing in the replacement technologies of batteries, electric vehicles, and renewables. In China, wind and solar will reach grid parity in 2020. Once built, a power plant is likely to operate for many years to come, but marginally costed and failing to cover its cost of, let alone return of capital.

But financial markets work on a different basis – they work on probabilities and the rate of change. Think capital stocks vs capital flows. As the capital flow moves to predominantly bank-rolling renewable energy, the capital market derates the incumbent stranded industry players owning now stranded thermal power plants.⁴

We have sought to illustrate the power of financial markets to look ahead to the end game even as technology disruption of energy markets is only now becoming probable. It will take decades to play out, but the equity market isn't waiting around. Peabody Energy is down 71% in less than year. The profitless prosperity for fracking firms in the U.S. market has seen leader Chesapeake Energy drop 66% this year even as U.S. economic growth is being driven by record-low energy prices and energy independence.

And as corporate leaders seize the opportunities that are emerging in new, replacement technologies, their shares are soaring. Offshore wind is yet to make a material impact on global electricity markets, but any investors who backed world leader Orsted have more than tripled their capital in just five years. And even as Duke Energy has languished for a decade, NextEra Energy has more than trebled, all whilst returning a handsome annual dividend pay-out.

⁴ Carbon Tracker, Bloomberg NEF, Rocky Mountain Institute, [The Speed of the Energy Transition](#), 12 September 2019.

About IEEFA

The Institute for Energy Economics and Financial Analysis conducts research and analyses on financial and economic issues related to energy and the environment. The Institute's mission is to accelerate the transition to a diverse, sustainable and profitable energy economy. www.ieefa.org

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Director Energy Finance Studies, Australia/South Asia Tim Buckley has 25 years of financial market experience covering the Australian, Asian and global equity markets from both a buy and sell side perspective. Tim was a top-rated equity research analyst and has covered most sectors of the Australian economy. For many years, Tim was a managing director, head of equity research at Citigroup, as well as co-managing director of Arkx Investment Management P/L, a global listed clean energy investment company that was jointly owned by management and Westpac Banking Group.

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