What digitalization means for charging industry?
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Flexibility, regulations and new ~~risks~~ opportunities

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Background & three hats

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Sähkoinen liikenne
E-mobility

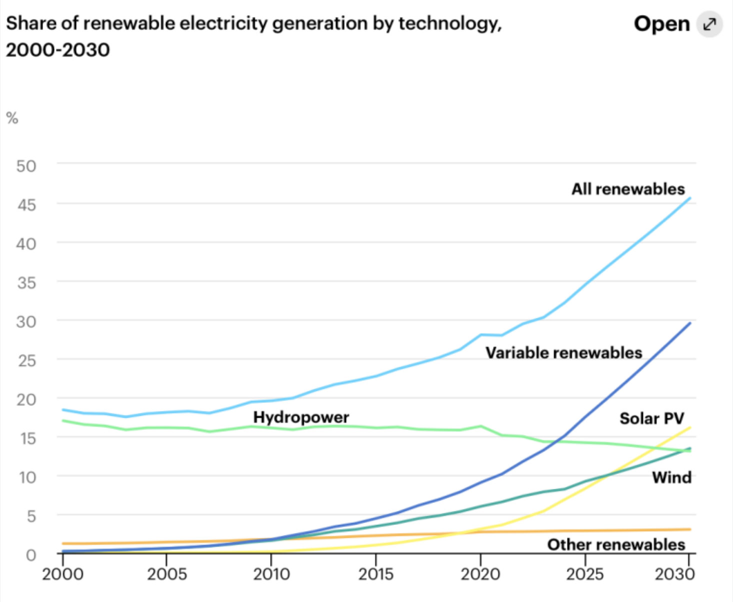
ITS Finland


Flexibility

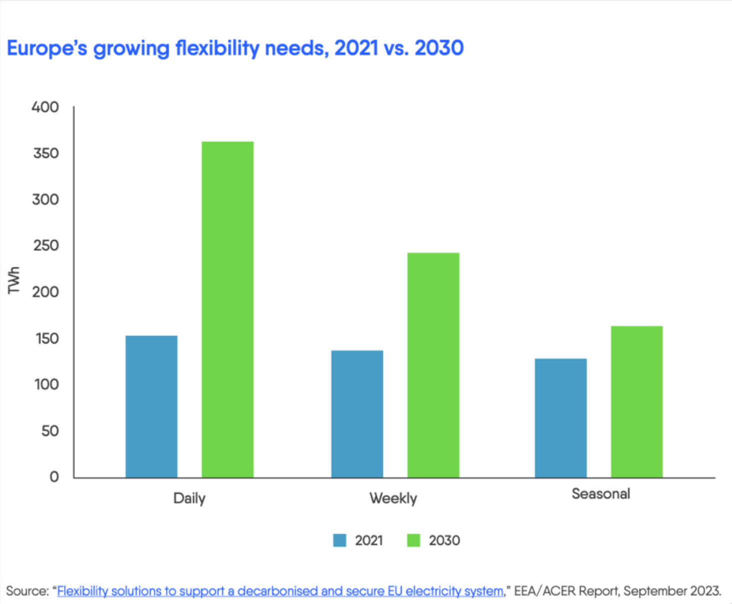

Regulation and market environment
#TeamJunckerEU
Europese Commissie
Commission européenne
European Commission
ec.europa.eu


New ~~risks~~ opportunities = Security and resiliency

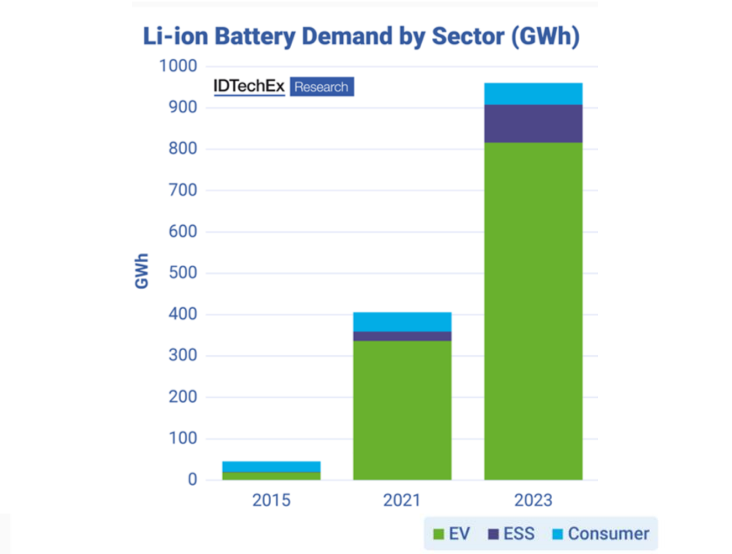
Renewables will double globally within the next 5 years, and EVs are required to stabilize the energy system



Variable energy production is projected to double globally over the next five years from 13% to 30% (IEA 10/24)



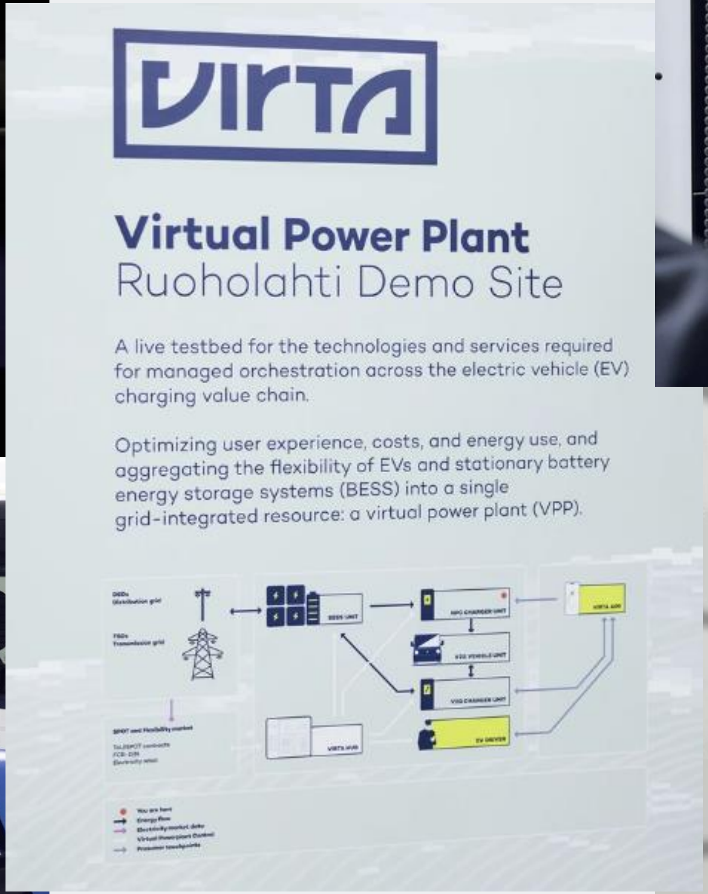
This shift creates volatility in energy production, requiring greater flexibility in the energy system while also increasing price volatility. (Eurelectric 3/25)



Li-ion Battery Demand by Sector (GWh) (left) and (%) (right). Source: IDTechEx

EVs are batteries on wheels, and 85%of new Li-ion battery capacity went to EVs in 2024. BESS has a 10% share of new battery capacity (IDTechEx)

V1G + V2G + BESS provide complementary flexibility services that can be aggregated to a single flexibility platform



Drowned by a tsunami of directives, fragmented ‘harmonization,’ and Brussels-effect rulemaking, the EU is regulating itself into irrelevance—suffocating EV charging innovators with a litigation-driven, 27-variant compliance maze that hikes costs, stalls scale, and hands the future to our global rivals

	AFIR	EPBD	EU data act	VAT in the Digital Age	Digitalizing the energy sector – EU action plan	Fuel quality directive	EU ETS II	ITS Directive
AFIR	–	?	?	?	?	?	?	?
EPBD	?	–	?	?	?	?	?	?
EU data act								
VAT in the Digital Age								
Digitalizing the energy sector – EU action plan								
Fuel quality directive	?	?	?	?	?	–	?	?
EU ETS II	?	?	?	?	?	?	–	?
ITS Directive	?	?	?	?	?	?	?	–

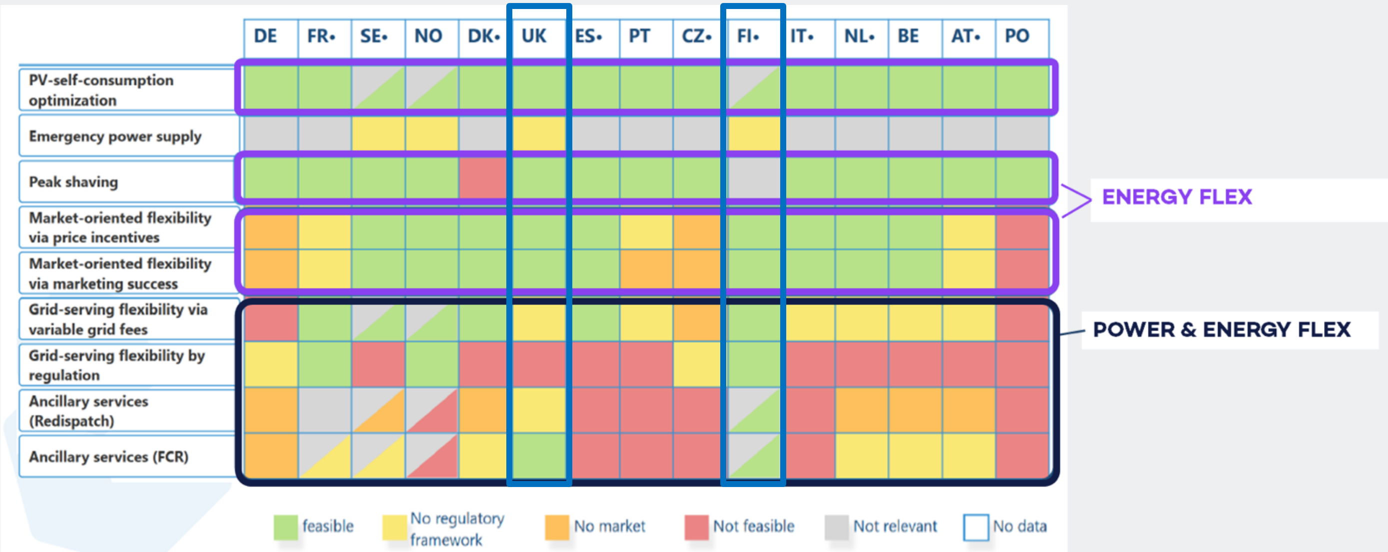
The Constitution of Innovation

A New European Renaissance

By Luis Garicano, Bengt Holmström & Nicolas Petit · Nov 10, 2025

The UK and Finland are the European leaders in integrating EVs into flexibility markets through V1G and V2G

V1G and V2G-market readiness: assessment of feasibility in European countries in early 2025



UK and Finland shine due to:

- Early, granular flexibility market design
➔ No major regulatory barriers
- Support for aggregators
- Advanced metering and data access
- Technology-agnostic, performance-based procurement for ancillary services
- Strong roaming and EV adoption ecosystems

Image: **V1G and V2G in an international context** - **January 2025** - FfE Research Centre for Energy Economics

New ~~risks~~ opportunities ?

450 billion worth of fossil fuel imports to EU, most for transport. 54 % of energy consumption from imports ➔ EVs reduce this drastically.

➔ Unwanted interest towards EVs and charging infra increases

➔ Finnish way to enhance resiliency and de-risk charging infra:

- ➔ Cooperation between emergency supply agency – Pools – Companies.
- ➔ Companies gain completely new level of risk mitigation assistance.

Want to learn more? Come and have a chat with me!

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