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Time to see the light on electric cars

TALKING POINT

ALAN FINKEL

In the 1880s, the idea of electric street lights seemed absurd. If you had to light the streets, you did it with gas. Gas lamps were a fire hazard, smelled terrible and were barely an improvement on total darkness. Apart from that, they were fine.

With the perspective of time, we see a failure of imagination. We forget how the arguments stacked up to our forebears.

After all, the gas-lamp defenders were right: the first generation electric lights were undeniably more expensive. The technology was untested at scale. Above all, it was unfamiliar. How could you picture a street lit up with 50 times the brilliance of the only lamps you had ever known? How could you project ahead to the night-time economy – the world of cinemas and bars, of night-time shopping and safe city transport, made possible by cheap and abundant electric light?

The problems were obvious, the potential was only visible to those with the courage to look.

I think of the gas lamp when I hear arguments against electric cars.

By now, you've probably heard them: the models available today are expensive. It takes longer to charge a battery than it does to fill a tank. You can't drive from Sydney to Melbourne on a single charge. And plugged into a socket in Melbourne, it will emit more carbon dioxide than a petrol-chugging equivalent.

Instead of the problems, let's look at the potential.

Start with emissions, using energy consumption data from the federal government's Green Vehicle Guide and the generation emission factors from the National Greenhouse Accounts (which include emissions from generation, plus emissions from fuel production).

The best-selling light vehicle in Australia is the Toyota Corolla. The 2017 Corolla petrol sedan has emissions of 178 grams per kilometre. The much larger Tesla Model S 75 RP has lower emissions, at 168 grams per kilometre, charged on the 2017 national electricity grid (910 kg/MWh emissions). The comparison to the Corolla is even more favourable for the similar sized electric Renault Zoe, which emits just 121 grams per kilometre.

That's today. The Corolla, like all petrol cars, will burn the same amount of fuel in the same way producing the same amount of emissions for as long as you continue to drive it. An electric car cuts its carbon footprint over time. If, as some forecasts would have it, the national average grid emissions were to decline by as much as half by 2040, then today's Renault Zoe in that year would emit fewer than 61 grams per kilometre.

I am often asked to consider electric car emissions specifically in Melbourne. My preference is to take a national perspective. After all, if I were asked to consider electric car emissions specifically in, say, Hobart, in the state that had the lowest 2017 average electricity emissions (170 kg/MWh), the Zoe would beat the Corolla in a walkover. At just 23 grams per kilometre, the Zoe's driving emissions are exceedingly small.

Let's look at lifestyle and convenience. Imagine if you couldn't charge your smartphone at home – if you had to schedule time in your day to "fill up" at a public charger. You'd be outraged. So what's so bad about a car you never have to take to a petrol station? It's convenient!

Today an electric car can easily take you from Canberra to Sydney on a single charge. As batteries improve, so does the range. And as more customers switch to electric, more charging infrastructure becomes commercially viable.

Let's talk price. The costs are falling rapidly as the global automotive supply chain re-engineers around the assumption electric-first. Vehicle manufacturers in Europe, China and the United States are committed to going electric in the next few years, and as they compete at large volumes, costs will tumble.

Yes, it is possible to imagine an Australia in which the benefits of electric vehicles flow only to a tiny minority – in other words, the status quo. It's unlikely. Australians are global travellers and early adopters, with one of the most open and competitive car markets in the world. Experience electric vehicles, see them deployed at scale in foreign cities, and we won't look back.

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