

Where's the electricity?

The elephant in the EV sales room is the limited electricity available to charge batteries.

Ronald Stein

One of the best-known quotes of the recent past was “[where's the beef?](#)” from the late Clara Peller, an American character actress who, at the age of 81, starred in the amusing 1984 advertising campaign for the Wendy's fast food restaurant chain.

Today, the huge dark cloud over projected EV sales (and “green electricity growth) is **the availability of electricity to charge batteries** – which leads us to the quote for the foreseeable future: Where's the electricity? Indeed, it's the Elephant in the EV Sales Room that no one wants to talk about: the limited electricity available to charge even today's EV batteries.

The [global fleet of road vehicles in 2022 numbered about 1.446 billion](#). That's with a “B.” Of this huge global fleet, [only 12 million were electric vehicles \(EV\) in 2021](#). Less than 1% of the world's vehicle fleet were EVs, meaning more than 99% of the global fleet are “yet to be replaced” by EV models. This is despite over 15 years of large subsidies and increasing regulatory requirements seeking to promote EVs.

And yet, during a July 2022 Texas heat wave, Tesla [asked its customers to avoid charging their cars](#) at peak times. During a California heat wave in September 2022, Governor Newsom, who wants to ban the sale of gasoline cars after 2035, asked owners not to charge their EV batteries, to avoid blackouts. Sweden's new government has [abolished state subsidies for electric cars and plug-in hybrids](#).

The UK is ahead of most of the world, protecting its electrical grid with **Smart Chargers** and setting up **Separate Meters** for EV charging so that EV drivers help pay for a new grid!

Smart Chargers: As of May 30, 2022, new home and workplace chargers being installed in the UK must be “[smart](#)” [chargers](#)” connected to the internet and able to employ pre-sets that limit their ability to function 8:00-11:00 am and 4:00-10:00 pm. In addition to the nine hours a day of downtime, authorities will be able to impose 30-minute “*randomized delays*” on individual chargers in certain areas to prevent grid spikes at other times.

Separately Metered: The [UK Electric Vehicles \(Smart Charge Points\) Regulations 2021](#) of June 2022 says all home-installed electric vehicle chargers must be separately metered and send information to the Smart Meter data communications network. This potentially allows electricity used for charging EVs to be charged and taxed at higher rates than standard domestic electricity. The technology also enables rationing electricity for EV charging, because the government can decide when and if an EV can be charged, and whether to drain EV batteries to supplement the grid when necessary.

As “net zero” efforts move forward to reduce emissions – with coal, natural gas and nuclear power plants closing in favour of massive build-outs of unreliable wind and solar facilities utilizing breezes and sunshine for intermittent electricity, the Elephant in the Room is growing ever larger.

The intermittency of electricity generated from breezes and sunshine has resulted in the “nameplate” generating capacity of wind turbines and solar panels being a “farce” capacity to replace nearly continuous and uninterrupted electricity generation from coal, natural gas and nuclear. Subsidies for wind and solar power plants are based on what they can generate under ideal conditions, which means they should be *penalized* when they cannot deliver what they have been permitted and subsidized for.

As more EV's (the other 99% of the 1.45 billion vehicle global fleet that have “yet to be replaced”) begin trying to get charged by electrical grids around the world that are incapable of meeting growing demands for electricity, the proverbial question will be **Where's the electricity?**

The likely answer will be: **It'll be there when it gets there – not necessarily when you need it.**