

SUSTAINABLE ENERGY WEEK 2024

BUILDING RESILIENT & JUST ENERGY SYSTEMS

16-20 SEPTEMBER 2024 | PALAIS DES NATIONS | GENEVA



Ukraine 2Power

Boom of the electric vehicle market in Ukraine amid power outages and war.

How energy challenges and driving EV adoption are reshaping infrastructure in Ukraine.



Ukraine2Power: Tackling Energy Shortages Due to Russian Attacks

Ukraine2Power (U2P) started in late Autumn 2022 as a private initiative from Berlin to help solve the energy shortages caused by Russian attacks on Ukraine's power system by delivering backup power solutions to support critical infrastructure across the country.

U2P uses battery storages made from reused electric vehicle (EV) batteries to replace traditional fuel generators.

One mobile power station **can prevent up to 10 tonnes of CO2 emissions** over its lifetime compared to a traditional 3kVA generator.

Key Projects



Delivered **mobile power systems to over 50 hospitals, schools, kindergartens**, ensuring essential services continue during blackouts.



Supplied **power systems to Ukrainian Railways repair teams** which are often operating open air.



Aiming to **replace diesel generators with lithium batteries and inverters** in Ukrainian **medical train cars**.

Electric Vehicle Market Growth in Ukraine Amid War and Energy Challenges

Key Trends in 2023-2024



Record EV Sales Despite War

In 2023, Ukraine saw a **sharp increase** in electric vehicle sales, with over **54,800 EVs purchased** in the first 8 months — more than the total sold in 2022. In **August 2024**, a record **6,714 EVs** were registered, an 80% increase compared to 2023.



EVs as Backup Power

Amid power outages, EVs are being used for transportation but also to power homes. Many Ukrainian homeowners with private solar panels or backup generators charge their EVs at home, using them to store and provide energy during blackouts.



Cost-Effective for Homeowners

Charging an EV at home is **significantly cheaper** than using gasoline, making it an attractive option. Government incentives like **zero customs duty and VAT exemptions** further encourage the adoption of EVs.



Increased Demand Due to Fuel Crisis

The rise in EV purchases is driven by concerns over fuel shortages and rising gasoline prices, as well as the possibility of new taxes. Western regions, like Volyn, saw EV registration growth of over 13% in August 2024.

Building Back Better: Decentralized Generation for Ukraine's Energy and EV Infrastructure

REBUILDING UKRAINE'S ENERGY SYSTEM



Massive Damage

Russia has destroyed key parts of Ukraine's energy grid, with over 9 GW of generation lost.



Decentralized Generation

Why it's important to rebuild a decentralized energy system: it's harder to attack and also helps support reliable EV infrastructure and charging stations.

EV CHARGING CHALLENGES



New Regulations

At least 5% of parking spaces in new developments must have EV charging stations, but this is often not enforced.



Growing Market

More EV charging stations are being installed at gas stations, public areas, and residential buildings, but the lack of coordination and standards is leading to overloading of old networks.

Key Benefit: Decentralized energy will strengthen the grid, ensure **stable EV charging**, and make Ukraine's energy infrastructure more resilient to attacks.

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Thank you!

Nataliia Fiebrig

Co-Founder and CEO Ukraine2Power NGO

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The views expressed are those of Nataliia Fiebrig do not necessarily reflect the views of the United Nations.

