



drax

Electric
Vehicles

Driving the benefits of fleet electrification with SES Water





SES Water is the supplier for over 745,000 people's water needs in the south of England. Its service covers 322 square miles, spans areas of Surrey, Kent and south London, and includes Gatwick Airport – also a Drax customer.



Our vehicle-electrification support for SES Water has developed into a true partnership.

From EV suitability assessments, through expert-yet-impartial hardware recommendations, to benefit optimisation and future planning, the Drax Electric Vehicles team has facilitated the flow of SES Water's fleet transition.

The utility's bold environmental focus, coupled with our energy expertise and bigger-picture perspective, has yielded substantial cost savings and CO₂-emission reductions.

And we're just getting started...



Adam Hall

Energy Services Director, Drax



Focus on sustainability

Having transitioned to renewable source electricity in 2018, SES Water was looking for the next step towards reducing its carbon emissions and environmental impact. A sector-wide pledge to reach carbon net zero by 2030 also gave the company – and its competitors – additional pressure to act now.

Through discussions with its electricity supplier, Drax, SES Water identified the replacement of its operations vehicles with electric alternatives as a potentially effective route.



A fresh perspective

As incumbent energy provider and experts in energy and electric vehicles (EVs), Drax was perfectly positioned to help realise SES Water's EV ambitions.

Introducing EVs to the company's fleet presented both a challenge and a huge opportunity. With SES Water's energy usage equalling that of 13,000 homes, Drax saw the potential for making an immediate impact. But it also identified the longer-term scope for improving SES's environmental credentials, as well as generating cost savings and even revenue streams. Drax knew the first step would be to support the company in providing a compelling EV business case.

With a 120-strong fleet of diesel vehicles, it was vital to prove that switching to EVs wouldn't have a negative impact on the utility's operations or costs. SES Water and Drax initially targeted 10 specific vehicles that were representative of the fleet's overall operations for the first phase of electrification.



The road to electrification



Assessing the EV potential

SES Water's existing supply arrangement with Drax provided the utility with a no-risk opportunity for exploring the potential of vehicle electrification.

By conducting an **EV suitability assessment**, Drax helped SES Water determine that there was mileage in converting their diesel-engine vehicles to EVs.



Current demands

Using information relating to vehicle mileage demands, load requirements and areas of operation, Drax conducted its **existing vehicle usage review**. SES Water already had fleet telematics capabilities in place, and this made the collation of required data all the simpler. Drax then analysed the results to determine how EVs would fare under the same demands.

Bottom line

As part of the suitability assessment, Drax also carried out an in-depth **comparative cost analysis**, generating 'total cost of ownership' figures for EVs and existing fleet vehicles.

EV purchase prices are higher than those of fossil-fuel-powered alternatives. But for an accurate comparison, it's important to consider the ways in which EVs can reduce costs, too. As well as removing the need for diesel refuelling and reducing maintenance requirements, electrification provides tax benefits and toll, levy and congestion-charge exemptions.

With Drax able to analyse and present the true financial implications of conversion, SES Water had the perspective to make informed decisions.

Drax was able to show SES Water comparative cost parity between switching to EVs and continuing to use its existing diesel vans. This insight – along with evidence to show EVs were up to the rigours of day-to-day use – provided a foundation for the utility to target the transition of 10 specific SES Water vans to electric alternatives.

Presenting both the figures and a clear overview of the conversion process, Drax helped build the business case which secured board-level approval to proceed.

Beyond the recommendation for this initial phase, Drax also identified additional electrification opportunities in the longer term to help SES Water move towards full-fleet conversion.



Drax helped us analyse the costs involved in expanding our EV fleet. This made decision making easier as we were able to compare options against our existing costs.



Laura Plumadore
Head of Corporate Services, SES Water

The van for the job

Drax based its **vehicle recommendations** on its in-depth knowledge of available EVs and the results of the existing vehicle usage review.

For SES Water's requirements, the Nissan eNV200 offered the best solution. Drax organised an on-site demonstration day, which gave the water company's drivers and decision-makers the opportunity to try the recommended vehicle for themselves.



Being manufacturer - and model-agnostic, Drax bases its advice purely on the potential for minimising operational disruption and maximising cost and environmental benefits.



Tailored charging solutions

The most effective charging solutions for EVs differ between companies. The Drax **charging infrastructure assessment** for SES Water took into account the vehicle requirement (quantity and model), user types and access control, charge speed efficiencies, location requirements and site capacity.

The utility's desire to offer charging facilities to staff and visitors as well as fleet-vehicle drivers was a particularly influential factor. Drax recommended the initial installation of 16 charge points with features such as untethered sockets for universal connectivity, and the capacity to support different tariff settings and user profiles, accordingly.



Site-specific circumstances

Drax carried out its **electrical site survey** for each location where SES Water had specified charging requirements. This provided the detail required for the energy expert to build upon its desktop reviews and plan for charge-point installations.

Customers often have aesthetic and operational preferences for charge-point locations. Drax balances these with the connection practicalities (and potential efficiencies – including cost savings) revealed by surveying.

In this case, Drax also factored in the likely impact of grid reinforcement requirements. This helped SES Water plan and budget for that eventuality – and consider the potential impact of needing more supply capacity in the future.



Fixture and fitting

The **implementation** phase involved Drax monitoring the selected hardware's lead times, organising purchases on SES Water's behalf, scheduling site works and project managing installations.

The energy expert worked closely with its specialist charge-point partner at relevant sites to programme the hardware for SES Water's requirements. Drax also acted as point of contact for its client's facilities, site-management and health and safety staff, minimising disruption and dealing quickly with any problems that arose.



Operation and upkeep

Drax Electric Vehicles' involvement with SES Water's EV conversion didn't end at installation. Supporting with EV fleet management and control enabled the energy expert to facilitate a smooth transition and ensure delivery of projected efficiencies and savings.

- Drax provided SES Water with a suitable **leasing partner recommendation** based on cost, service requirements and the availability of the chosen vehicle model. Proposing an EV-only leasing partner, Drax was confident SES Water would get the right levels of care and expertise.
- SES Water decided to manage its charge stations' access control settings 'in house'. Embedded software enabled the utility to set up different profiles and charge tariffs for the various user groups it had identified. Even so, as Drax offers **charge station management** services, it remains on hand to support with any hardware issues and answer any queries that arise.
- To give SES Water more peace of mind, Drax included **maintenance and servicing** support within the contract. This covers updates to the charge stations' software, as well as fault detection and correction – issues are often addressed before the water company's aware a problem exists. It also includes the coordination of charge-station programming specialists – and even the management of hardware replacements – if required.
- SES Water relies on its existing telematics reporting for vehicle, driver and operational insights. It was thrilled that the Drax EV **telematics provision** offered not only a comparable level of detail, but enabled compatibility with the current data generated by non-EV vehicles.

Success by association

The Drax support offer takes the form of an ongoing partnership with SES Water. The energy expert provides assistance with existing assets while also aiming to build on its client's environmental credentials and electric-vehicle investment.

This has already resulted in extensions to SES Water's EV conversion commitments. The water company has introduced additional EVs to its fleet, and Drax has managed the installation of further charge stations, growing the network of equipped SES Water sites.

Another example of the partnership approach was the **driver training** Drax organised on SES Water's behalf. The sessions provided an opportunity for drivers to act on the data that the telematics devices had generated in relation to driving efficiency. SES Water enjoyed the informal training, which incentivised economical driving practices to optimise efficiencies and reduce costs.

As the largest single provider of renewable power to the Grid, Drax also continues to supply SES Water with renewable source electricity. This gives the utility a firm foundation for introducing environmental initiatives – and for substantiating its environmental claims.





56%

saved on vehicle running costs (electricity vs fuel)



18 tonnes

of carbon dioxide emissions prevented

Results based on the 14 months from the start of the trial, and compared with previous diesel vehicles



A significant impact

The initial phase of EV conversion has resulted in substantial financial and environmental benefits for SES Water.

Based on the proof already provided by the initial trial, SES Water has extended its commitment to electrification by identifying and replacing further fuel-based vehicles with electric alternatives. The utility's charge station count has increased to 42, spread beyond its head office to treatment site locations across its network. With Drax support, SES Water will target the conversion of vehicles with different uses, as EVs continue to demonstrate the ability to deliver.

The utility also believes that the market awareness Drax provides will soon present new opportunities to convert vehicles with even more demanding requirements, thanks to the evolution of available EVs.

The future's green

SES Water was clear from the outset of its EV journey that the initial wave of fleet electrification represented a trial to prove cost-competitiveness, and a stepping stone to broader deployment.

As it works towards the conversion of its full operations fleet, SES Water's keen to develop frameworks for incentivising its staff to choose EVs. The utility believes the trial has already encouraged a shift in mindset amongst many.

The initial suitability assessment also identified the longer-term potential for further environmental benefits and cost savings. Drax is ideally placed to make sure SES Water's ready to act when the time's right.



Drax continues to monitor technological advances, vehicle launches and the resulting opportunities in order to develop **electrification expansion** plans for SES Water.

These plans have already seen the installation of home-based vehicle charging facilities for drivers, following extensive practicality analysis and development work. Linking related electricity consumption to SES Water's energy contract, or rolling out existing home-energy-use reimbursement solutions, will build on efficiencies and simplify the charging challenge.



Adopting an **EV innovation partnership approach**, Drax is also keeping an eye on the potential of vehicle-to-grid (V2G) charging – which will soon offer revenue streams for EV adopters.

Assets such as equipment and offices are already enabling businesses to take advantage of financial incentives for helping National Grid balance electricity supply with demand. SES Water believes its vehicle fleet can drive cost savings in precisely the same way in the future.

The utility is planning to convert every fleet vehicle to electric before 2030.



Every year we're expanding our EV fleet, which is in line with our company goal to become more environmentally friendly and reach net zero by 2030. Drax has helped us on this journey.



Laura Plumadore
Head of Corporate Services, SES Water

Drax - sustainability as standard



Drax Power Station provides 12% of the UK's renewable power, and is the largest decarbonisation project in Europe



We're the biggest supplier (by annual consumption) of renewable power to UK businesses



Our bioenergy with carbon capture and storage (BECCS) trial aims to capture one tonne of CO₂ each day



We have partnerships with over 2,300 renewable generators across the UK



Drax is aiming to become a net zero company by the end of 2040

To learn more about our EV charging solutions or to discuss the potential of converting your fleet vehicles, get in touch with our experts.



energy.drax.com/ev



evsales@drax.com



[/company/drax-electric-vehicles/](https://www.linkedin.com/company/drax-electric-vehicles/)



Certified by LRQA to ISO
9001:2015 – Quality
Management System