



By
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Earlier this year, Jaguar revealed its first all-electric SUV, the latest of its kind since Tesla's Model X in 2015, heating up the race for carmakers to prove their green credentials. The rapid development of the electric vehicle (EV) industry is timely with the UK government's announcement that new diesel and petrol cars will be banned in the UK from 2040. Since the ban was announced, sales in electric cars have soared – with global sales up by 63%ⁱ. The mainstreaming of EVs was most recently demonstrated in the last few weeks when BP bought the UK's biggest electric car charging network for £130 million, arguably a milestone in the push towards clean motoringⁱⁱ.

There are few doubts regarding the green merits of EVs, given their improved efficiency over petrol and diesel engines, lower maintenance requirements and cost savings. And with the exponential growth of the industry, there has been a surge in the market for rechargeable batteries necessary to power them. Richard Branson (who leads a team in Formula E – Formula One's EV equivalent) believes that bringing the ban forward to 2025 would not only ensure the UK's position as a leader in efforts to reduce pollution, but also encourage developments in battery technology. To that point, Formula E chief executive Alejandro Agag has claimed the batteries used in next year's competition will have double the capacity for energy storage. However, with the rapid development of EV technology, is the battery market as ethical as the car is green?

The ethical issue

What some of the owners of the UK's 140,000 EVsⁱⁱⁱ might not know, is that the battery powering their new car could be the cause of human rights violations in countries such as the Democratic Republic of Congo (DRC). The most common battery used in EVs is the lithium-ion battery, primarily made up of the minerals cobalt, lithium and graphite. Increasing development in the technology that requires these batteries has led to a huge spike in demand for these minerals. The price of cobalt, for example, doubled between 2016-2017 and is predicted to see a 30-fold increase in demand by 2030. What is perhaps most important to note however, is that at least 60% of cobalt comes from the DRC, the

central African country the same size as Western Europe. Despite the country's overwhelming mineral abundance, the DRC is one of the poorest countries in the world, and it has been long-plagued by civil war and ongoing conflict fuelled by the trade in conflict minerals.

Two Amnesty International reports have shed light on this issue revealing children as young as seven mining cobalt in the DRC, where 20% of cobalt comes from artisanal and small-scale mining (ASM). The proportion of cobalt coming from ASM has increased significantly with the demand for lithium-ion batteries – problematic due to the unregulated nature of the mines, springing up in back gardens and underneath kitchen floorboards, with little to no health and safety equipment or considerations. Child labour is one of the most commonly reported human rights abuses in mining, which has been difficult to control given the small and hidden nature of many of the mines. Furthermore, in DRC, a lack of strong institutions and rule of law has meant production and trade can often contribute to armed conflict and human rights abuse.

How are companies reporting?

The primary legislation governing the trade in minerals is the US Dodd-Frank Act, which came into force due to concerns that mineral trading by armed groups was helping to finance conflict in the region, contributing to a wider humanitarian crisis. The 'conflict minerals' covered by the legislation include tin, tantalum, tungsten and gold – the '3TGs'. Companies that source any of the four minerals from a specified list of countries, must carry out a reasonable country of origin inquiry (RCOI) and follow up with due diligence, generally in the form of a conflict minerals report. In addition, EU conflict mineral regulation is set to come into force in January 2021, covering the same minerals but with slightly different requirements. However, both pieces of legislation are currently limited by not covering cobalt. In a bid to overcome this, signatories of the Responsible Cobalt Initiative are working together to address social and environmental risks in the cobalt supply chain, specifically by developing a due diligence management system for cobalt, promoting community action in local communities, and improving the transparency of their communications.

Despite this, a number of challenges remain for companies. A 2017 Amnesty International report found that the majority of companies investigated were not doing enough to ensure the cobalt used in their supply chains was responsibly sourced. There are numerous excuses for companies not acting responsibly, including visibility of the cobalt supply chain, traceability of cobalt and understanding the

critical stages and relationships within the mining supply chain. However, one or two companies including Apple, have demonstrated that it is possible to mitigate and overcome some of these challenges. After approaching the companies outlined in the report, Amnesty International announced Apple as leading the way in the responsible sourcing of cobalt, after first mapping it down to mine level in 2016 and coordinating third-party audits in all of their known refiners. Most recently, Apple has looked into securing its cobalt supply directly from miners, cutting out the middlemen to guarantee the mineral as the market grows^{iv}. Furthermore, the company has launched a pilot project to recover cobalt and other minerals from old products for reuse in new products^v, which could make a huge difference to the market if successful.

Expansion of 'conflict minerals' to cover cobalt, lithium and nickel?

Elon Musk, CEO of EV giant Tesla, is taking a different approach to Apple, attempting to phase out the use of cobalt in the company's batteries. Partnering with battery manufacturer Panasonic, Tesla uses nickel-cobalt-aluminium batteries, which contain less cobalt than lithium-ion batteries used by the majority of other carmakers. Furthermore, Tesla has already managed to reduce the amount of cobalt used in each vehicle by around 60% since 2012^{vi} – an impressive amount, although removing it from batteries completely will be difficult without sacrificing safety and performance. Another challenge to add to the list is that although cobalt is currently the mineral under the most scrutiny as a component in lithium-ion batteries, it should be noted that lithium and nickel are also critical elements in rechargeable batteries, and also have significant risk factors associated with their sourcing.

The region known as the 'lithium triangle' covers Chile, Argentina and Bolivia and holds over 50% of the world's lithium resources. Lithium here is generally held in brines in underground reservoirs and extraction requires a combination of pumping and evaporation. Although the process is relatively cheap and easy to construct, water scarcity is a huge regional issue that causes regular conflict between local communities and mining companies. As water scarcity becomes more severe with climate change, companies may well need to re-evaluate where they source the lithium for their rechargeable batteries. There are fewer social issues concerning nickel mining, however there have been numerous environmental issues in the past, with pollution of rivers, rice fields and watersheds, and mining taking place in protected forests in the Philippines and Indonesia.

A road forward

Although legislation does not currently require reporting on cobalt, lithium and nickel, as the EV industry inevitably continues to grow and the associated demand for rechargeable batteries continues, starting the reporting journey now is the right thing to do.

How can Sancroft help your company?

1. Assess exposure – understand the extent of human rights risks in your business
2. Future proof – ensure an ethical supply chain for your batteries
3. Report – communicate actions and progress.

ⁱ <https://www.bloomberg.com/news/articles/2017-11-21/global-electric-car-sales-jump-63-percent-as-china-demand-surges>

ⁱⁱ <https://www.theguardian.com/business/2018/jun/28/bp-buys-uks-biggest-electric-car-charger-network-for-130m>

ⁱⁱⁱ <https://www.theguardian.com/business/2018/jun/28/bp-buys-uks-biggest-electric-car-charger-network-for-130m>

^{iv} <https://www.bloomberg.com/news/articles/2018-02-21/apple-is-said-to-negotiate-buying-cobalt-direct-from-miners>

^v [https://www.apple.com/euro/environment/pdf/g/generic/Apple Environmental Responsibility Report 2018.pdf](https://www.apple.com/euro/environment/pdf/g/generic/Apple_Environmental_Responsibility_Report_2018.pdf)

^{vi} <https://uk.reuters.com/article/us-cobalt-evs-ahome/commentary-tesla-leads-electric-vehicle-race-to-cut-cobalt-dependency-idUKKCN1J21HO>