Dear Norman,

Thank you for your letter of 12 August, regarding the Science and Technology Committee’s questions on electric vehicle batteries. I believe these are important issues and the Government is committed to carrying out significant research in this space.

The Government has invested £274m into the Faraday Battery Challenge (FBC), to support the research, development and scale-up of battery technology. It aims to ensure the UK builds on its strengths and leads the world in the design, development and manufacture of electric batteries, through three areas:

- Core research: The Faraday Institution has been established to be the UK’s independent institute for electrochemical energy storage science and technology.
- Innovation: £88m funding is available for businesses to carry out feasibility studies and develop their products.
- Scale-up: the UK Battery Industrialisation Centre will allow companies to quickly develop their capabilities to manufacture batteries and get them to market, scale up and go global.

With the development of new technologies future battery chemistries will continue to evolve and affect the demand for battery materials. The Faraday Institution estimates that for 50 GWh of battery production in 2030, the UK’s mineral demand would be approximately 5,600t lithium, 5,400t cobalt, 37,000t nickel and 30,000t lithium carbonate equivalent. These key materials are currently found in a range of countries, principally Chile, Australia and Argentina for lithium; the Democratic Republic of Congo and Australia for cobalt; and Indonesia, Australia and Brazil for nickel.

The Government provides support for UK based miners and the mining supply chain in doing business overseas to ensure responsible sourcing of battery materials. The FBC and the Advanced Propulsion Centre (who
support UK competitiveness in low carbon propulsion technologies) are looking to localise more of the battery supply chain in the UK. This will further improve sustainability and affordability of key chemicals, materials and components. This includes the Faraday Battery Challenge’s funding for mining consultancy firm Wardell Armstrong to lead a feasibility study into developing a UK supply of lithium, and potentially cobalt and tin.

Electric vehicle battery recycling is covered by the Waste Batteries and Accumulators Regulations 2009, which ban the disposal of automotive and industrial batteries to landfill and incineration. The FBC is promoting the reuse and recycling of battery components. The £10m Faraday Institution ‘ReLib’ research project is developing the technological, economic and legal infrastructure to allow high percentages of the materials in lithium ion batteries at the end of their first life to be reused or recycled.

The Government requires all UK companies involved in the mining sector to comply with all relevant legislation and regulations, to support the responsible mining of battery materials. The Department for International Trade is currently supporting LME in the development of their responsible sourcing programme, and is working with miners to consider use of UK mining innovation and technology with the potential to reduce the environmental impact of their mining operations.

The Faraday Institution also participates in the Global Battery Alliance: a World Economic Forum initiative seeking to address the human, health and environmental challenges of batteries. This will catalyse and accelerate action towards a socially responsible, environmentally sustainable and innovative battery value chain.

As you note, the Government’s mission is to put the UK at the forefront of the design and manufacturing of zero emission vehicles, and for all new cars and vans to be effectively zero emission by 2040. To achieve this, the Government is investing nearly £1.5bn between 2015 and 2021, with grants available for plug in vehicles and schemes to support charge point infrastructure in homes, workplaces and on residential streets.

Yours ever,

Rt Hon Grant Shapps MP
SECRETARY OF STATE FOR TRANSPORT