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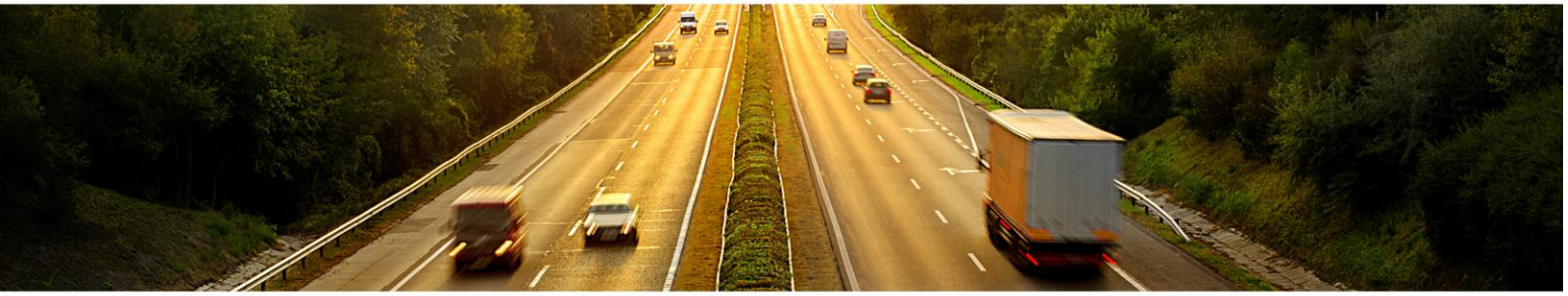

The Business Case for Corporate Leadership on Electro-Mobility

Key arguments and proof points

Electro-mobility offers a crucial climate solution – the main driver for companies to commit to switching their fleets

- **Transport is the fastest-growing contributor to climate change**, currently accounting for 23% of global energy-related emissions, and with further increases expected over the coming years. Road transport has the largest share within the sector.

- **Electro-mobility offers an attractive solution**. Companies setting ambitious emissions reduction targets realise that transport is a major area of their carbon footprint that they need to address. EVs offer an opportunity to do so while securing important competitive advantages.

- **EVs produce far less CO_2 than petrol and diesel vehicles (ICEs)** in the vast majority of markets around the world, contrary to claims that the CO_2 emitted in electricity production and vehicle manufacturing outweigh the benefits. In some markets, such as Sweden and France, these CO_2 savings are up to 70%. Moreover, while emissions from ICEs are expected to fall by less than 2% annually through to 2040, pollution from EVs will fall by 3-10% annually, as a result of continuous grid decarbonisation.

- **Electro-mobility and renewable energy are hugely complementary.** For example, with smart charging, EV batteries can become part of the storage solution required to balance an electricity grid with larger input from intermittent energy sources such as wind and solar. This means EV100 is very complementary with our sister initiative, RE100, which brings together companies committing to 100% renewable electricity across their operations. At the time of reporting in 2019, 2 in 5 EV100 members are sourcing 100% electricity for charging from renewable sources.

- **EV100 promotes electro-mobility as a key part of a larger sustainable transport story.** Electro-mobility is a key technology to decarbonise transport, but we explicitly see it as being complemented by other solutions, such as wider public transport use and other zero carbon transport modes such as walking and cycling. Electro-mobility also mutually reinforces other transport trends such as shared transport and automatization. However, while efficiency gains are possible with the other two trends, only electro-mobility has the potential to entirely decarbonise road transport.

- **Pollution from battery manufacturing for EVs is clearly outweighed by the emissions saved during the vehicle use**. However, environmental and social impacts do need to be further minimised. Good practices are already emerging – for example, Tesla has set out sustainable sourcing practices for metals it uses in its batteries (also see this Tesla conflict minerals report), and emerging recycling schemes that allow old batteries to be used as stationary storage capacity or their materials to be used in manufacturing processes. We want to see these practices scaled up and will be working with other organisations and businesses to support these efforts. There also appears to be no concerns about the long-term supply of materials needed for battery production.

The business case is continuing to grow – companies gain competitive advantages as early movers

- **EVs are becoming increasingly price competitive**. Battery pack costs – one of the major price factors for EV – has fallen by 87% between 2010 and 2019 and are expected to fall to $100/kWh by 2023. Bloomberg New Energy Finance (BNEF) has predicted that there will be upfront price parity between battery electric vehicles and internal combustion engine vehicles by 2022. Already today, total cost of ownership (TCO) of an EV is increasingly becoming

competitive, as a higher purchase price balances out against operational savings on fuel, maintenance and repair.

- EV100 member, LeasePlan, has published a TCO analysis for EVs in Europe. Across almost 1,000 TCO scenarios, the data showed that, on average, the costs of an EV are 5% lower than a similar ICE vehicle.

- EV100 member, Austrian Post expect their electric vans to be up to 10% cheaper over their 8 year lifecycle than ICE equivalents.

- EV100 member, Ingka Group (IKEA), found that making the switch to EVs was vital, particularly in Amsterdam, where if their fleet wasn't zero emission by 2025, they would lose direct access to more than 390,000 households and USD$30.2 million in revenue per year, due to expected limits on vehicle emissions in the city centre.

- A recent study found that zero emission trucks are expected to reach TCO parity with diesel in the US by 2030, even accounting for costs of associated charging infrastructure.

Policy makers are driving EV uptake – companies secure their licence to operate

- **Governments support EV market development as a strategic interest.** Countries including China, Denmark, France, Germany, India, Ireland, Japan, the Netherlands, Portugal, South Korea, Spain, the UK have already set national targets for EV deployment. Over a dozen national governments have announced a phase-out date on fossil fuel vehicles: amongst others, France will ban all new combustion-engine vehicles by 2040, the UK has brought forward its target to at least 2035 from 2040, while the Netherlands plans to do so by 2030 and Norway by 2025. Sub-national governments are doing the same. California alone plans to put 5 million zero-emission vehicles onto the road by 2025.

- **Air quality legislation and climate targets are expected to increasingly restrict polluting vehicles.** Outdoor air pollution kills more than 3 million people annually and costing OECD countries alone almost USD 1 trillion every year. In light of this, 28 global cities like London, Paris, Mexico City, Los Angeles, Seattle and Tokyo, have already committed to creating zero emission areas by 2030.

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EVs are moving towards a tipping point – companies prepare for the transition

- **The market for electric vehicles is rapidly expanding.** In 2019, global sales of electric cars topped 2.1 million, surpassing 2018 – already a record year. Over 7.2 million electric cars are now on the road worldwide. In Norway, electric and hybrid vehicles already have a market share of 52%.

- **The number of electric models is rapidly increasing**. Although COVID-19 has delayed some plans, BNEF project that by 2022, there will be 500 EV models available globally.

- **EV100 sends a demand signal to the auto-industry and governments at all levels.** Lack of vehicle supply was seen as the leading barrier to EV uptake by EV100 members in our 2020 Annual Report. As the campaign continues to grow, as does the demand signal to the auto-industry and governments at all levels, which we communicate through our ongoing policy and advocacy work. We also facilitate relationship building with other companies and external organisations to tackle some of the leading barriers to electro-mobility.

- **Electric versions of commercial vehicles are becoming increasingly available, despite the market being less mature than the EV passenger vehicle market.** CALSTART, a U.S. based organisation working on clean transportation, has created a Zero-Emission Technology Inventory, a comprehensive resource of all the worldwide commercially available zero-emission medium- and heavy-duty vehicles.

- **Range anxiety is no longer an issue, with the battery ranges of new electric models now moving to 200-300 miles and more.** Often, much less range is required in real life, as most people don't travel more than an average 50 miles per day. Already in 2016, an MIT study found that nearly 90% of vehicles on the road in the US could be replaced by EVs immediately without any loss of convenience in real-life use. EV100 member, Austrian Post reports that it can complete 70% of its routes on a single charge, and is expecting this to increase to 80% in the coming years. With rapid charging also becoming more common, having to top up vehicles will not take much longer than 10 minutes.

- **OEMs are rapidly moving away from petrol and diesel**, with automakers continuing to announce new electric or hybrid versions across all their models, including Volvo (from 2019), Jaguar Land Rover (2020), BMW (2020), Mercedes (2022), Peugeot, Citroën, Opel, Vauxhall

(2025) and Volkswagen (2030). Over $300 billion of investments in electric vehicles have been announced by global automakers over the next five to 10 years. Daimler and Volkswagen have gone one step further than the rest by committing to phase out the internal combustion engine from their production by 2039 and 2050, respectively.

- **Public charging is rapidly expanding across most markets**. However we do recognise the need for this expansion to happen quicker and across *all* markets to support the transition. The demand signal sent by EV100 members will make an important contribution to showing governments, as well as private investors, that such infrastructure is needed now. However, with EV range rapidly increasing, a lot of the charging needs will be done at home or at the workplace.

Employees and customers want employers and businesses to support them to live low-carbon lifestyles

- **Once employees start driving EVs, they tend to prefer them to ICE vehicles**. However, it's important that companies communicate the benefits and reasoning for joining the transition to its employees affected by the decision, i.e. engineers who use the vehicles every day. Once initial perception barriers are overcome, staff generally tend to love their EVs.

- **It's important to recognise the importance of supporting employees to make sustainable choices**. EV100 member, Genentech, has invited EV manufacturers to give talks, run EV ride and drive sessions and installed over 100 EV charging stations at its campus, supporting the 800+ EV drivers among its staff. Genentech is also actively encouraging other modes of sustainable mobility and has, for the last two decades, run commuter coaches from San Francisco to its campus, relieving employees of the need to drive. They have recently started to covert these coaches to electric, with an expected 20 electric coaches to be in their fleet by the middle of 2020.

- **Workplace charging can add to staff satisfaction and retention**. EV100 member, HP Inc, has found that sustainability ranks as one of the top three reasons employees enjoy their workplace. HP recognise that installing charging is an important benefit that appeals to the values and lifestyle of current and future employees.

- **Customer charging is good marketing.** In the EV100 Progress and Insights Annual Report 2019, METRO AG demonstrated that adding charging points meant an added service for customers, leading to higher retention rates among sustainability conscious customers.

Now is the time for leadership - EV100 supports companies on their journey

- **The EV100 initiative provides a platform for companies making public commitments to transition their vehicle use to EV and/or roll-out charging infrastructure at their premises by 2030.** The initiative gives public recognition to companies that join the campaign and connects them into a global network of peers for learning and exchange, and to jointly engage with related stakeholders to address the remaining barriers. We provide a range of profiling opportunities through social media, events and case studies.

- **A 2030 commitment demonstrates that the time to engage on EVs is now**, sending a crucial market signal to automakers, policymakers, and other stakeholders. Setting a public target also focuses corporate priorities and helps to secure internal buy-in.

- **Public pressure for action on the climate crisis is growing**, particularly from younger generations. This means companies must turn words into action. Committing to EV100 is not just a 'commitment'; through creating a roadmap within a year of joining and participating in annual reporting, the campaign ensures transparency and accountability for companies to act on their commitments. Through our peer learning activities, we support companies in meeting commitments through webinars, workshops and facilitating relationship building between member companies and experts.

For further information on the EV100 campaign, please visit our webpage: www.theclimategroup.org/ev100

- For insights on EV100 members' commitments, activities and successes, **please download our 2020 Annual Report**
- Please get in touch with us find out more: **ev100@theclimategroup.org**