



UNECE

Virtual horizons: Unlocking the potential of the virtual worlds for the Sustainable Development Goals

Virtual Power Plants and Digital Twins: a journey of advancing the state of the art



@ UN Virtual Worlds Day

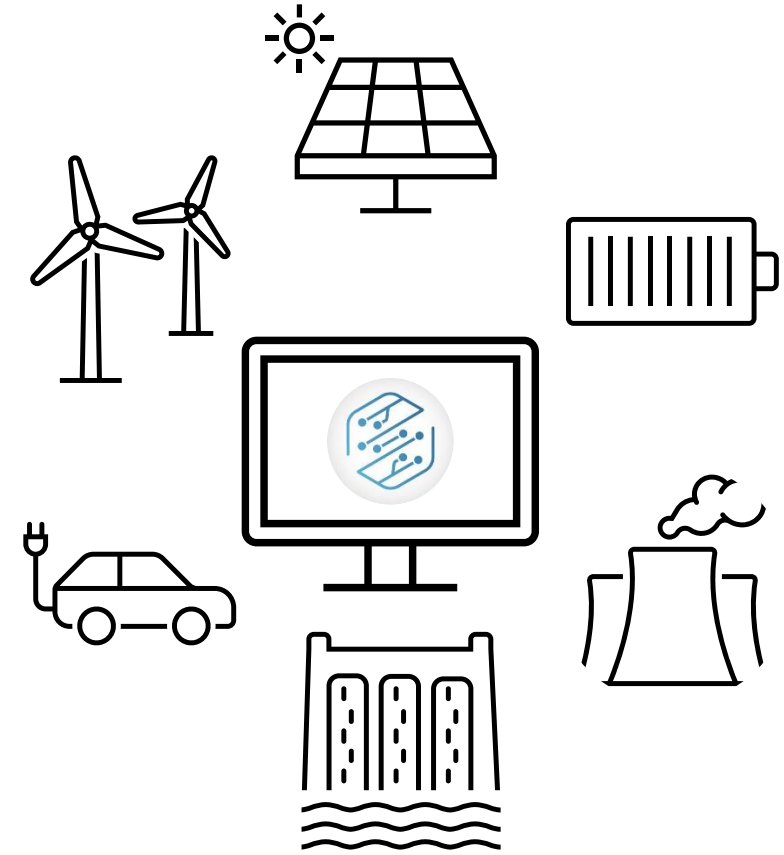
Harnessing the metaverse to advance the Sustainable Development Goals



What is a virtual power plant? In a nutshell...

A network of distributed generation assets, coordinated through advanced software to operate as a unified power plant.

- Ability to leverage existing infrastructure
- Seamless integration with renewables
- Dynamic response to demand fluctuations
- Emergence of 'prosumers'

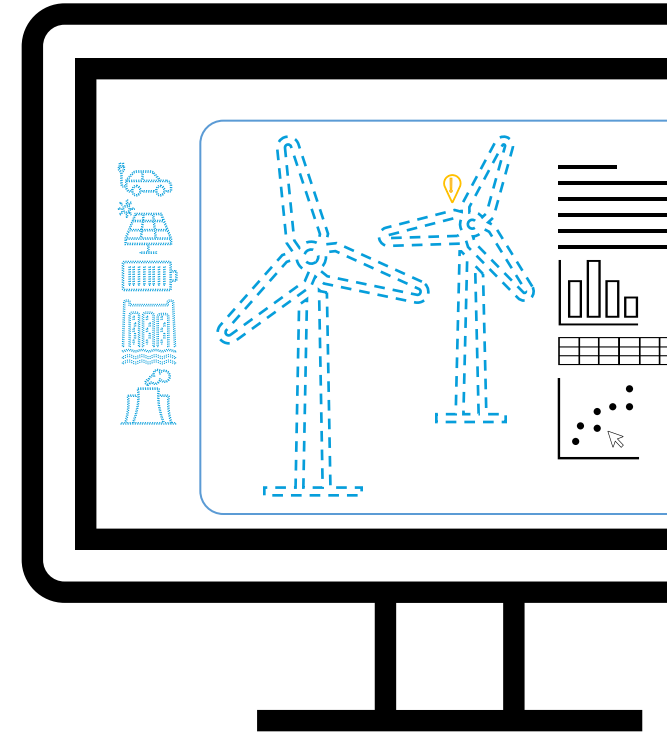


What is a digital twin, then?

In a nutshell...

A digital model of a physical asset, system, or process

- Simulates performance in real-time providing insights into operation
- Integration of real-time data with predictive analytics
- Diagnostics of own issues and suggestions on corrective actions
- Management of complex energy systems efficiently and reliably



Tech advancements make energy transition a reality

Applications make breakthroughs happen

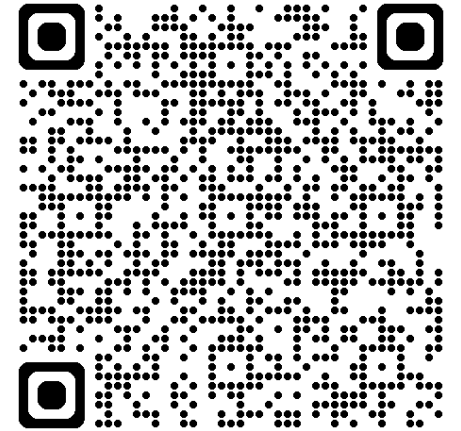
The two technologies are state-of-the-art and powerful on their own, and they are not just independent technological advancements: their true potential for a **cleaner, smarter, and more efficient energy ecosystem**, lies in their integration.

What if such integration is embraced by not only energy supply, but also, end-use?

What is UNECE doing in this direction?

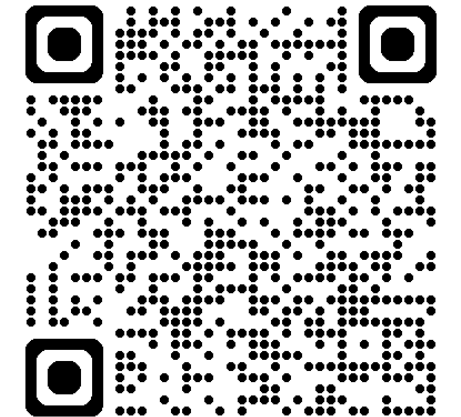
Developed in line with core functions of UNECE, a rich body of our **instruments** drives progress of UNECE member States towards the green transformation.

See: Toolbox of ECE instruments (E/ECE/1505):



Linked to energy, UNECE **pioneers sectoral digitalization** efforts: **UNECE Task Force on Digitalization in Energy** is a platform for cross-sectoral dialogue that shapes the respective policy agenda.

See: Task Force information and documentation:





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Thank you!

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