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Geopolitical and Energy Challenges in the European Context

Catharina Sikow Magny

Agenda

A Secure and Flexible Power System: Is Europe Getting the Framework Right?

- New geopolitical context and what energy security means for Europe today
- Evolution of European energy policy and electricity market design
- What Europe needs to do to turn an increasingly electrified and renewable-based power system into an asset for energy security, resilience and competitiveness

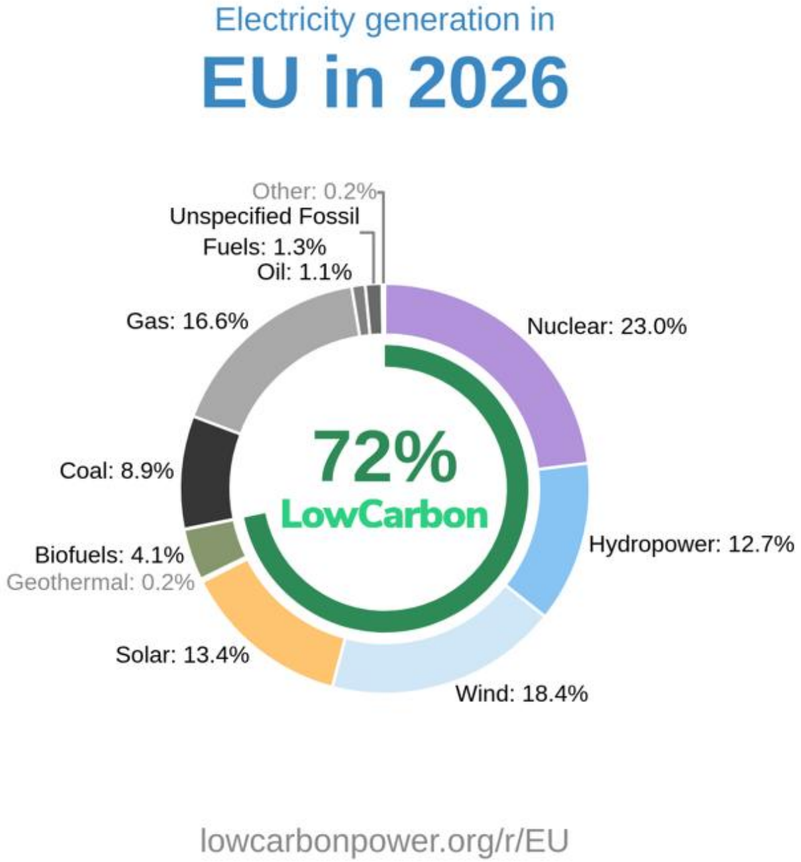
Rapidly changing energy landscape – higher uncertainty and risk

I. Rapid uptake of renewables

- Increasing variability: new sources of flexibility needed, from minutes to weeks
- ~80% of new renewables connected to the low/medium voltage distribution grid
- Hence 2/3 of investment needs at local, 1/3 EU and cross border level
- *But: long connection queues for generation, storage or load, waiting times in years*

II. Technology development

- Battery boom in the past 5 years
- Heat pumps, geothermal, waste heat, electric cars as battery, "water kettles", sand storage,...
- Demand response
- *But: are these coming fast enough?*



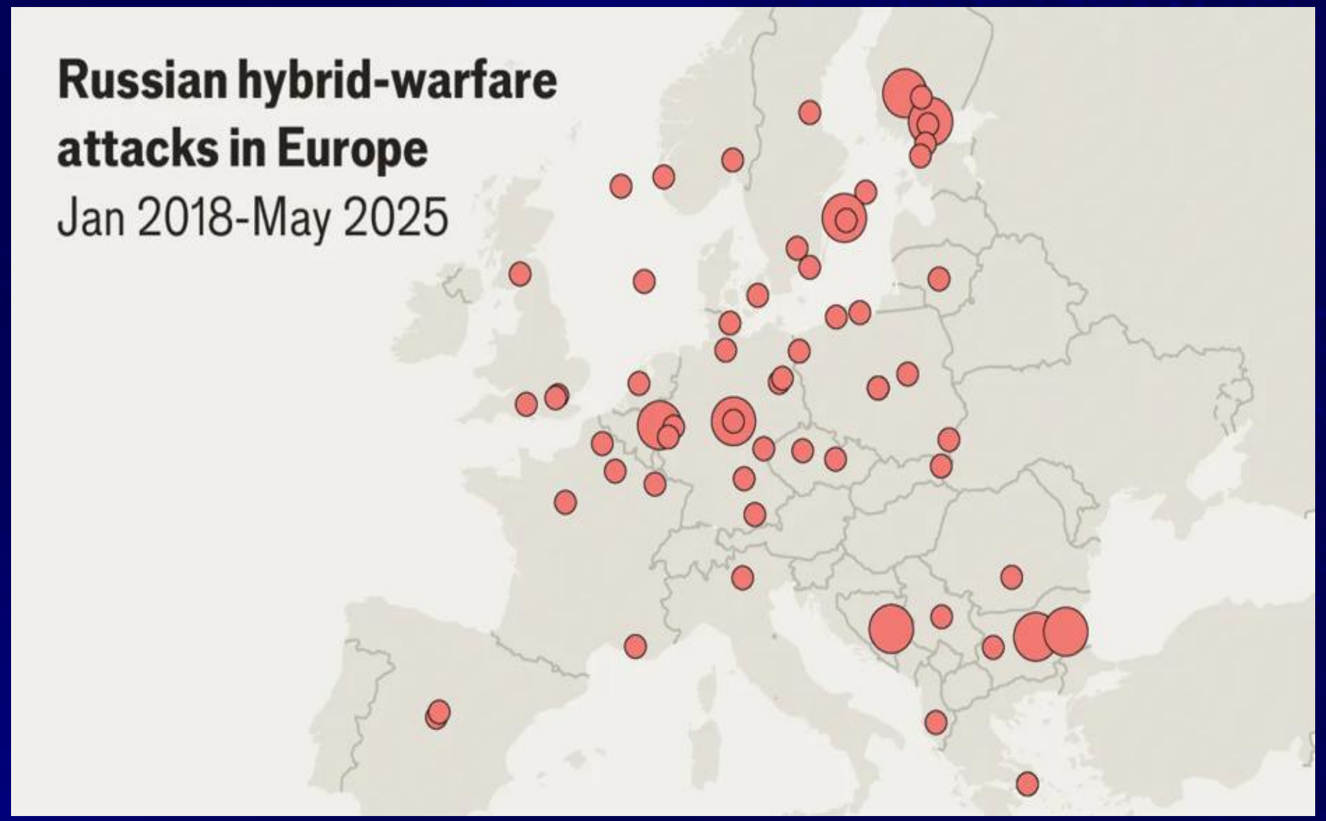
Rapidly changing energy landscape – higher uncertainty and risk

III. Geopolitics, dependence, security risks (Niinistö report)

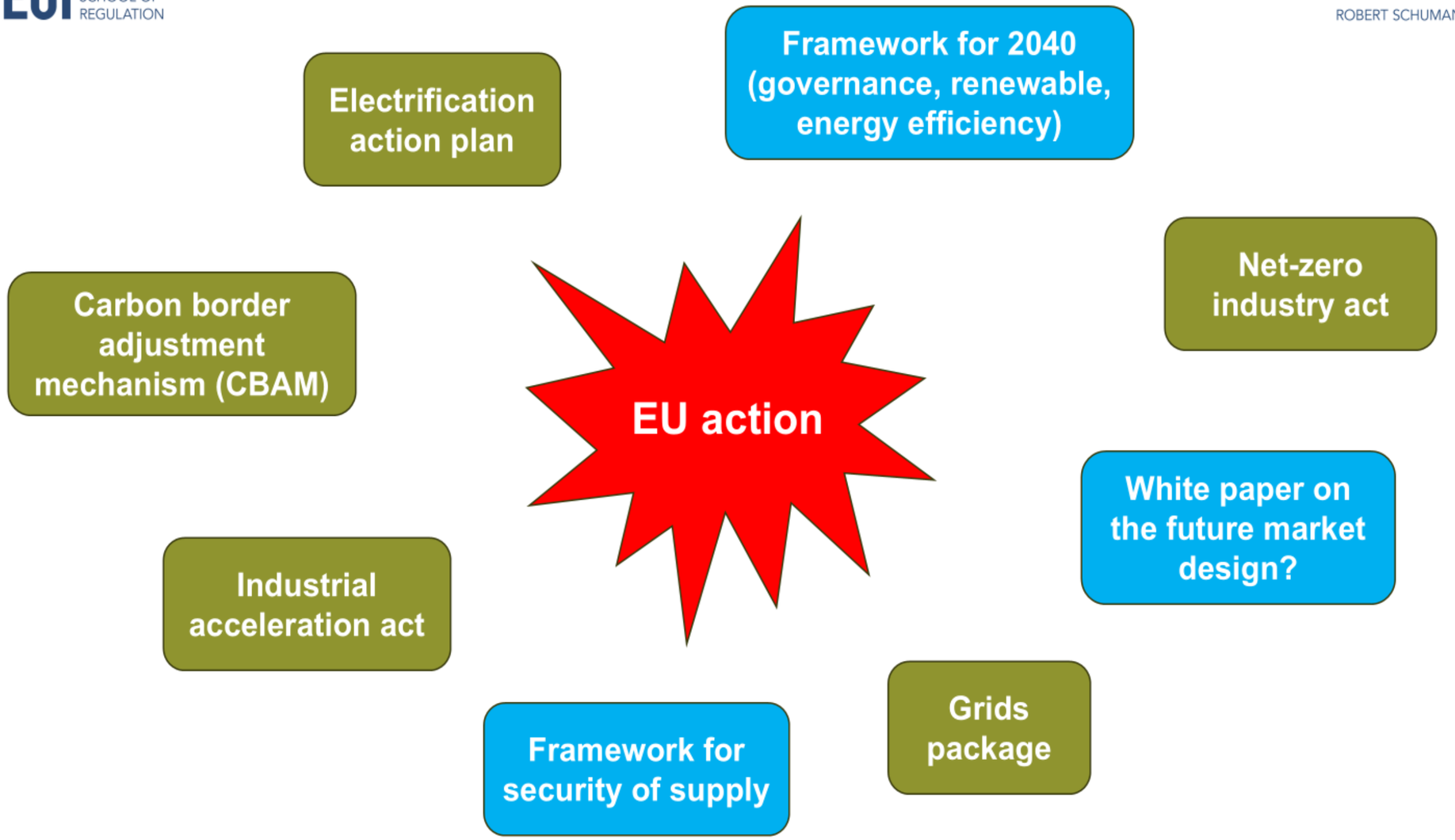
- Geopolitical risks and malevolent actions have increased considerably
- Import dependency for critical raw materials, energy equipment, fossils
- Extreme weather conditions have led to curtailment or damages in generation and grids
- *In particular: today's society without electricity comes to a halt as a whole*

IV. European economy, cost, competitiveness (Letta and Draghi reports)

- Fragmented internal market, capital markets national
- High cost of energy
- Renewable production is cheaper but the system costs may be higher
- *Hence: start-ups go to the US for risk capital; energy intensive industry risks shutting down or relocating outside of EU*

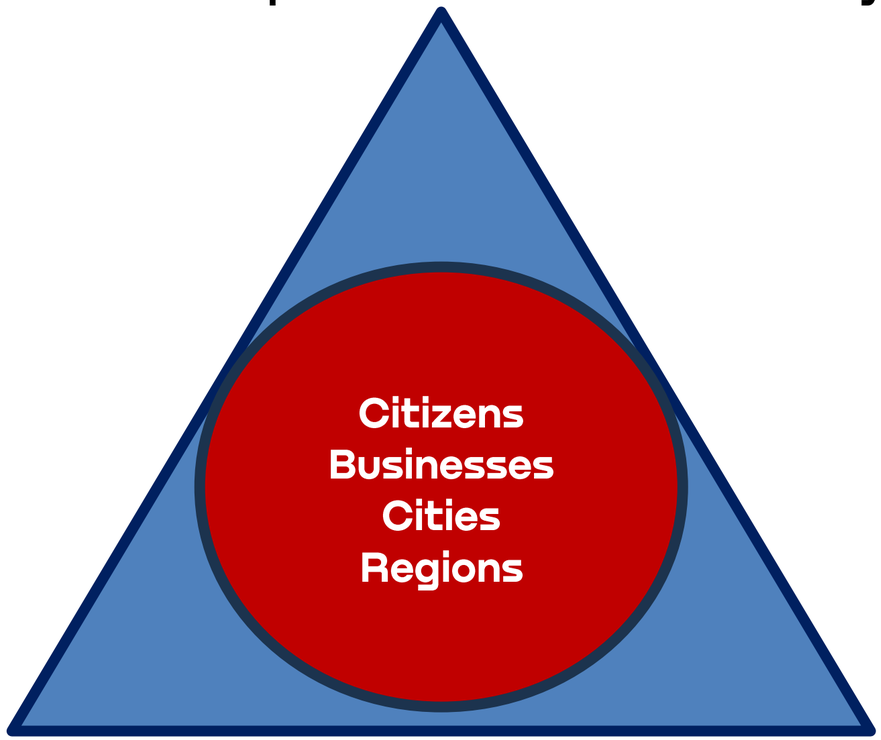


Source: The Economist


Framework for 2040 (governance, renewable, energy efficiency)
Electrification action plan
Net-zero industry act
Carbon border adjustment mechanism (CBAM)
EU action
White paper on the future market design?
Industrial acceleration act
Grids package
Framework for security of supply

The energy triangle is changing – what about policy?

From markets to competitiveness and affordability (cost)



From sustainability as mitigation to adaptation and resilience

From security of supply and diversification to protection of critical infrastructure and resilience

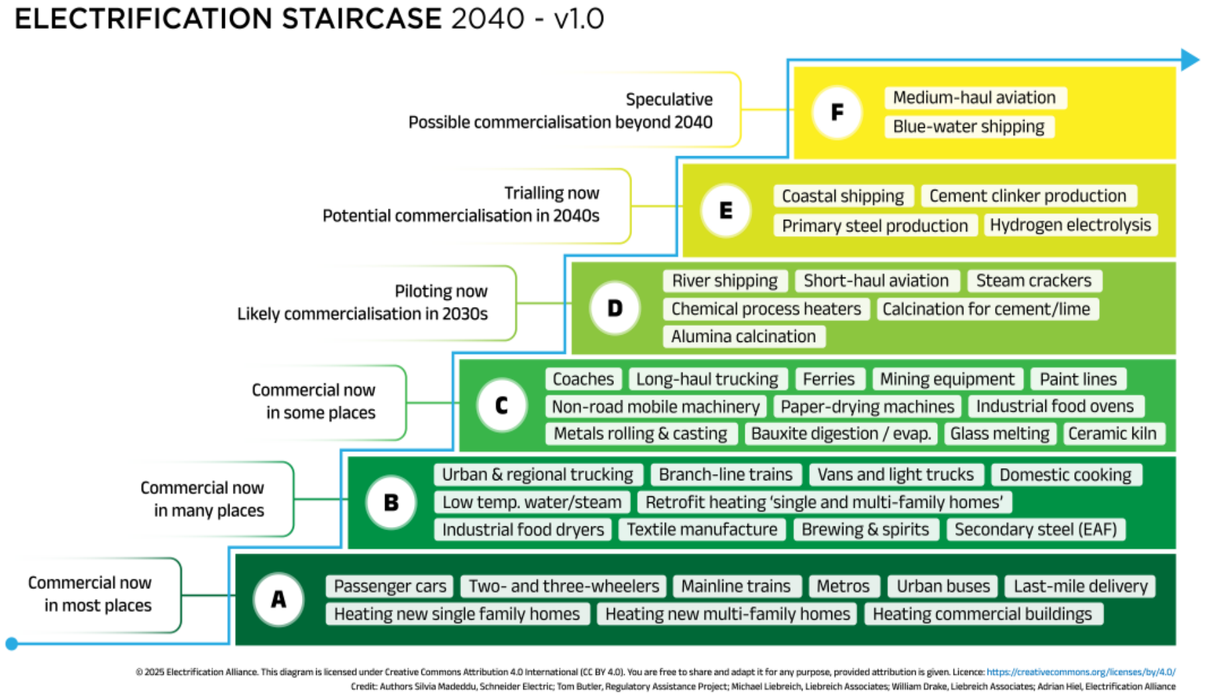
Two priorities for action

Implementation – key urgent priority

- Electrification is applying Energy Efficiency First -principle at the system level
- Electrify everything possible and start with the "low hanging fruits"
- Cross-border grids: from more plans and paper to implementation - we know which projects are needed (e.g. the Iberian connections!)
- One-size does not fit all but learn from others - "united in diversity"

Working methods to be adjusted

- Coordination to save costs (regional planning of generation, capacity mechanisms, balancing, scenarios)
- Cooperation to work on common regional issues, to identify common solutions and to agree on priorities for implementation
- Coordinate supply-demand, cooperate with industry
- Adaptive regulatory approach is necessary
  - Regulatory sandboxes
  - Learning by doing



Source: Electrification Alliance

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Obrigado.