

Investing toward a net-zero energy system

By: John Miller | & Cheryl Wilson | June 4, 2021

Washington - Zeroing out carbon dioxide (CO₂) emissions from the global energy sector is not only possible - it now has a clearly articulated road map as provided by the International Energy Agency (IEA). The IEA report highlights the growing investable opportunity inherent in the dichotomy between our current energy system and that system needed to achieve global climate change ambitions. For Calvert, this approach confirms decades of ESG investment research.

Calvert's perspective on key takeaways from the IEA road map:

The needed technology already exists

According to the IEA, current technologies (in addition to limited behavioral changes) achieve more than 80% of annual emissions savings needed to achieve interim 2030 objectives and nearly 50% of the total 2050 pathway target.¹ What's more, where innovation is required, it is focused on known platforms - such as advanced batteries, hydrogen, bioenergy, and carbon capture.

However, Calvert's ESG research has identified that continued collaboration between companies and stakeholders is required to rapidly scale available zero emissions technologies. At present, Calvert remains underweight heavy industries such as steel, chemicals, and cement -- which together account for more than 20% of global greenhouse gas emissions -- owing to the unfavorable economics of zero emission feedstocks. For example, while green hydrogen has for decades been a known technology capable of decarbonizing the heavy industries, current economics would result in negative unit costs in comparison to traditional energy sources. The rapid expansion of solar and wind-powered generation sets an achievable precedent where all stakeholders -- including shareholders and communities -- appropriately shoulder costs to achieve the scale needed to reach net zero.

The future is electric

Electricity production and networks are the winners in a decarbonized energy system. According to the IEA, solar and wind capacity in 2030 will need to be four times greater than reported in 2020.² From a base of less than 10% in 2020, solar and wind will generate more than 60% of total electricity by 2050.³ Increased electricity supply will power an electrified (and decarbonized) transportation, industrial, and building environment.

For example, the IEA's road map indicates that almost all new passenger vehicle sales should be electric⁴ globally by the mid-2030s, a significant increase from the approximately 4.5% of unit sales in 2020.⁵ Yet we estimate that only about one-third of the largest global automakers have stated EV sales targets throughout this decade (2020s), which may result in a widening gap between automakers' product decarbonization trajectories.⁶

Fossil fuel is out

The IEA's road map calls for no new oil, gas, or coal field development beyond those already committed.⁷ This should come as little surprise, as it adheres to prior supply and demand iterations within the IEA's Sustainable Development Scenario (SDS), but the message remains stark. The current fossil-powered energy system, and the companies that make up the value chain, are operating in a market defined by long-term structural decline.

A misaligned capital allocation strategy drives Calvert's research and strategic underweight of oil, gas, and coal value chain companies. Despite the IEA's call that additional investments in fossil capacity are unaligned with a net zero 2050 target (and should be oriented toward other activities), the sector reports continued annual investments of more than \$800B.⁸ Conversely, energy sector investments in renewable or alternatives represent less than 1% of sector spend.⁹

Green investment vehicles have guidance

Regulatory taxonomies, scenario analysis aligned with specific decarbonization goals (such as the IEA road map), and supportive government policies are likely to provide the impetus for additional growth in green, sustainable, and sustainability-linked debt by improving clarity and credibility in the market on what constitutes necessary and sustainable actions for companies seeking to sell debt. The establishment of short-, medium-, and long-term climate goals provide critical guidance for potential sellers of sustainable debt as to the nature and scale of projects necessary to address pressing environmental concerns, as well as related timelines. Particularly in markets that lack a defined taxonomy for classifying green activities, a shared understanding among market participants on these factors will enable investors to most effectively allocate capital to the entities that must make this transition.

Despite robust growth in the green bond market, Calvert's research indicates significant gaps still exist between the global economy's climate aspirations and its current financing activities. In 2020, investment bankers earned \$4.6 billion from underwriting fossil fuel clients compared to just \$1.3 billion from green bond customers.¹⁰ In 2020 and 2021 YTD, industrial companies accounted for 9% and 7% of green corporate issuance respectively¹¹ despite being responsible for more than 20% of global greenhouse gas emissions.¹² Companies that are able to leverage an expanding sustainable debt market to finance these transitions in line with guidance such as that provided by the IEA will be well-positioned to play a larger role in a Paris-aligned economy.

Bottom line: Calvert believes that security valuations across the global energy sector remain skewed by greenhouse gas externalities. It remains core to our ESG-centered investment outlook that the energy transition is happening, both along a faster overall timeline and at a faster velocity than currently reflected by the market. We believe that the regulatory and policy framework necessary to properly incentivize a road map similar to that presented by the IEA is likely - sooner or later - with the UN's COP26 this November serving as a near-term catalyst.

1. *International Energy Agency, "A Roadmap to the Global Energy Sector," May 2021, p. 15-16.*
2. *Ibid p. 15.*
3. *Ibid p. 24.*
4. *Mostly battery-electric vehicles, but also including plug-in hybrids and fuel-cell vehicles.*
5. *Bloomberg data.*
6. *Calvert Research and Management estimate using data from Bloomberg and company statements, as of end-2020.*
7. *IEA roadmap, p. 21.*
8. *IEA, World Energy Investment 2020 and Calvert Research.*
9. *IEA, The Oil and Gas Industry in Energy Transition and Calvert Research.*
10. *Bloomberg Green, "Banks Earn Big on Green Bonds But Really Clean Up With Fossil Fuel," May 2021.*
11. *Calvert research utilizing Bloomberg data.*
12. *IEA roadmap, p 26.*



John Miller
VP and ESG Senior Research
Analyst
Calvert Research and
Management



Cheryl Wilson
VP and ESG Senior Research
Analyst
Calvert Research and
Management

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