

KEYNOTE INTERVIEW

Closing the loop on decarbonised transport



Investors in transport must offer solutions that reduce emissions without needing subsidies, says UBS's Vijay Pattabhiraman

Emissions from transport will need to fall by 3 percent each year if the world is to reach net zero by 2050, according to the International Energy Agency. The need for greener transport is clear – but finding economically viable solutions is easier said than done.

Vijay Pattabhiraman, managing director and global head of energy and transport transition at UBS, says the key is to focus on closed systems where vehicles have high utilisation rates. Within these systems there are many opportunities to reduce emissions in a

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way that makes economic sense without the need for subsidies.

Q What is the current state of the energy transition?

In the last 10 years, almost two-thirds of energy transition investments have been in renewable energy generation. But now, on a portfolio level, returns are falling or stagnating. To even make

a 10 percent return with renewable energy, one needs to take outsized risks – either development risk or emerging market risk. Not only are different risk profiles needed to make good returns on renewables, but most of the returns are back-ended, which is capital gains in nature.

Recently, transport has also overtaken investments in renewables as the largest investment in the energy transition. The subsector has very strong tailwinds, particularly in ground transport. That still makes up around 70

percent of transport sector CO2 emissions, and each dollar of investment has the potential to deliver attractive emission reductions.

Q What is the best way for infrastructure investors to invest in transport?

There are many different approaches. Many people are investing in transport using a traditional venture capital or private equity approach. They often underwrite transactions based on cutting edge technologies, or they depend on subsidies to secure returns. Others depend on very ambitious ramp-ups in utilisation to be profitable.

Often, people invest into open systems, where it is very difficult to forecast what the demand and utilisation are going to be. This can mean you do not really know what your efficiency is going to be in these open systems.

However, we do find that there are many investments that are solution-oriented across the transport value chain, and these can be accessed using a defensive infrastructure approach.

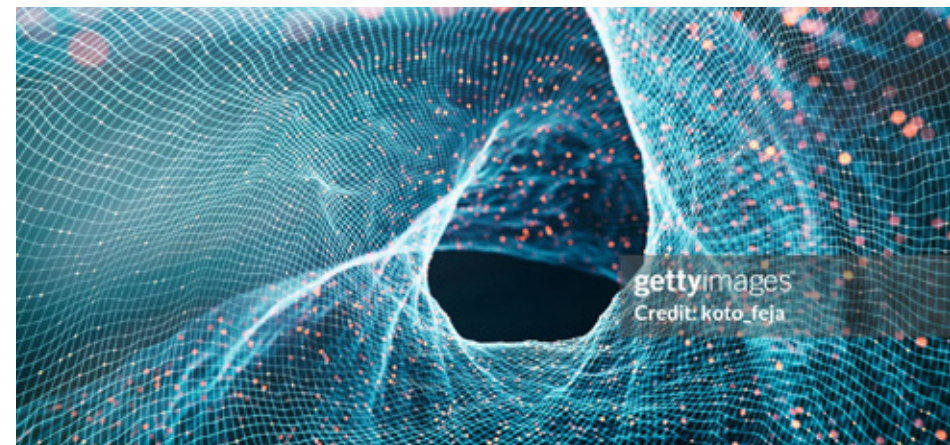
We use a data-driven method, focusing on subsectors where reducing carbon emissions is profitable on a standalone basis. In other words, we look for opportunities where we do not need to underwrite subsidies.

We also look for opportunities where decarbonisation makes economic sense. That allows us to have an all-weather strategy – we find use cases where customers will choose lower carbon options regardless of government policies and regardless of subsidies.

Q Can you give some examples of this?

A battery electric vehicle is up to five times more efficient than a similar diesel vehicle. That is down to physics. But whether a particular solution makes economic sense depends on the asset utilisation.

A battery-powered school bus that is only used twice a day would need subsidies to be viable. However, if you have



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a taxi that has a utilisation rate of 60 percent, then it makes eminent sense to decarbonise. Because of the efficiency, the physics part of the equation takes care of the economics.

As mentioned, it is a lot more complicated to invest in open systems than closed systems. If you are installing a public EV charger network, you have to be very intelligent in forecasting the percentage of vehicles that will convert to electric, how many cars will stop at your charging points, how long drivers will leave their car charging for. What we do is very simple.

We invest in closed systems. An airport is a closed system, for example, with its ground vehicles all running in a predictable way. In a closed system, the asset utilisation rate is much higher and also easier to predict, which is what makes decarbonisation economically rational. That is the beauty of our approach.

We target the largest users in the subsectors that we find attractive, such as last-mile delivery services. We then approach them and usually find that they like the idea of decarbonising but are worried by the cost. The capex for zero emission vehicle systems is up to three times more than for internal combustion engine vehicles, so their asset turnover ratios will fall.

We approach users with strong credit ratings and we offer them an

Q Is there still an element of technology risk in investing in decarbonising transport?

Unlike in traditional infrastructure, where the lifetime of an asset might be 50 or 60 years, transport assets are self-liquidating. A terminal tractor at an airport, for example, might have a lifetime of eight years. And the operator will not buy an entire new fleet at any one time; it will only purchase new tractors to replace those that have reached their end of life. It might renew one-eighth of its fleet every year, say.

What this means is that investors in transport solutions can take advantage of improvements in technology. We can purchase one technology today and then a slightly better technology a few years later. A portfolio takes time to decarbonise, so the important thing is to simply purchase the best technology at any given point in time that can deliver cost savings over the lifetime of the asset.

“If your basic underwriting depends on subsidies, then you will find that you have to be more careful around changes to regulations”

end-to-end solution. We can provide cost savings by offering lower running costs and we remove the inconvenience for them having to convert to a low-carbon ecosystem themselves.

Q How does the backlash against climate policies, especially in the US, affect the investment case for decarbonising transport?

Let's forget about carbon reduction for a moment. If I tell you that I have a solution that can reduce your cost structure, would you take the opportunity? The answer is probably going to be yes. If that solution helps reduce carbon emissions as well, that is simply an added benefit.

It is true that when solutions depend on subsidies, those solutions are vulnerable to changes in government policy. Regulations matter when you are dependent on some largesse from the regulators. If your basic underwriting depends on subsidies, then you will find that you have to be more careful around changes to regulations.

That is why we want to invest in solutions that make financial sense without subsidies. If there is a subsidy, then that can help make returns more attractive and the solution more affordable for the end user. But we are focused only on opportunity sets where decarbonising is fundamentally economically viable

without subsidies. That means that we can be more immune to changes in regulatory frameworks.

The noise that we are seeing today is going to be temporary. Long term, there is a secular trend. People will understand that in the longer term, they have to look at ways to reduce total life cycle emissions.

But in the short to medium term, if we are able to offer solutions for decarbonising transport that save people money or reduce their cost structure, they will take those solutions even if only for economic reasons.

Q What is the best approach for navigating the fundraising environment?

It is a challenging environment for fundraising, particularly because a lot of LPs have not seen cashflows coming back from some of their existing commitments. That is mainly because a lot of the returns are driven by exit events and are therefore rear-ended.

One of the advantages of our strategy is that returns are driven by cash-on-cash yields. We don't need fancy assumptions around exit multiples with respect to back-ended capital gains.

Ours is a cashflow model where every year, you get a portion of the capital back, and you get your yield every year. And we think more and more LPs will want to see a yield component

in their overall infrastructure or real assets portfolio. Once upon a time, infrastructure used to be about cash-on-cash yields and we expect those annualised returns to be attractive to more and more investors again going forward.

Q How do you expect the decarbonisation journey to progress in the transport sector over the next decade?

A few years ago, people had a halo around their head when they were looking to decarbonise transport. People were looking at green hydrogen, even though it did not make economic sense. You will go through a lot of stress when you try to decarbonise something that does not make economic sense.

Right now, our strategy in transport is unique, but hopefully as people see what we are doing, as they see that it makes economic sense to decarbonise transport in this way, a lot more capital will come into the sector.

Increasingly, investors will recognise that they can get more bang for their buck in terms of carbon reductions in the transport sector, particularly in countries with low-carbon electricity grids. A lot of people assume transport is a niche market, but actually it is an \$8 trillion market, possibly even larger. And I do not mind being in a niche market if the size is \$8 trillion. ■