

Why this sustainable investment firm can't buy Tesla



Tesla, the pioneering car manufacturer, was built around a mission to accelerate the world's transition to sustainable energy and transportation. Indeed, its very name is synonymous with the more environment friendly, resource efficient world we now aspire to. So why isn't it a key part of our resource efficient portfolio?

Since its inception in 2003 Tesla has not been transparent about its environmental impact or its use of resources. This changed last month, when Tesla released its first [impact report](#), detailing figures regarding their product and operational impact, supply chain, and employees and culture.

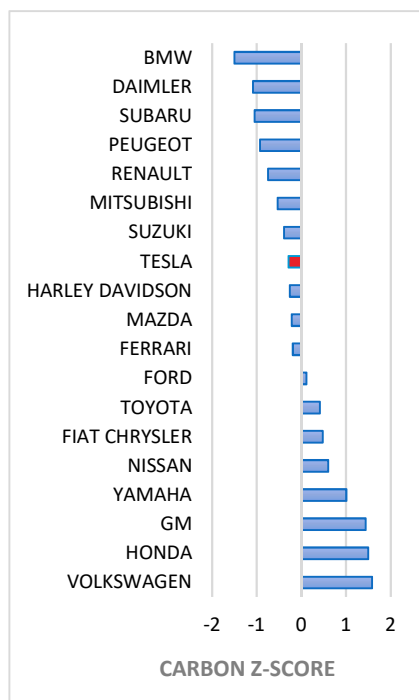
The report lacks the detail and granularity which is widespread in the automotive industry, but it does provide us with some key insights that enables our Model of Resource Efficiency (MoRE) to quantify the performance of Tesla and compare the company to their industry peers for the first time. Something many ESG and environmental ratings agencies have [struggled with in the past](#).

The MoRE model provides a clear and transparent way of assessing Tesla's productive use of resources.

Firstly, to give credit where it's due, Osmosis commends the innovation Tesla has brought into the industry and we celebrate the 4 million tons of carbon that Tesla has saved in recent years. On a dollar generated per tonne of Co2 created our model of resource efficiency places Tesla in the top performing half within the auto sector. But, on some measures, Tesla falls short of meeting our model's inclusion criteria.

Tesla proves to be more carbon efficient in manufacturing vehicles than most of their peers.

Tesla reported annual global carbon emissions of 282,000 metric tonnes of CO₂, direct and indirect, across its facilities and operations (including supercharger network, sales, service & delivery and energy operations). This figure, when normalised for revenue, puts the company in a favourable position within the MoRE model.



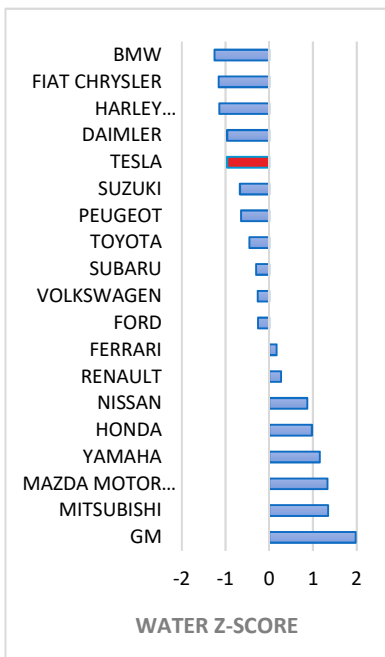
As can be seen in the table on the left, Tesla proves to be more carbon efficient in manufacturing vehicles than most of their peers, ranking 8 out of 19. Tesla has designed its [factories](#) in a way that reduces overall energy consumption significantly. Features from installing rooftop solar panels and LED lighting to the very location of its battery manufacturing factory in Nevada, which benefits from cold desert nights, are encouraging. Another special aspect of one of Tesla's factories is that there are no natural gas lines within the factory, resulting in no on-site combustion of fossil fuels, with thermal systems that are engineered to maximise heat recovery.

It's when we put the carbon data in the perspective of total vehicles produced, that new insights start to emerge.

"In 2017, 1.73 tonnes of CO₂ were emitted per manufactured vehicle, which compares to 0.52 from [BMW](#) and 1.30 from [Daimler](#)¹. While the production process of electric vehicles is distinctly different than that of internal combustion engine (ICE) vehicles, especially when the battery production is brought inhouse, these figures indicate that there is still room for improvement." *Lennart Hermans, Senior Environmental Research Analyst, Osmosis Investment Management*

¹ "Emissions per manufactured vehicle are calculated using the Osmosis IM carbon database, and 2017 vehicle production figures reported by BMW, Daimler and Tesla."

Tesla also produces a water consumption figure in its impact report. Due to their operations in solar energy generation, and the lack of granular data, comparing this figure with their industry peers is challenging. Solar power generation has an overall positive effect on water consumption compared to thermoelectric generation, however, as most of their peers are not engaged in significant power generation this effect will not be fully captured by the MoRE model.



Regardless of these differences in business model, Tesla’s water consumption per revenue again puts them in the top half of the industry. This is achieved by focussing on efficiency improvements and water reuse systems, as well as technological advances such as the development of a waterless car wash method.

No figures on waste generation were provided

It was Tesla’s decision not to report their waste generation that led to its total exclusion from our resource efficiency model. Tesla does mention the importance of waste as a manufacturing company and highlights some examples of its action, for example the “Zero Waste” certification for their Fremont production facility and the commitment to recycling and product reuse. However, it failed to offer any insight into its waste generation. You

can draw your own conclusions.

It’s fair to say that Tesla has innovated and disrupted the industry, but the path to resource efficiency is not straightforward and the company clearly faces its own operational challenges. Going forward we would like to see greater transparency and detail in future iterations of the impact report. After all, while the environmental impact of electric transportation cannot be denied this should not be at the expense of Tesla’s own, direct and indirect, impact.

As part of our engagement process, we will be liaising with Tesla in the coming weeks and months to encourage a more thorough environmental disclosure. In particular, we would like to see details on waste generation and the origin and breakdowns of emissions figures and water use. These figures would help us to more accurately assess their use of resources. We have recently had some key engagement successes with

companies such as The Coca-Cola Company and Marks & Spencer and we hope we can add Tesla to the list. We will monitor our progress and report back.

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