# TfL secures 15-year solar deal to power entire London Underground by 2026



Transport for London (TfL) has taken a significant stride towards decarbonising its operations by entering into a 15-year Power Purchase Agreement (PPA) with EDF Renewables UK, securing a supply of renewable electricity from a new solar farm to be constructed in Longfield, Essex. The facility, expected to be operational by 2026, will deliver up to 80 gigawatt hours (GWh) annually—enough to power the entire London Underground network for a year.

This development is part of TfL’s broader ambition to source up to 70% of its electricity through such PPAs and achieve 100% renewable electricity consumption by 2030. Currently, TfL is London's largest single electricity consumer, using around 1.6 terawatt hours (TWh) annually. The fixed-price agreement aims to protect TfL from fluctuations in the energy market, providing long-term price stability while simultaneously supporting the rapid transition to clean energy.

Rachel Cary, Head of Industrial Strategy at Energy UK, highlighted the value of PPAs in accelerating renewables investment, reducing systemic costs, and improving air quality. These agreements not only grant organisations like TfL supply security but also strengthen the wider grid’s move toward sustainability.

The Longfield solar farm is projected to generate approximately 400 GWh annually by the end of the decade, marking a substantial addition to the UK’s renewable capacity. Over the span of the contract, this partnership is estimated to cut TfL’s carbon emissions by over 28,000 tonnes—a figure roughly equivalent to the emissions from 33,300 flights between London and New York.

Environmental considerations are integral to the Longfield project. The solar farm will cover around 400 hectares and include extensive tree and hedgerow planting along with habitat regeneration efforts. With a targeted biodiversity net gain of 87.1%, far exceeding the statutory minimum of 10%, the project is designed to support local ecosystems and comply with biodiversity targets outlined in the Environment Act 2021.

Parallel to this renewable energy agreement, the Mayor of London has launched a climate finance taskforce to mobilise an estimated £75 billion toward climate-related infrastructure investments. Drawing together financial sector experts, this initiative aims to fast-track funding for projects that underpin London’s transition to a low-carbon economy.

TfL is also actively pursuing the development of future private wire solar projects, which could generate up to 64 megawatts (MW) of electricity. If successful, these projects would directly power the Underground network, contributing around 5% of the Tube’s electricity demand from a purely renewable source.

Lilli Matson, TfL’s Chief Safety, Health and Environment Officer, described the PPA as a landmark moment for London’s public transport sustainability efforts. She emphasised how the agreement not only enables investment in new renewable infrastructure but also creates green jobs, enhances local biodiversity, and stimulates the national economy. Moreover, it exemplifies how public sector purchasing power can catalyse private investment in clean energy, opening pathways to decarbonise the broader UK electricity grid.

This initiative echoes the Mayor of London’s 2022 commitment to powering the Tube network with 100% renewable electricity by 2030, aiming to establish a zero-carbon railway system. TfL’s proactive approach as a major electricity consumer underscores the city’s broader environmental objectives to reduce carbon emissions and lead in climate action through innovative, sustainable transport solutions.

### 📌 Reference Map:

* Paragraph 1 – [[1]](https://airqualitynews.com/fuels/tfl-sign-deal-to-secure-solar-energy-supply-for-15-years/)
* Paragraph 2 – [[1]](https://airqualitynews.com/fuels/tfl-sign-deal-to-secure-solar-energy-supply-for-15-years/), [[2]](https://www.london.gov.uk/press-releases/mayoral/plans-to-power-tfl-network-with-green-energy), [[4]](https://www.london.gov.uk/press-releases/mayoral/plans-to-power-tfl-network-with-green-energy)
* Paragraph 3 – [[1]](https://airqualitynews.com/fuels/tfl-sign-deal-to-secure-solar-energy-supply-for-15-years/)
* Paragraph 4 – [[1]](https://airqualitynews.com/fuels/tfl-sign-deal-to-secure-solar-energy-supply-for-15-years/)
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## Bibliography

1. <https://airqualitynews.com/fuels/tfl-sign-deal-to-secure-solar-energy-supply-for-15-years/> - Please view link - unable to able to access data
2. <https://www.london.gov.uk/press-releases/mayoral/plans-to-power-tfl-network-with-green-energy> - In June 2022, the Mayor of London announced plans to power the Tube network with 100% renewable electricity by 2030. Transport for London (TfL), one of the UK's largest electricity consumers, launched a Power Purchase Agreement (PPA) tender to secure renewable energy sources, aiming to reduce carbon emissions and support the transition to a low-carbon economy. This initiative aligns with the Mayor's goal of achieving a zero-carbon railway by 2030 and contributes to London's broader environmental objectives.
3. <https://www.london.gov.uk/press-releases/mayoral/mayor-confirms-tube-renewable-energy-plan> - In June 2022, the Mayor of London confirmed the first steps towards powering the Tube network with 100% renewable electricity by 2030. This initiative involves launching a Power Purchase Agreement (PPA) tender to purchase renewable energy directly from generators, aiming to decarbonise London's transport system and support the Mayor's goal of a zero-carbon railway by 2030. TfL, as a major electricity consumer, seeks to reduce carbon emissions and contribute to London's environmental objectives through this plan.
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