







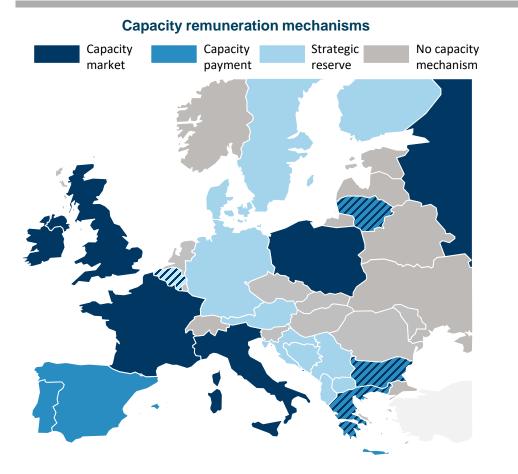
EU electricity market model: from integration of energy markets toward hybrid markets

IAEE Webinar - Electricity Markets Assessment: Europe & the US

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EU HAS A COMMON ENERGY MARKET... BUT NATIONAL APPROACHES FOR SECURITY OF SUPPLY AND RES SUPPORT SCHEMES





Support schemes for utility-scale RES

Sources : European Commission - Final Report of the Sector Inquiry on Capacity Mechanisms European Commission - RES Legal CEER - 2nd CEER Report on Tendering Procedures for RES in Europe CEER - Status Review of Renewable Support Schemes in Europe for 2016 and 2017 European Commission - Final Report of the Sector Inquiry on Capacity Mechanisms CEEM - Capacity Remuneration in power markets an empirical assessment of the cost of production

CL Intelligence

In practice most countries have put in place some form of tendering and/or long term contracts to support investment in clean technologies and/or dispatchable resources

THE CURRENT EU MARKET MODEL HAS ITS ROOTS IN THE CONTEXT OF THE 1990S – BOTH TECHNOLOGIES, CONSUMERS, AND POLICY OBJECTIVES HAVE CHANGED...

	Context of the 1990s and early 2000s	Current context
Policy	Focus on competition and market integration	Focus on decarbonization requires step up in investments
Market	Focus on day ahead wholesale market integration	Focus on intraday and real time markets to manage variable RES growth
Technology	 Dominance of variable costs technologies ('dash for gas') 	Dominance of fixed costs (CAPEX) / decentralised technologies
Consumers	 Passive (no decentralised generation, storage, DSR, etc.) 	Active demand participation, rise of prosumers
Networks	Focus on optimisation of the use of existing infrastructure	 Need to reinvest to upgrade grid to decentralised generation & RES growth

THE EU DECARBONISATION WILL REQUIRE A NEW MARKET MODEL TO STEP UP AND COORDINATE INVESTMENTS

The Green Deal requires a step up in power sector investments

800 bn€ investments needed in power generation in the next decade, a significant increase compared to the previous decades

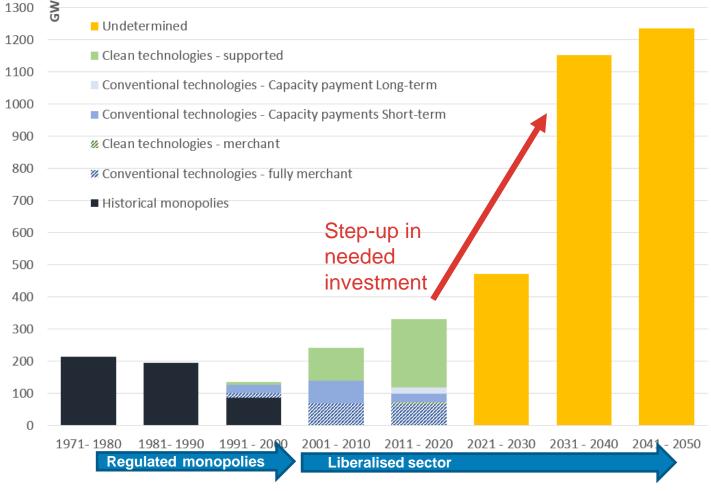
A framework to boost private investment is needed to support the energy sector decarbonisation

 Private investments in energy assets can play a key role in the economic recovery but requires a sound investment framework

Historically most EU investments in the power sector were made under regulation or supported by long term contracts

 Based on the current regulatory framework, only a small share of total generation investments in the next decade are expected to be merchant

Capacity additions in Europe based on the regulatory framework when the decision was taken



Source: CL analysis based on Platts, Country NECPs and CL Intelligence European Commission - Final Report of the Sector Inquiry on Capacity Mechanisms CEEM – Capacity Remuneration in power markets : an empirical assessment of the cost of production CEER - 2nd CEER Report on Tendering Procedures for RES in Europe

TOWARDS HYBRID MARKET: COMPETITION IN TWO STEPS THROUGH TENDERING OF LONG TERM CONTRACTS

Competition "for" the market

- Tendering of long term
 contracts
- Can be technology neutral or specific
- Puts competitive pressure where it matters: CAPEX
- Can be used to stimulate new entrants and development of competitive market
- Ensures coordinated system developments

Competition "in" the market

- Well integrated and liquid forward, day ahead and intraday markets
- Optimises short term dispatch and minimises costs for consumers
- Level playing field with balancing obligation for all
- Supports retail competition and development of demand response

Investment planning (years ahead)

Operations planning (days /hours ahead)

THE THREE KEY STAGES FOR A HYBRID MARKET FRAMEWORK: PLANNING, CONTRACTING AND SHORT TERM MARKET INTERACTION

Investment framework stages	Key features of an efficient hybrid market investment framework	
1 Planning & definition of system needs	 Need for efficient coordination & holistic planning of the different system needs (clean tech and for flexible/firm capacity), across sectors (power/gas/heat/mobility) and Member States Need for neutrality of the planning agenc(ies), supported by sound regulatory framework 	
2 Contracting & hedging mechanisms	 Need for long term contractual commitments to hedge some of the policy, regulatory and market risks and facilitate investment Need for increased coordination & consistency of the procurement mechanism with the planning process, to make it more efficient and predictable (e.g. RES tenders schedule consistent with long term policy targets) 	
3 Efficient short term market interaction	 Need for efficient interface with wholesale and retail markets, to avoid distortions Need for an assessment framework and mitigation of the impact of some of the current schemes on short term market signals (e.g. negative prices triggered by feed-in-tariffs) 	

If you have any question about this paper, please contact

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