

THE EUROPEAN ELECTRICITY MARKET REFORM: IS A NEW TARGET MODEL EMERGING?

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Webinar
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Agenda

- Introductions
- The European electricity market reform - implications and directions for the emergence of a new market model?
 - The role of planning processes and new methodologies to analyse the needs for flexibility, adequacy, and network development
 - Best practices for the design of Contracts for Difference (CfDs)
 - State aid and competition issues associated with long-term contracts
- Introduction to the Executive course on electricity markets
- Conclusion

Introductions

Faculty and course participants

Introductions

- Course Directors
 - **Thomas-Olivier Léautier** | Total Energies, Toulouse School of Economics and Florence School of Regulation/RSCAS/EUI
 - **Fabien Roques** | Compass Lexecon, University Paris Dauphine and Florence School of Regulation/RSCAS/EUI
- Training Coordinator
 - **Marina Cascella** | Florence School of Regulation/RSCAS/EUI

The European electricity market reform - implications and directions for the emergence of a new market model?

Electricity matters

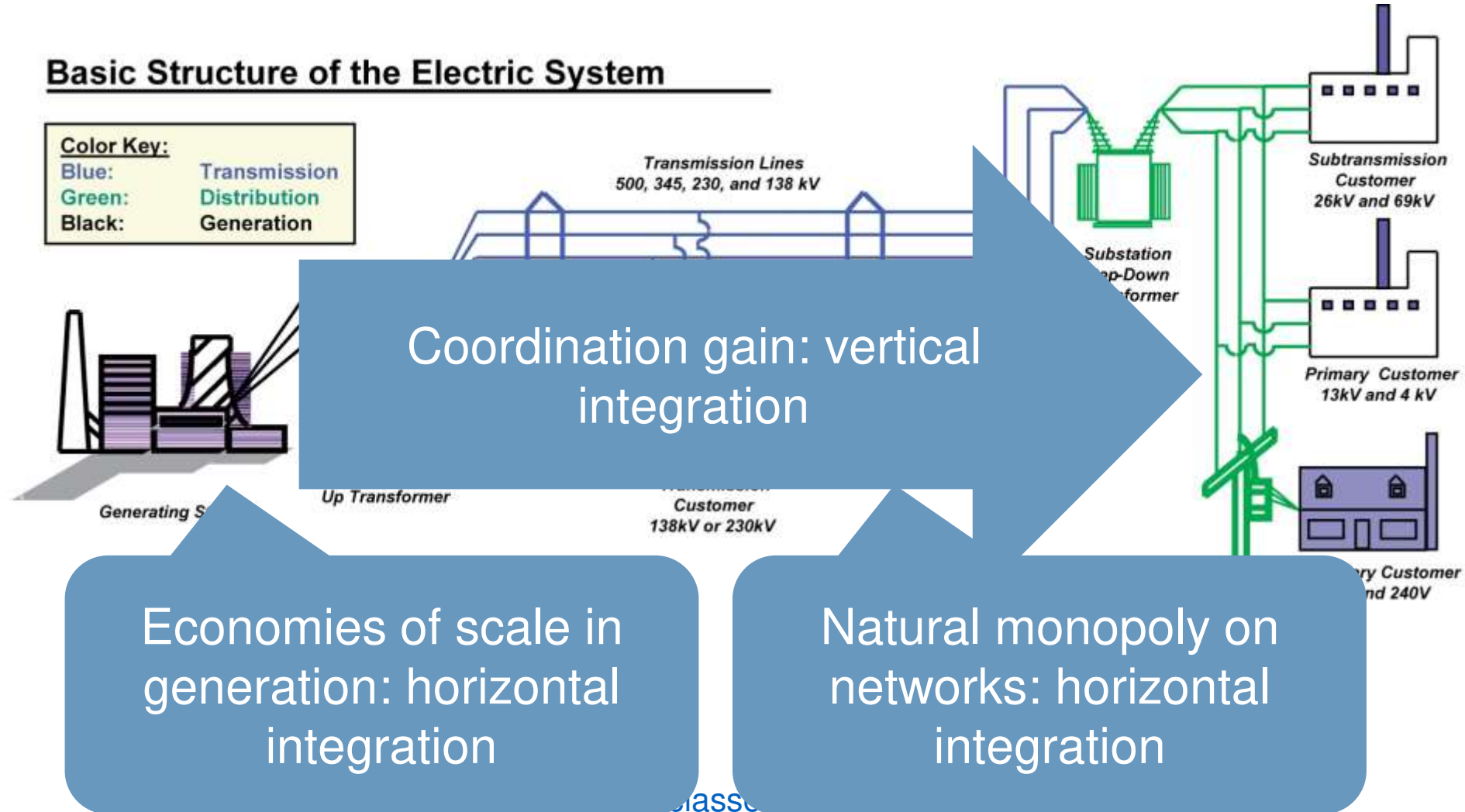


“Communism is Soviet power plus the electrification of the whole country.” Vladimir Ilyich Ulyanov, Lenin (1920)

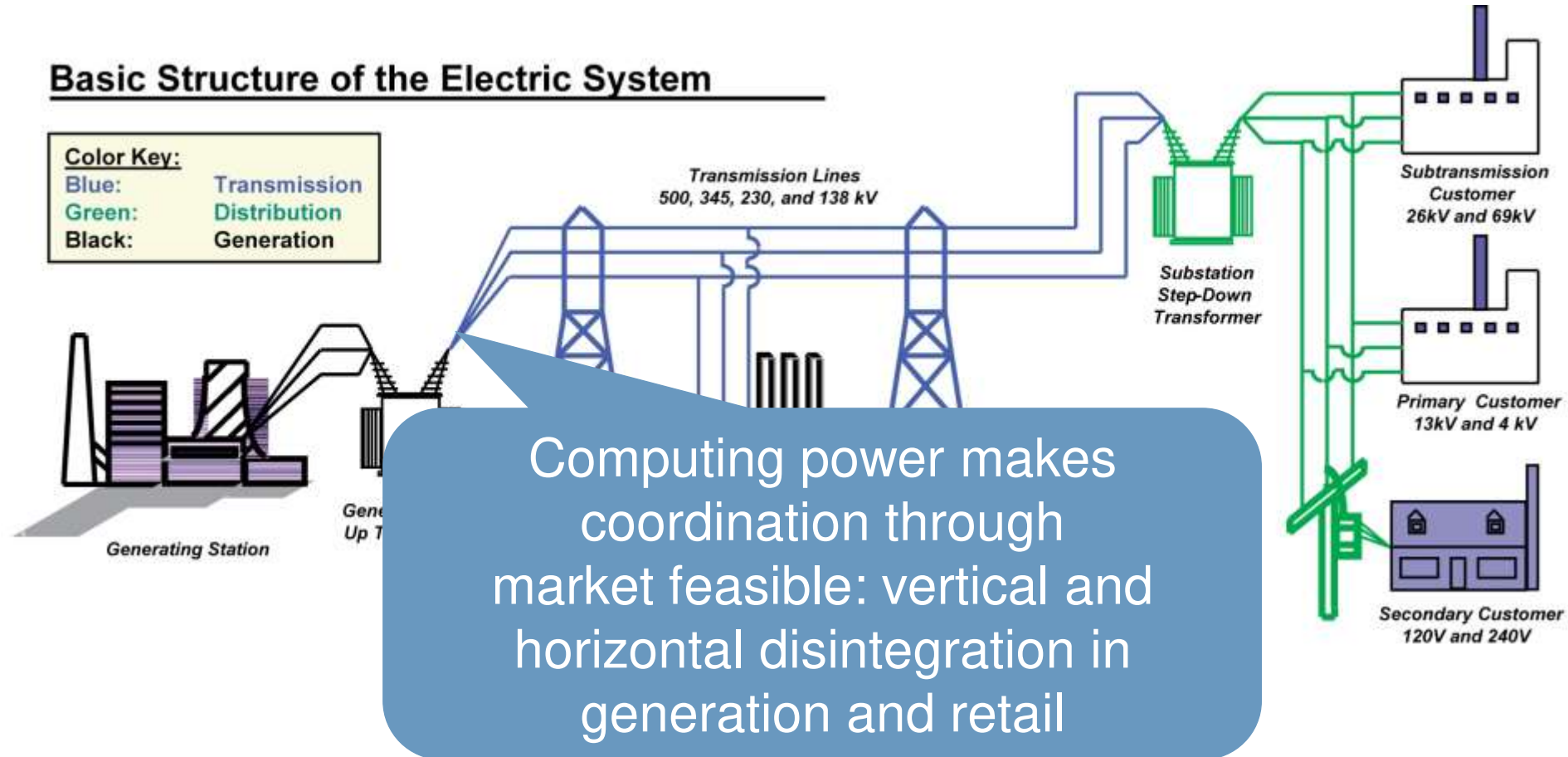
A brief history of the power industry liberalisation

1. The “golden age”: regulated/state owned monopolies (1917 to mid 1990s)
2. From regulated monopolies to markets (1990s to mid 2000s): market restructuring, international expansion, new business models
3. The return of regulation (mid 2000s to today)
 1. 2000/2001 California power crisis
 2. 2008 financial crisis
 3. Energy transition and renewable support
4. Toward a new “hybrid market model”
 1. The role Energy security and affordability / competitiveness
 2. The need for an assessment of system needs and a new definition of security of supply
 3. The role of long-term contracts (both CfDs and PPAs)
 4. The issue of cost pass through

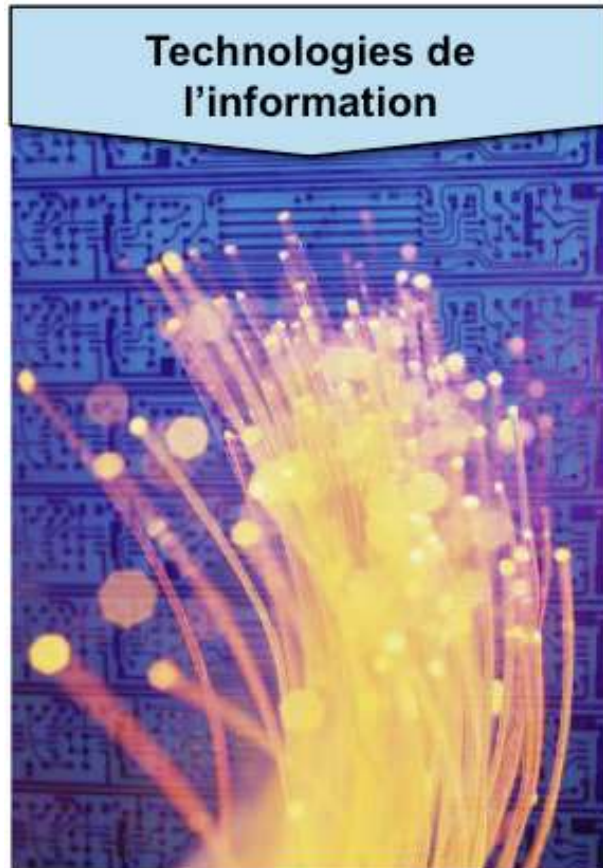
20th century: vertical and horizontal integration



End of 20th century: first digitalisation



Restructuration driven by changes in technology ...



Source: Paul Joskow and Richard Schmalensee, 1986. Markets for Power, MIT Press

... and politics



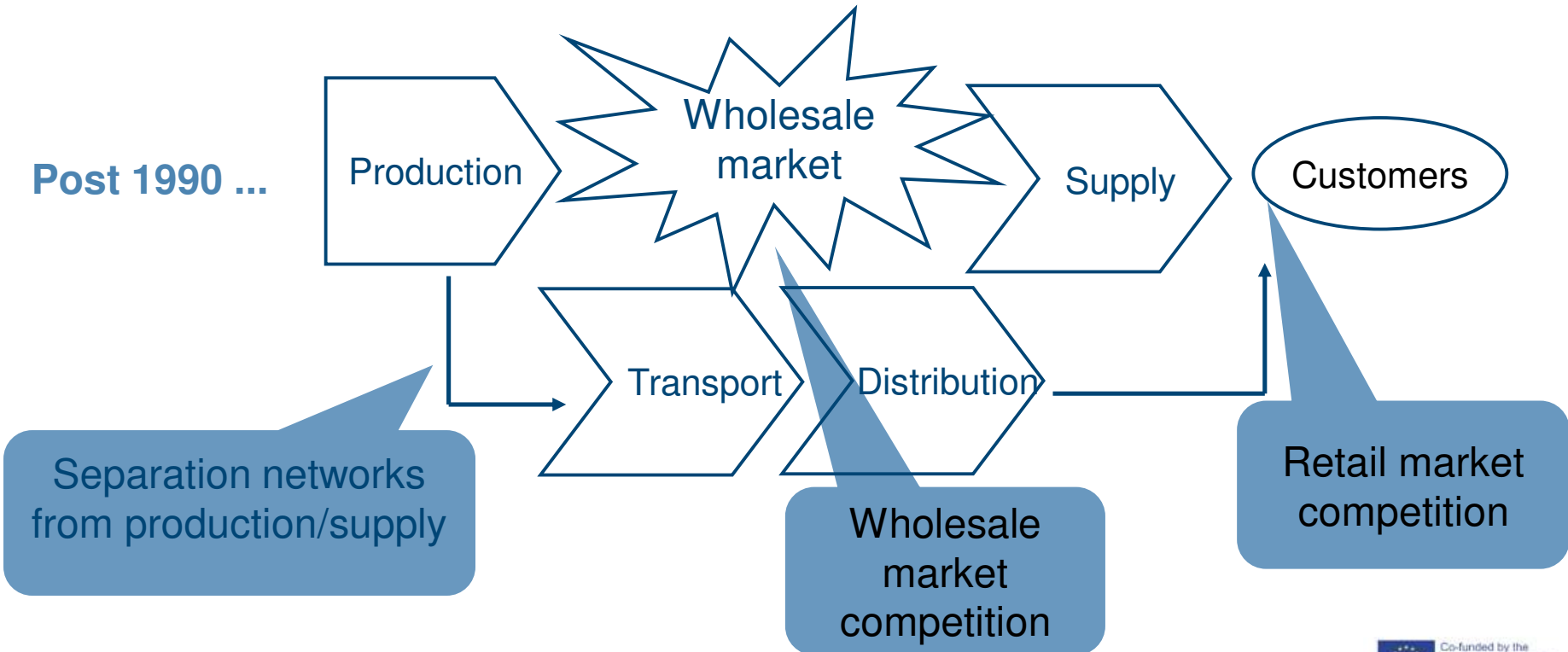
Electric power industry structure

Pre 1990 ...

**Vertically
integrated
regional
monopolies**



Post 1990 ...



The California Crisis

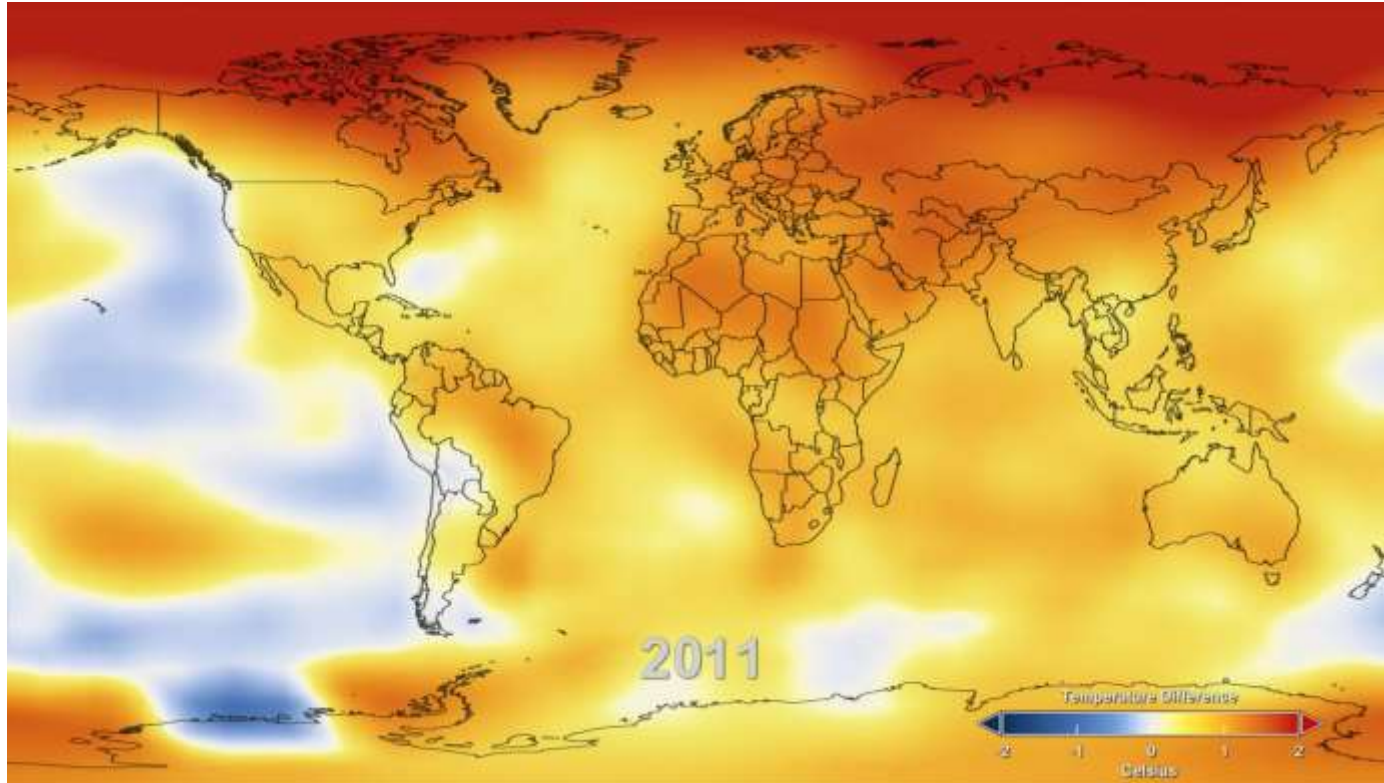


[California blackouts - you tube](#)



Climate change mitigation policies

Evolution of world temperature since 1880



**2011 the
warmest year
since the first
observation
(1880)**

**10 warmest
years were
among last 15**

<http://svs.gsfc.nasa.gov/vis/a000000/a004000/a004030/>
<https://climate.nasa.gov/interactives/climate-time-machine/>

The EU Green Deal

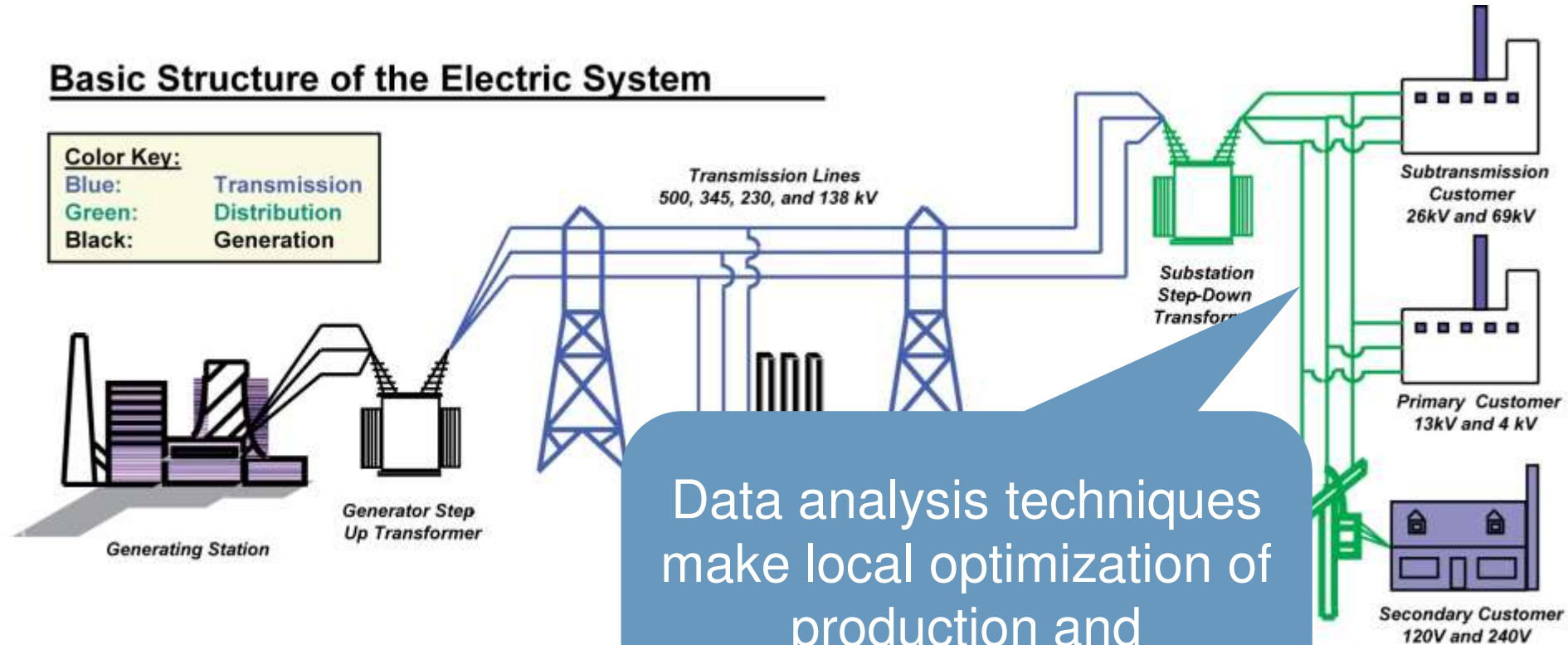


Security of supply and energy independence are back on the agenda



“We must become independent from Russian oil, coal and gas,” the European Commission’s president, Ursula von der Leyen, said in a news release

First half of 21th century: second digitalisation



Data analysis techniques make local optimization of production and consumption feasible

Toward a new regulatory/institutional framework?

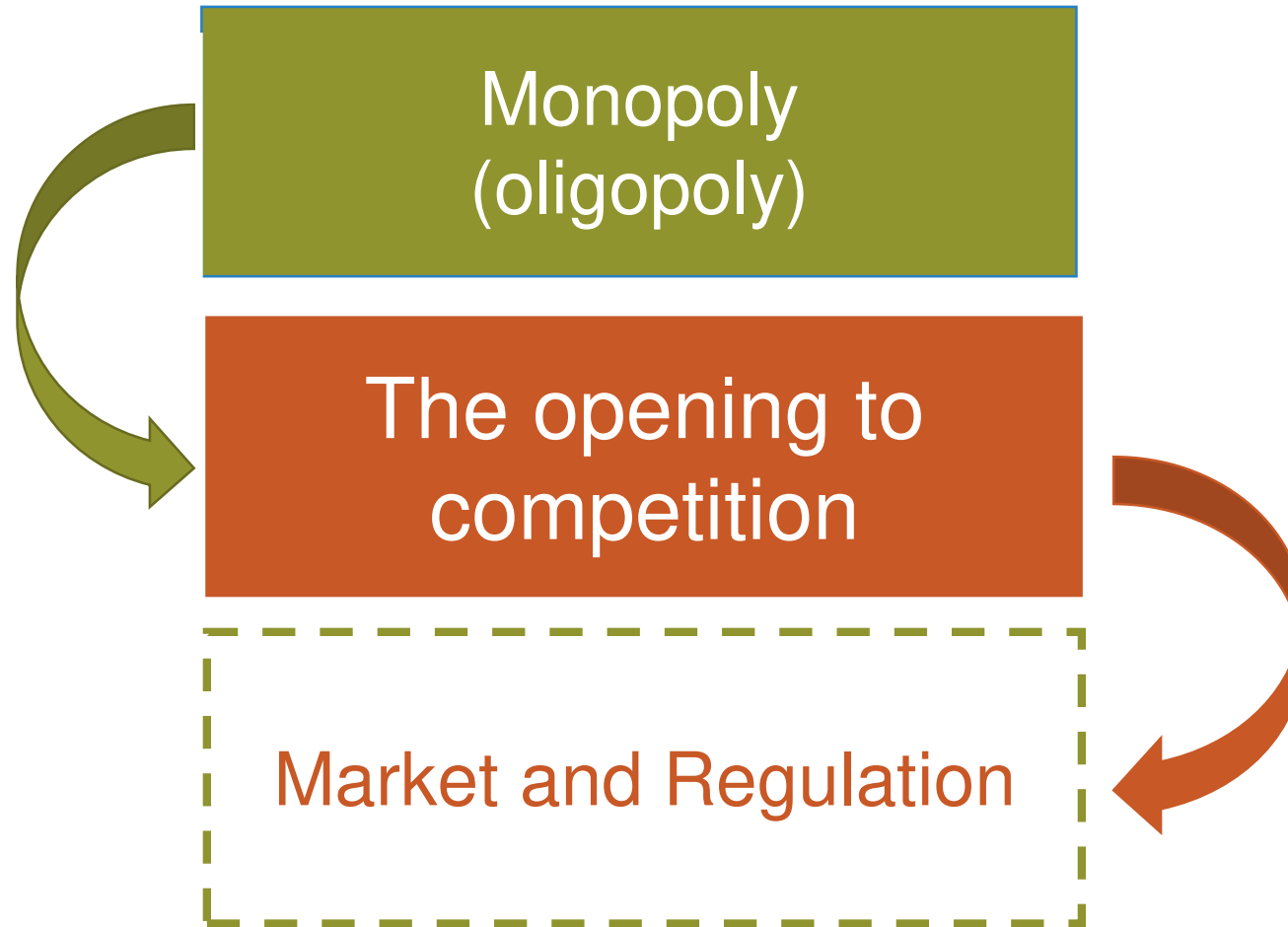
- Key issues for policy / regulators include:
 - Coordinating centralised & decentralised technologies deployment
 - Limiting regulatory loopholes
 - Managing interplay of retail and wholesale markets and role of self consumption
 - Developing a coherent governance framework at the local / regional / global level
- The rhythm of technology change requires regulations and market design
 - which are evolutive and foster innovation...
 - ... whilst providing investors with a predictable investment framework

Tension between microeconomics and political economy

- **Microeconomics:** real-time coordination of millions of economic agents on the European network is best achieved through real-time prices, determined on wholesale markets
- **Political economy:** electricity is different
 - Price volatility exposes consumers, especially households, to risk
 - High prices can be socially sub-optimal
 - Spot prices cannot guide long-term investment decisions, let alone address geostrategic concerns (“Commanding heights” argument)
 - Markets cannot be trusted anyway

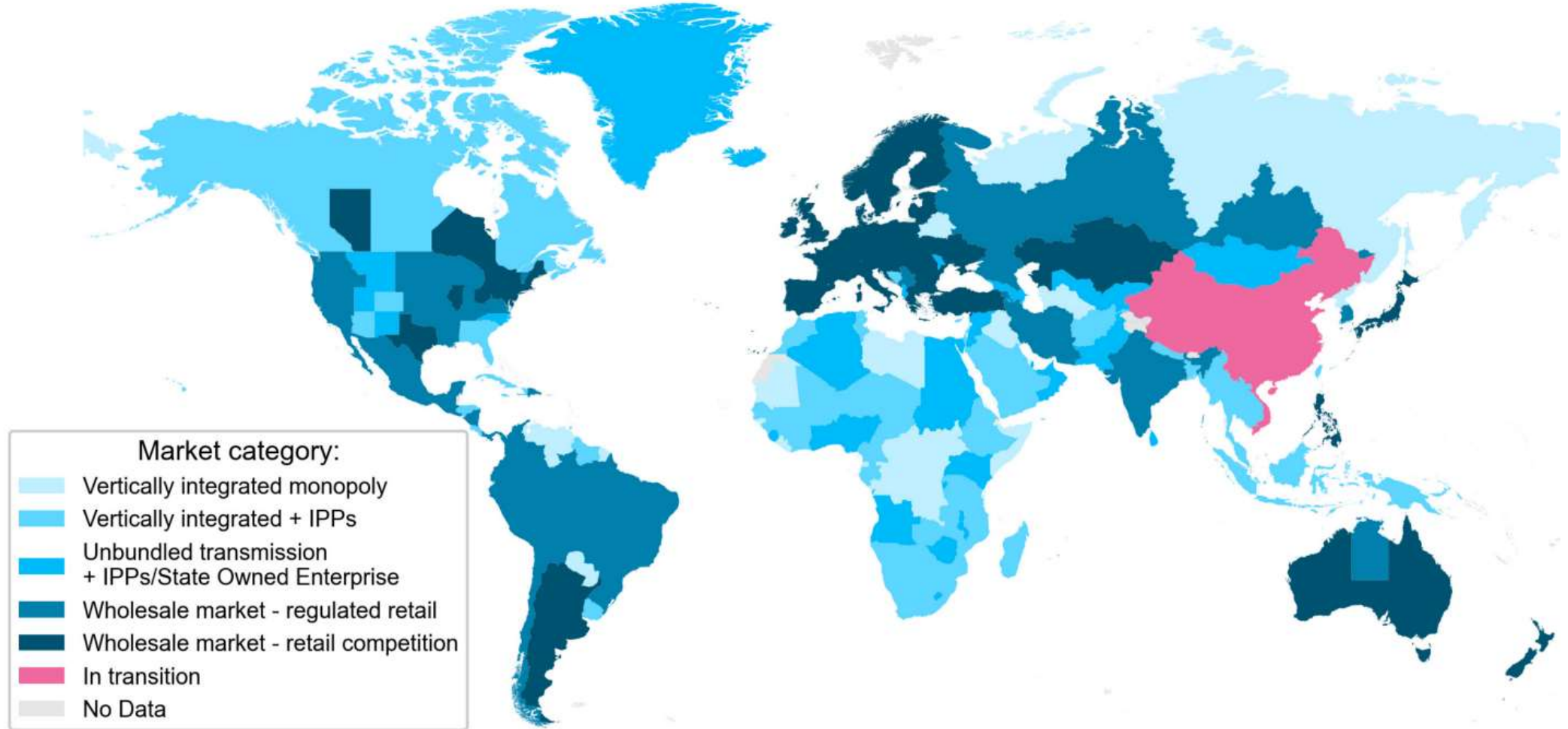
Which is best:
Coordination through prices?
Or control through planning and
norms?

The search for a third way combining markets and regulation



A wide variety of market models around the world

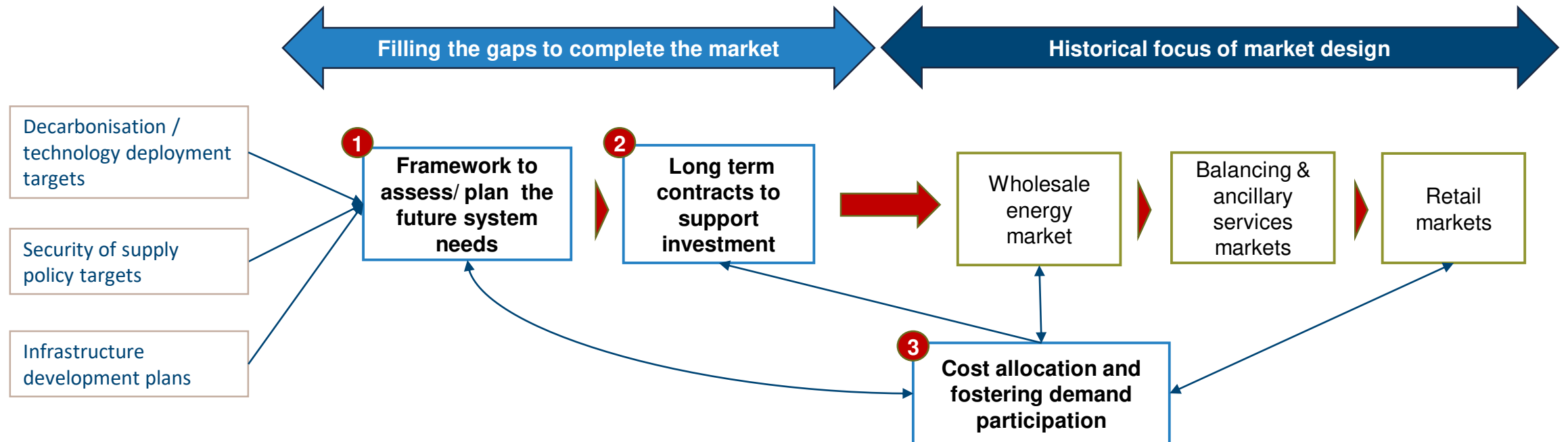
Degree of liberalisation of electricity markets worldwide



Combining electricity markets and long term contracts to deliver policy objectives

There is a growing literature on hybrid power markets (e.g., Roques & Finon, 2013, 2017; Keppler et al, 2021; Joskow, 2022, etc.) that puts forward different alternatives to address the various market and institutional failures affecting electricity markets:

- Additional “modules” to internalize policy interventions to define the generation mix, the level of security of supply through the introduction of complementary planning and long-term hedging / contracting mechanisms...
- ...whilst preserving efficient competition in energy markets, and introducing further hedging instruments to protect consumers



International examples of approaches to supporting investment through hedging mechanisms/long-term contracts

Examples of countries with long-term investment mechanisms/contracts:



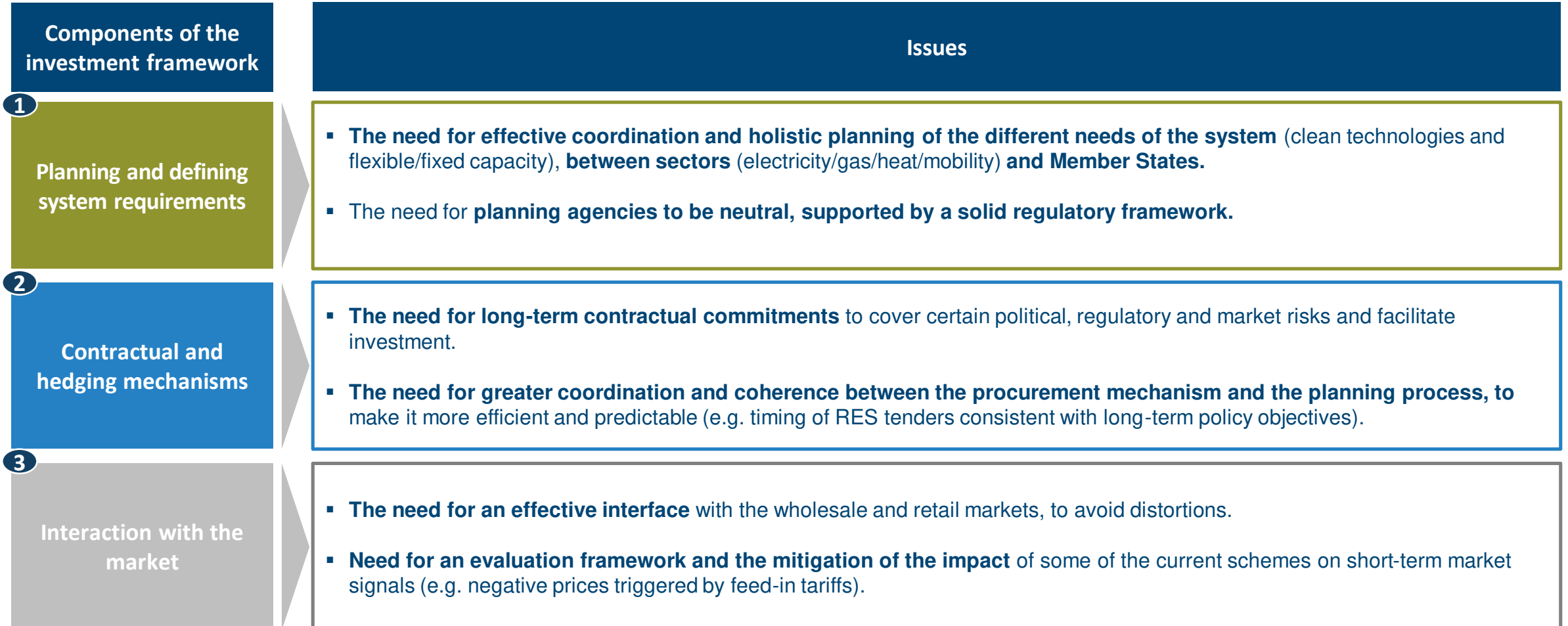
In Latin America, in the early 2000s, hybrid markets with long-term contracts to support and coordinate investments were introduced with the following objectives:

- Coordinate investments through a competitive process (auctions) and allow sufficient time to develop capacity through forward auctions reflecting anticipated needs.
- Decoupling investments from spot price volatility
- Reducing risks for new entrants and facilitating project financing



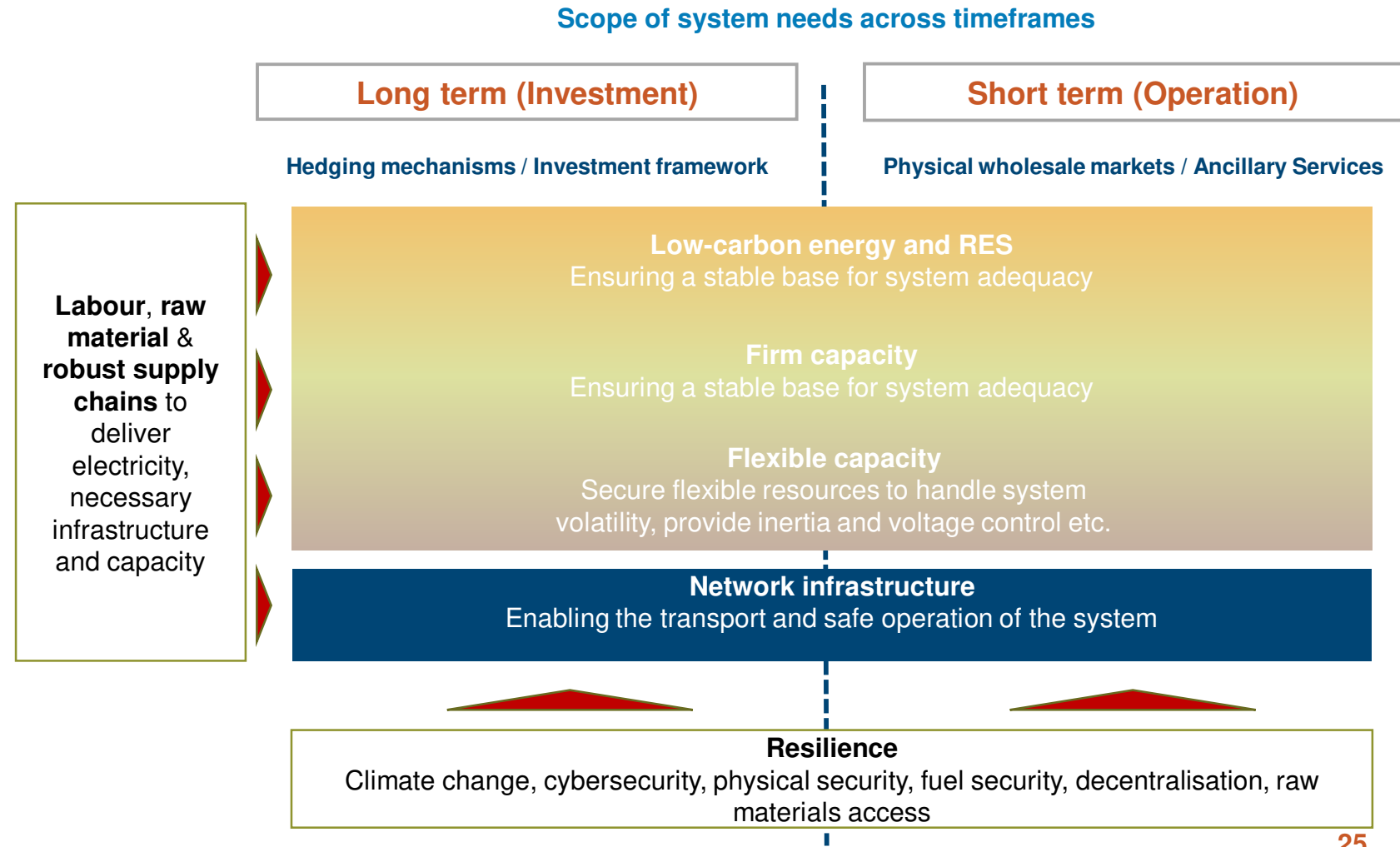
- The lessons from Latin America are mixed, with some successes and (many) problems.

Towards an efficient investment framework: reconciling planning, contracts and efficient markets



Key issue 1 - The assessment of power system needs

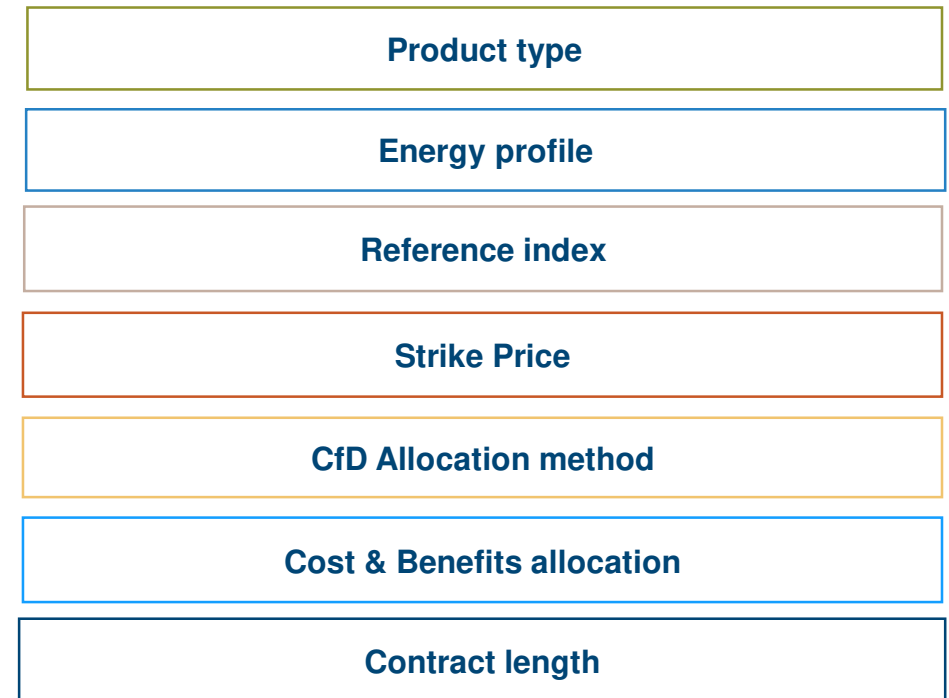
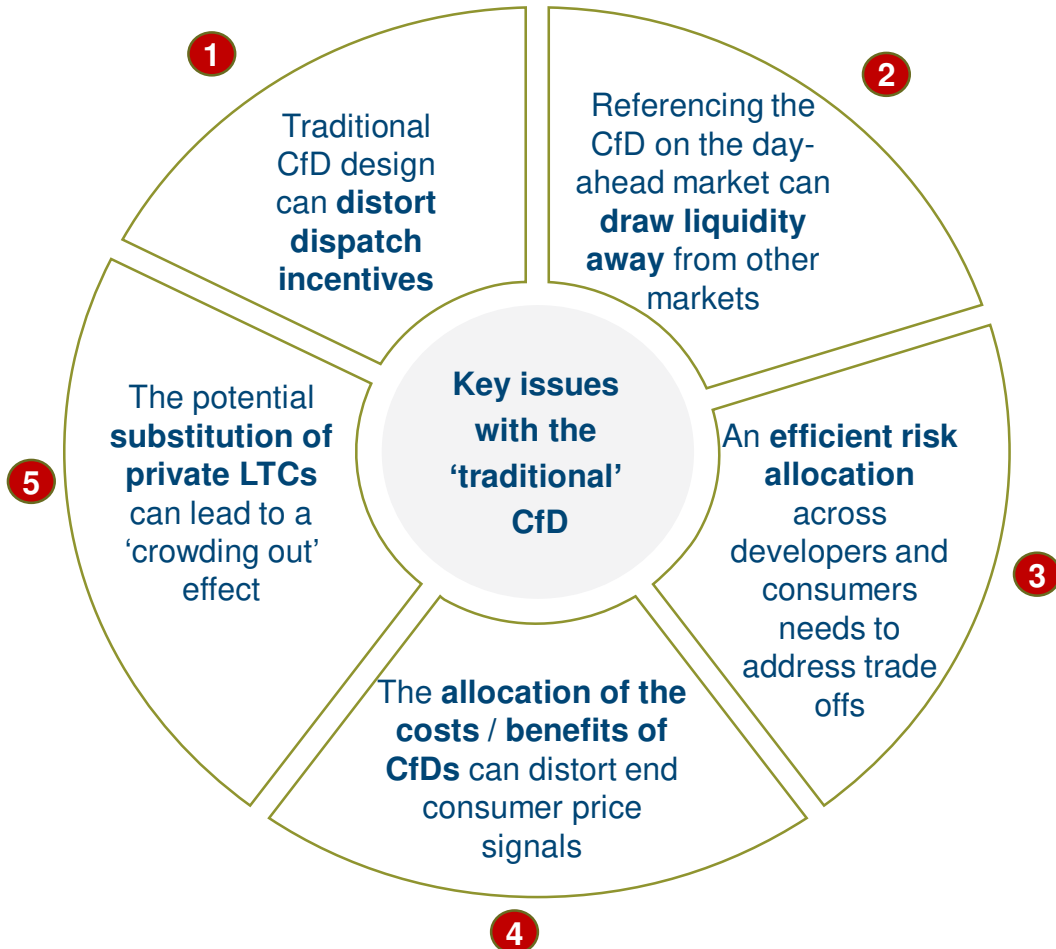
- In addition to reaching decarbonisation targets, system needs include security of supply concepts across several dimensions, including firm capacity, flexible capacity, and network infrastructure
- The European framework already includes flexibility considerations, but so far mostly focuses on adequacy. The current metrics are designed to **quantity firm capacity**.
- Despite several initiatives across Europe (ENTSOE, TSOs...), there are **not yet precise guidelines or mandate** around the evaluation of flexibility needs.



Key issue 2 - The design of the LTCs matters – The case of CfDs

The 'traditional' two-sided CfD design faces multiple design issues...

... for which a range of options are available to improve CfD design along key contractual feature dimensions



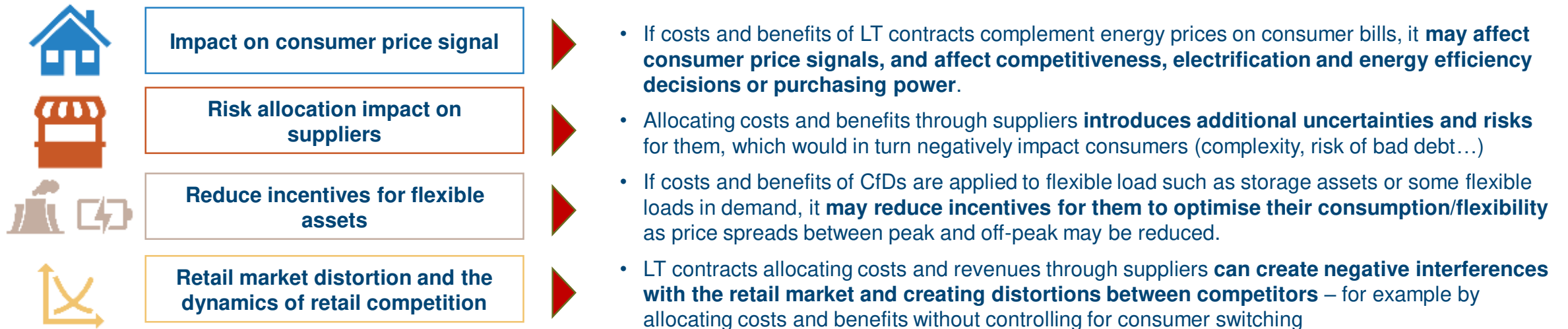
The different options available imply trade-offs to resolve issues with the 'traditional' CfD. For example, the choice of energy profile, reference index and strike price in the CfD design should balance dispatch incentives with risk exposure

Key issue 3 - Which approach to pass through the costs ?

There are different options to allocate the costs and benefits of CfDs to consumers with central/ governmental counterparties

Levies or charges embedded in grid tariff	Supplier charges, passed on to consumers
Resale of electricity to suppliers/consumers via centralised auctions of long-term contract slices	General tax system (State budget)

Depending on the LT contracts cost and benefit allocation method downstream, distortions could be created in the retail market price, affecting consumers and suppliers



Key issue 4 - Competition issues associated with long term contracts: do we need to revisit the historical approach?

The historical approach to assessing Long Term contracts is the balancing test weighing pro- and anti-competitive effects

- Competition authorities perceived long term contracts in the 2000s as standing in the way of liberalisation
- Under specific pre-conditions, the European Commission conducts an in-depth case-by-case assessment of the potential anti-competitive effects of the contracts

Pro-competitive effects

Mitigate risk of market power abuse in the spot market

Facilitates / coordinates investment

Anti-competitive effects

Foreclosure of actual or potential rivals

Dry up spot market liquidity



With the historical approach, the assessment of long-term contracts on a case-by-case basis could create substantial uncertainty and delays

- Assessing the effects on competition of a long-term contract requires a comprehensive **assessment of pro- and anti-competitive effects**.
- This could create substantial uncertainty regarding presumptions of legality and regarding the methodologies to be used for assessing effects

Fostering the development of long-term contracts will require to clarify presumptions of legality and define guidelines for assessing effects

- Two areas may benefit from more guidance to enhance predictability in the outcome of the competitive assessment :

The identification of situations where long-term contracts are less likely to trigger competition concerns (or should be presumed pro-competitive).

- The identification and qualification of concrete efficiencies brought about by long-term contracts relevant for the competitive assessment:



Overview of the course

GENERAL INFORMATION



DATES

14 Oct 2024 - 15 Oct 2024



LEVEL

Specialised



TYPE

Residential



REGISTER BY

26 Aug 2024

MAIN TOPIC: the micro-economics of wholesale power and carbon markets and their implications for the restructuring of European electricity markets.

Europe's energy crisis, caused by the war in Ukraine, has pushed power prices to new highs and stressed markets. This course brings together experts to discuss policy changes needed for a clean energy future.

STRUCTURE OF THE COURSE

- **Module 1:** *Theory of power markets and carbon pricing (Online)*

Readings and video lectures to be completed before the residential course

1. CO2 market fundamentals

- **Module 2** *(14-15 October 2024): Practice – Power markets and carbon trading in practice (Residential)*

Residential lectures in Florence on the reform of the European electricity market architecture.

1. Power markets in practice
2. CO2 pricing in Europe

Thank you for your attention

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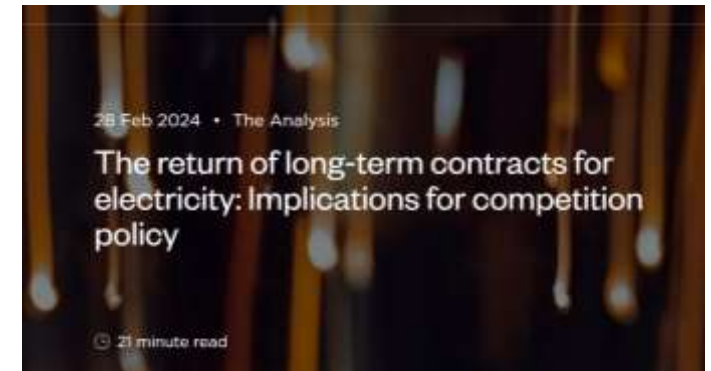
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1. F; Roques & D. Finon (2017) Adapting electricity markets to decarbonisation and security of supply objectives: Toward a hybrid regime?. Energy Policy Volume 105.
2. Eurelectric (2023) Electricity market design fit for net-zero. Public report.
3. Eurelectric (2024) Unlocking the power of two-way Contracts-for-Differences (CfDs) to accelerate the energy transition. Public executive summary.
4. F. Roques & G. Duquesne (2024) The return of long-term contracts for electricity: Implications for competition policy. Policy brief.



Note : publications can be accessed by clicking on each picture