



The 2018 Annual Report on Monitoring the Electricity and Natural Gas Markets

Alberto Pototschnig

Director, ACER

Rafael Muruais

Team Leader, ACER

Annegret Groebel

President, CEER

Bart Vereecke

Team Leader, ACER

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Outline

- Introduction
- Consumer protection and empowerment
- Electricity wholesale markets
- Gas wholesale markets
- Electricity and gas retail markets





The MMR provides an in-depth year-on-year analysis of the functioning of the IEM and of the remaining barriers to its completion, providing recommendations on how to overcome them







Background of the MMR 2018

Key milestones

- 4 October: publication of the GW and Retail Volumes
- 12 November: presentation to European Parliament, ITRE Committee
- 30 October: release of the Retail and CP Volumes
- 11 November: release of the EW Volume
- 20 November: Public presentation of the MMR

Novelties

- In electricity: an assessment of cross-zonal capacity with regards to the 70% Clean Energy Package target and an assessment of the consistency between established CMs and adequacy issues.
- In gas: broader and deeper analysis of market effects of Network Codes implementation, LNG and convergence





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Objectives of consumer protection and empowerment monitoring

- Review the levels of consumer protection and engagement in the European electricity and gas markets from the perspective of the final household consumer
- Identify progress made regarding the implementation of the EU legislation and the achievement of its targets (e.g. smart meter roll outs)
- Explore new challenges in monitoring consumer empowerment and protection following the Clean Energy for All Europeans Package (CEP)*
- The Volume covers:
 - » Public service obligations
 - » Protection of vulnerable customers
 - » Consumer rights
 - » Smart metering
 - » Consumer choice
 - Complaint handling and Alternative Dispute Resolution (ADR)
- NEW! A brief historical outline to illustrate that the European Union has come a long way since the first set of energy-specific consumer protection rules were introduced in the Second Energy Package.





The areas of consumer protection and empowerment have expanded over time

Second energy package - 2003

Third energy package - 2009

Clean energy package - 2019

S 2nd electricity and gas Directives
C introduced notion of consumer
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- 3rd electricity and gas Directive expanded the scope of consumer rights to reflect full retail contestability
- Recast Electricity Directive empowers electricity consumers in view of the transition to a decarbonised energy system

First public service obligations:

- Right to be supplied with electricity
- Obligation to protect vulnerable consumers
- Measures for consumers to be able to switch:
 - Access to information on prices and tariffs
 - Contracting rights
 - Wide choice of payment options
 - No charges for switching

Ability for consumers to choose own supplier:

- Minimum billing information
- Maximum switching time
- Availability of comparison tools
- Roll-out of smart meters in case of positive costbenefit analysis
- Single point of contact (usually NRA)

Active participation of the consumer in the market:

- Entitlement to smart meter
- Entitlement to dynamic price contract
- Aggregation contracts
- Demand response
- Citizen energy communities
- Some existing provisions to become more prescriptive (e.g. minimum requirements for comparison tools, energy poverty)



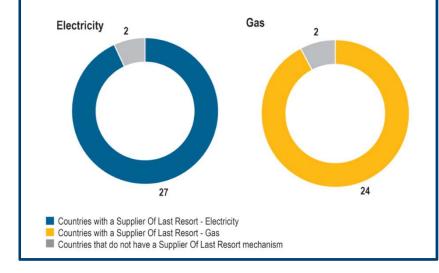


Public service obligations on supply of electricity and gas

Supplier of last resort (SOLR)

- Available practically everywhere but rare experience across Europe
- When SOLR prices are applied in case of a bankruptcy, they are often more expensive than the previous contract

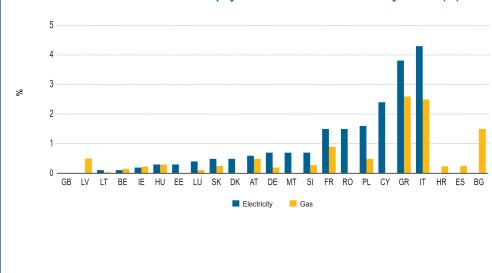
Supply of Last Resort: availability in EU MSs and Norway – 2018 (nr of EU/EEA countries)



Disconnection due to non-payment

- Process gives reasonable time to settle open bills in most MSs: rates rarely exceed 1%
- Consumers are informed about alternatives in majority of MSs, but no records (apart from prepayment meters) on their efficacy

Share of disconnections due to non-payment in EU MSs and Norway – 2018 (%)



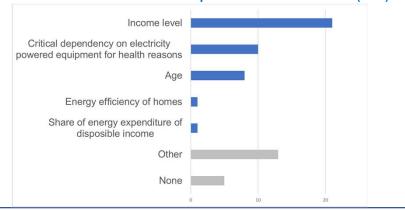


Vulnerable customers and energy poor are different categories

Concept of vulnerable customers

- Low income & critical dependency on electricity as main determining criteria
- Relative energy expenses and energy efficiency play no role
- Main protection through restrictions to disconnection & social benefits

Criteria used to determine concept of vulnerable customers (MSs)



Energy poverty

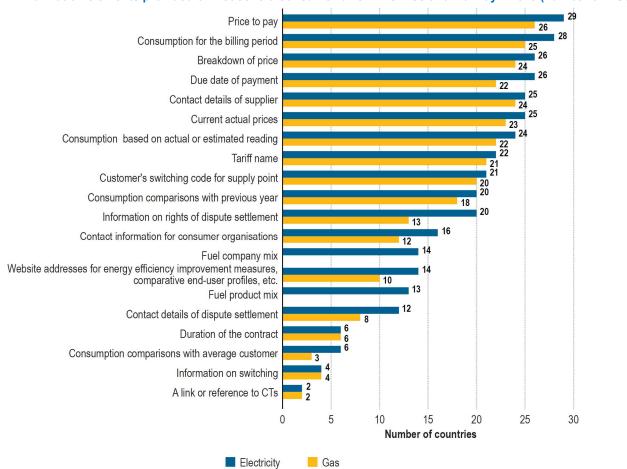
- Increased relevance to be expected following Clean Energy Package
- Only 7 MSs with official definitions yet
- Energy poor up to 14% of population





Could too much information hamper transparency?

Information elements provided on household consumer bills in EU MSs and Norway - 2018 (number of MSs)



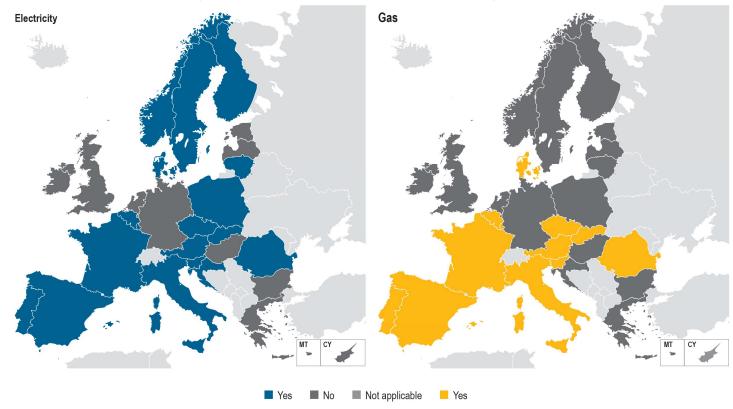
- Consumers already face "heavy information" bills across the continent
- More information yet to come according to Directive EU 944/2019





Public authorities often operate a comparison tool



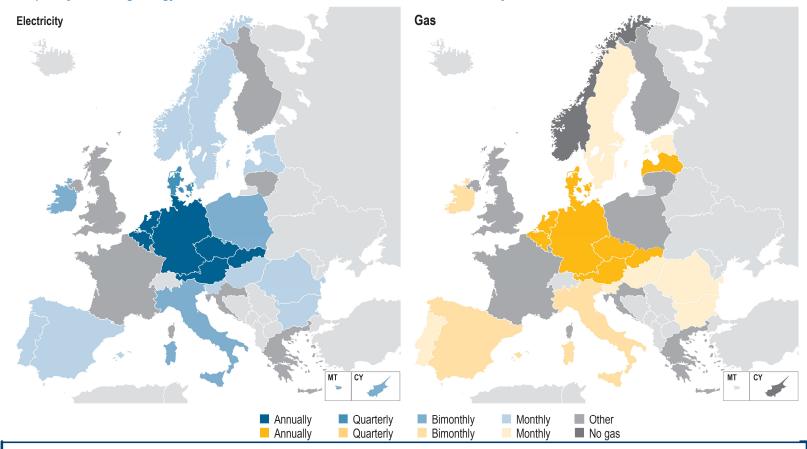


- Almost universally available, but variation in number of CTs per MSs, and their properties (coverage, reliability)
- Only 7 NRAs confirm at least 1 CT which fulfils all the criteria listed in Directive EU 944/20



Billing frequency is heterogenous across EU

Frequency of issuing energy bills to final household customers in EU MSs and Norway - 2018

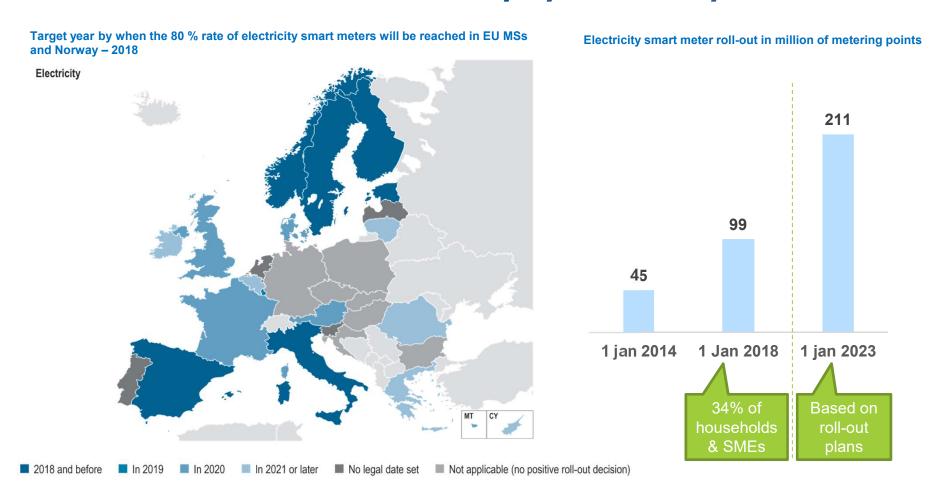


- No standard billing frequency across Europe
- Smart metering promotes the issuing of monthly bills





Smart meter roll-out differs vastly by EU country

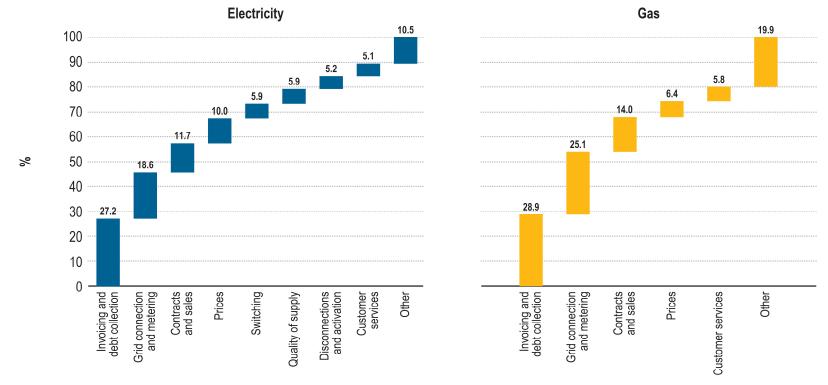






Main complaint categories relate to invoicing, contracts and grid connection matters

Average national shares of types of final household consumer complaints in electricity and gas directly addressed to NRAs for EU MSs and Norway – 2018 (%)



- Main share of complaints is about bills, (dis)connections, prices and contracts
- Suppliers and DSOs often requested to respond within 1 month or faster
- NRAs often answer or forward complaints to responsible bodies however, national ways of collecting complaint statistics varies vastly across Europe jeopardizing comparability





Recommendations

- To avoid possible disparity of treatment between gas and electricity consumers: improvements in consumer rights and information introduced by the CEP should be somehow "mirrored" in EU gas legislation, regardless of new EU legislation to be issued in the future.
- To design SOLR mechanisms in ways that enable and promote consumer engagement in liberalised energy markets
- To consider the main gaps between the current and the future situation regarding the implementation of the Recast Electricity Directive:
 - » Electricity smart meter roll-out: challenging timeline
 - Comparison tools (CTs) for electricity: minimum requirements for electricity CTs now mandatory. Offers for dynamic electricity price contracts to be included
 - » Definitions and monitoring of energy poverty
 - Citizen energy communities: EU countries to provide an enabling regulatory framework according to the provisions of Article 16
 - EU countries to adapt complaints treatment procedures to reflect Article 26, which implies that the participation of energy suppliers in dispute settlement procedures is mandatory





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Objectives of electricity wholesale markets monitoring

"Contribute to an efficient integration of EU electricity wholesale markets", by answering two main questions:

- What is the current level of market integration? (Analysing the recent past)
- What else is needed to enhance market integration? (Recommendations for the near future)





Key findings at a glance

Objective (CEP)	Target	Indicator	Current level	
"Efficient use of the available cross zonal capacity"	100%	Efficient use of cross-zonal capacity across all market timeframes	√	87% in the DA timeframe
"Maximise the amount of cross-zonal capacity available for trade"	70%	share of capacity of network elements offered for trade	×	Often below 20%*
"Ensure security of supply in a cost-efficient manner"	Capacity markets should be implemented only when and where adequacy issues are expected and after removing market distortions		×	Potential inconsistency between established CMs and expected adequacy issues

^{*}For example, in the CWE region the average capacity available for trade on the weakest network each hour was below 20% for the period 2016-2018





Outline

Electricity wholesale markets

- Efficient use of commercial cross-zonal capacity
- Amount of commercial cross-zonal capacity
- Capacity markets and adequacy issues

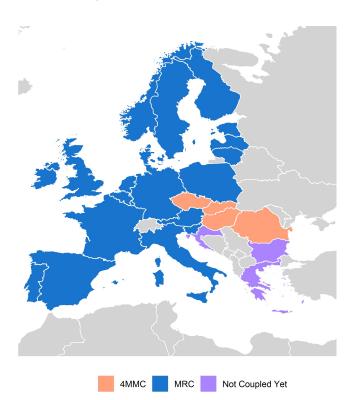




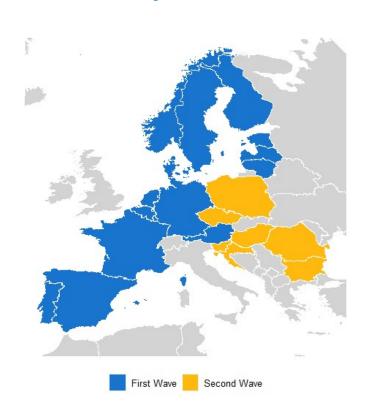
The completion of DA and ID markets integration through market coupling is getting closer...

Implementation status of single DA and ID market coupling (November 2019)

Day-ahead



Intraday



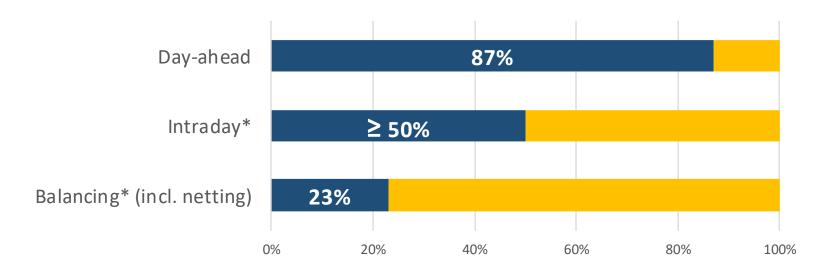
Note: Second XBID wave expected for 19 November 2019.





..as a result, the (limited) cross-border capacity made available to the market is used very efficiently in the DA timeframe. In the ID and balancing timeframes there is significant room for improvement.

Efficient use of interconnectors in the different timeframes in 2018 (%)



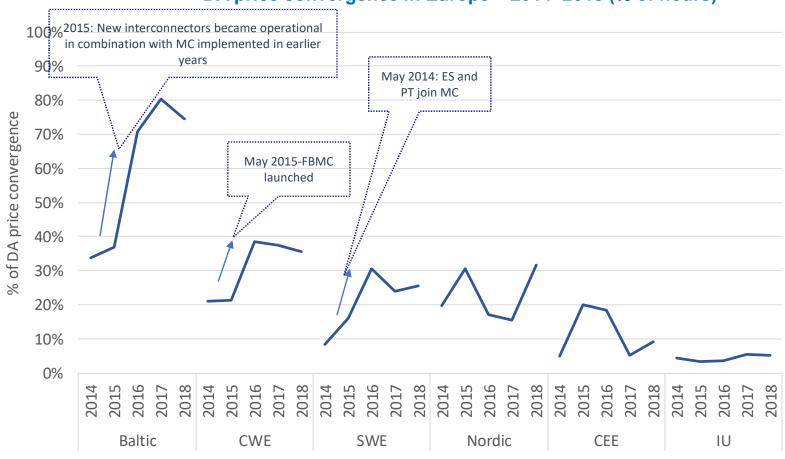
Note: * ID and balancing values are based on a selection of EU borders.





Market coupling contributes to price convergence, although price convergence is not an objective as such

DA price convergence in Europe – 2014–2018 (% of hours)







Market coupling brings additional benefits, e.g. increased ID liquidity enabling market participants' access to a larger portfolio of bids and offers to balance their positions

Monthly evolution of the cross-zonal intraday traded volumes for all continuous trading markets 2017–2018 (TWh)







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The amount of cross-zonal capacity: Background

- The calculation of cross-zonal capacity is crucial for the internal electricity market. It should ensure the efficient management of network congestion, along with the management of remedial actions, network investments, and the definition of bidding-zones
- Although some progress was achieved in this area over the years, the level of efficiency, transparency and non-discrimination expected by the European legal and regulatory framework has not fully been reached.
- The recast Electricity Regulation provides a new opportunity to improve congestion management while ensuring a minimum level of cross-zonal capacity (70% target*)

Regulation 2019/943 introduces "...the following minimum levels of available capacity for cross-zonal trade [...]:

for borders using a coordinated net transmission capacity approach, the minimum capacity shall be 70% of the transmission capacity respecting operational security limits after deduction of contingencies [...]

for borders using a flow-based approach, the minimum capacity shall be a margin set in the capacity calculation process as available for flows induced by cross-zonal exchange. The margin shall be 70% of the capacity respecting operational security limits of internal and cross-zonal critical network elements, taking into account contingencies [...]"





The 70% target in the CEP

- Following a request from the cross-border committee, ACER, in close coordination with the EC, NRAs, TSOs and ENTSO-E, adopted a Recommendation in August
- Based on this Recommendation, and on ad-hoc data provided by TSOs, the levels of margin available for cross-zonal trade (MACZT) can be estimated in a harmonised manner.
- The monitoring of MACZT estimates the flows induced by crosszonal trade within the EU (and with third countries, subject to conditions)





Electricity wholesale markets: MACZT

Increasing the share of physical capacity offered for cross-zonal trade remains a priority: important efforts needed to reach the 70% CEP target

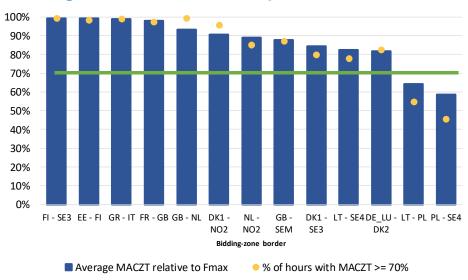
Average relative margin available for cross zonal trade (MACZT) on selected AC bidding-zone borders in Europe – 2016–2018



Note: The average relative MACZT is computed over all declared critical network elements, taking EU bidding-zone borders into account. The margin available for trade on a given border is displayed from the perspective of the two Member States at both sides of the border.

Member States and borders are selected based on the confidence in data, i.e. only borders for which the confidence was sufficient are displayed.

Average relative MACZT and percentage of time when the minimum 70% target is achieved on DC bidding-zone borders in Europe – 2016–2018







The inclusion of third countries (e.g. Switzerland) may significantly impact MACZT in some regions, such as e.g. Italy North

Average relative MACZT in the IT North region, 2016-2018



Notes:

For each Member State, the value on the left describes MACZT for IT North excluding all exchanges with Switzerland
For each Member State, the value on the right describes MACZT for IT North taking full account of the NTC on the Italy – Switzerland border
Both values are computed based on the same set of NTCs and schedules





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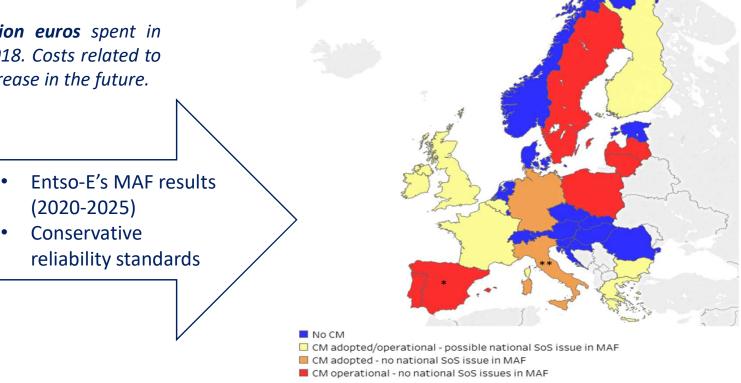
Electricity wholesale markets: CMs/adequacy

Several Member States have established or plan to establish a Capacity Mechanism, whereas a number of these Member States do not seem to face an adequacy problem in 2020 or 2025

Facts:

- CMs continued to emerge in Europe (six mechanisms approved by the EC in February 2018).
- More than 2.5 billion euros spent in CMs in Europe in 2018. Costs related to CMs expected to increase in the future.

Perceived need for Capacity Mechanisms based on the ENTSO-E mid-term adequacy forecast (MAF) 2018 results



Note: In Spain (*), the CM used to comprise "investment incentives" and "availability payments". The availability payments were removed in June 2018 and the investment incentives only apply to generation capacity installed before 2016. In Italy (**) the analysis suggests potential adequacy issues at the bidding zone level, in Italy-Centre-North and Italy-Sicily, rather than at the national level.



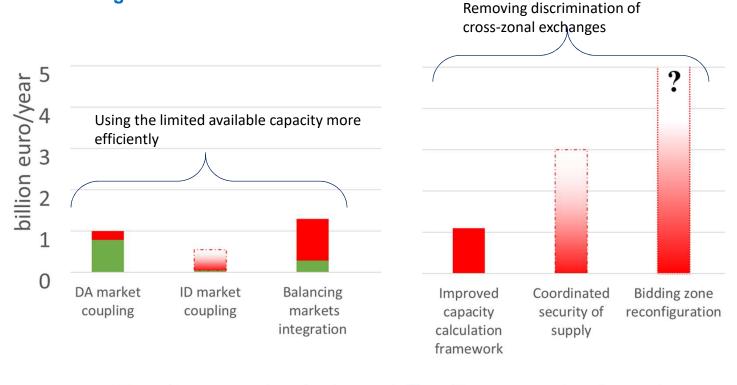


Electricity wholesale markets: Recommendations

The recommendations included in preceding MMRs remain valid: Any step to remove the discrimination of cross-zonal exchanges will bring significant benefits to end-consumers

Social welfare* benefits already obtained and to be obtained from various actions intended to increase

EU markets integration



■ Welfare gains already obtained ■ Welfare gains to be obtained

Note: *Gross benefits. The fading color for some categories reflect that the welfare gains are based on third party estimations and/or subject to considerable uncertainty.





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Market overview in a nutshell

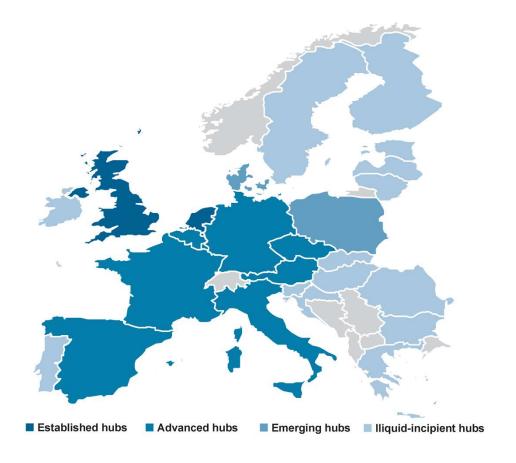
- Demand dropped after 3 years' growth
 - Lower gas-fired power generation and milder weather were the key drivers (-3.7% YoY)
- EU dependency on external imports keeps raising
 - Domestic production fell (-6.5% YoY) chiefly due to Groningen cap
 - Modest progress of biogas production (4% of EU supply-share)
 - Gazprom deliveries rose by further endorsing hub-price models (>35% of EU supply-share)
 - LNG imports went 10% up (10.5% of EU supply-share). Russia and US reducing the dominance of Qatar
- Gas prices are turning more volatile, increasingly influenced by global dynamics
 - International gas prices are further converging and guided by energy commodities' price dynamics
 - EU hub prices rose across most 2018, driven by oil and coal price escalation and higher Asian demand
 - From autumn 2018 EU hub prices have been decreasing sharply aided by higher LNG imports
- 7% more gas changed hands at transparent trading platforms compared to 2017





The functioning of the internal gas market is generally improving, except in a few Member States

2018 EU gas hubs categorization based on AGTM metrics



A gradual improvement of metrics' results is observed since 2013

- Traded volumes up
- Diversity of hub products improving
- Several hubs functioning better
- Higher price convergence

But

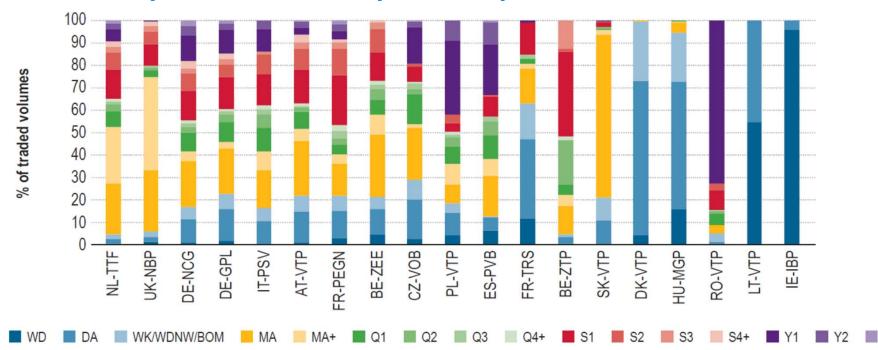
- Some 'hubs' are not taking off
- Limited improvement in terms of forward liquidity
- Most hubs remain at some distance from AGTM targets





More advanced hubs tend to have more forwards in their product portfolio

Breakdown of traded volumes per hub product at the trading venues of selected hubs- 2018 - (% of traded volumes) and TWh/year

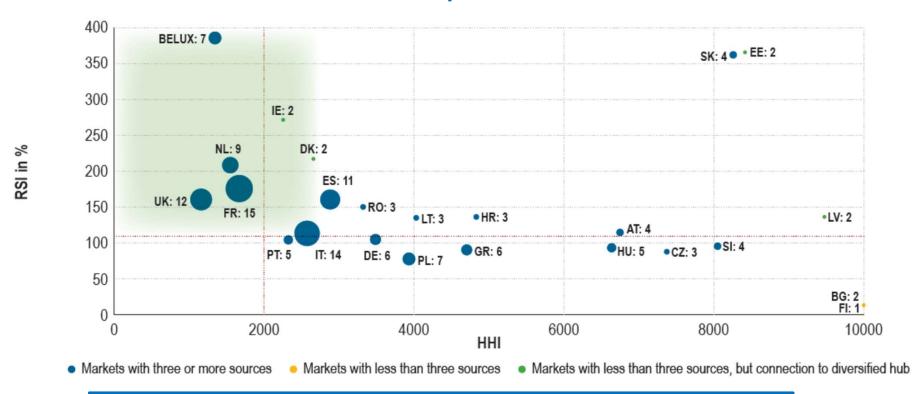






Structural aspects that impact markets' functioning are gradually improving

Overview of AGTM market health metrics per MS - 2018



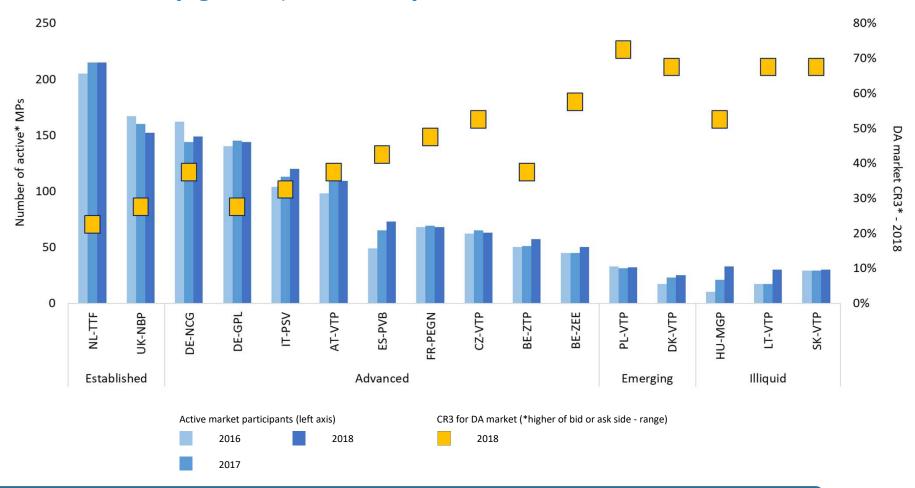
- MSs with developed hubs tend to present better results
- · High upstream market concentration is the main challenge





Growth in number of market participants actively trading at the hub is contributing to better market functioning

Number of active market participants* (left axis, 2016 - 2018) and DA market concentration (right axis, CR3 - 2018)



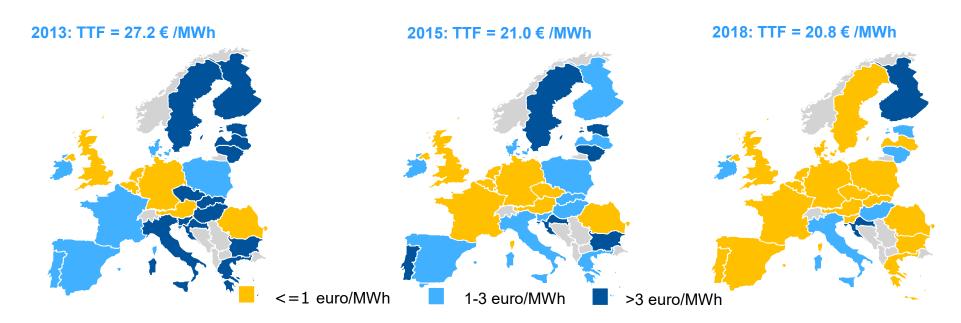
^{*} Criteria for *active* is 1 trade by MP in the calendar year Source: ACER calculation based on REMIT data





High degrees of gas supply cost convergence have been reached across most parts of the EU

Calculated gas supply sourcing cost* compared to TTF - estimates



What matters most is competition, less proximity to sources...

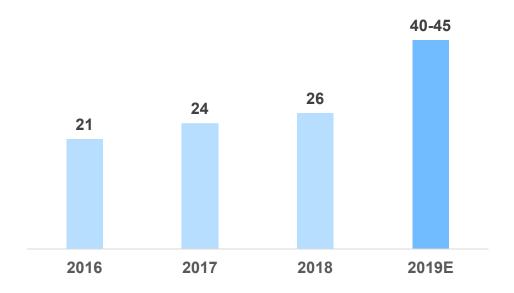
^{*} Note: Suppliers' sourcing cost assessment based on a weighted basket of border import and hub product prices.





All of this is helped by well established and interconnected European gas infrastructure (pipes, LNG, UGS) and regulation (e.g. reverse flows, NCs) resulting in low congestion levels

LNG example: Average utilisation rate of technical regasification capacity of LNG terminals in 2018 - %



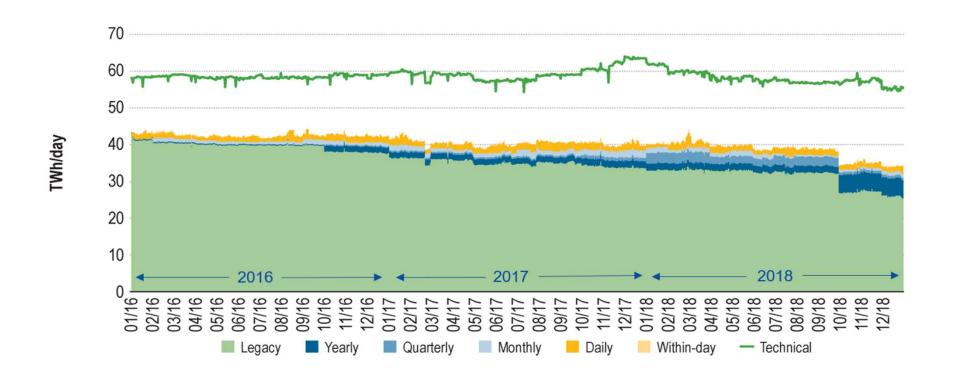
 The EU can attract surplus LNG cargoes due to inter alia market size, spare regasification capacity and ample UGS





Capacity made available through CAM enables shippers to respond to changes in short-term fundamentals

Type and volume of capacity booked at intra-EU gas IPs across 2016-2018, TWh/day







Capacity bookings patterns are evolving which may impact price convergence in coming years

IP type	Characteristics	Bookings	Impact on convergence
Core to supply	 Supply route linked to entry, demand areas 	High replacement expected	Current situation to continue
Portfolio optimisation	 Important for managing positions in adjacent markets 	 Reasonable replacement expected 	 Current situation to continue
Periodic supply	 Periodic but mostly for seasonal demand 	 Could diminish Driven by hub price signals 	 Periodically lower when IP sets marginal supply price
Near idle	Less and less used	 Low replacement expected 	• Lower
Up to now no impact on convergence can be observed			





The BAL NC has benefited spot markets' liquidity where in place

TSO share of hub's spot markets and their correspondent TSO traded volumes for the gas years 2015/16 and 2017/18 at selected hubs – % and TWh



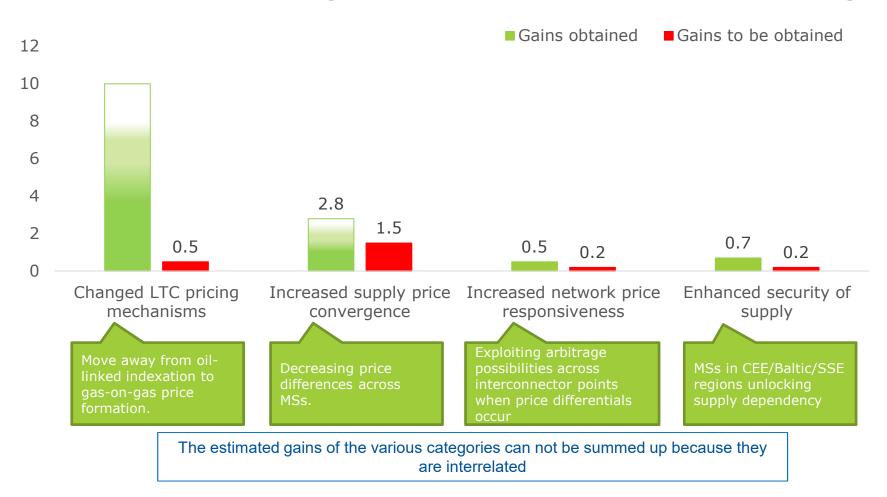
- TSOs' role in balancing is becoming more shortterm and residual
- Clear rules on imbalance charges and reliable information given to shippers increases their confidence to take positions on spot markets, hence backing hubs' liquidity





EU gas consumers are receiving tangible benefits from better functioning wholesale markets and could gain even more

Estimation of annual welfare gains since 2013 in billion euros for selected categories







Conclusion

- No fundamental change in the EU gas regulatory framework is needed as the model has proven its value; i.e. the market is already functioning well for 70-80% of gas consumption
 - But NCs fitness should regularly be assessed and ability to have technical amendments made quicker
 - □ Some codes still under implementation, e.g.TAR NC. Once implemented there could be room to update them in line with market functioning
 - ☐ Fully implement the BAL NC in those MSs lagging behind. If not, take corrective actions
 - ☐ The possibility to increase the frequency of CAM auctions should be further discussed
 - **Specific measures** could be needed to further enhance the IGM especially in those MSs that have challenges to move to a functioning gas market
 - e.g. exploring gas release programmes





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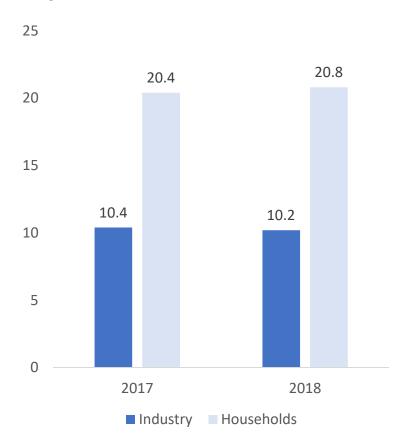
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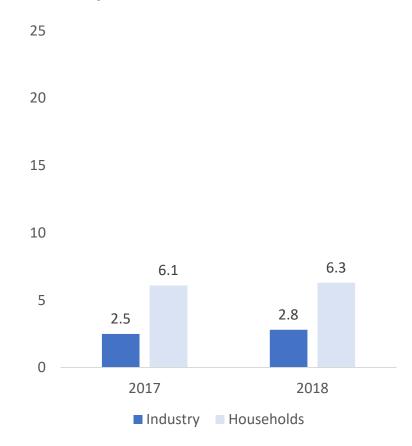


Electricity and gas prices in the EU increased slightly year on year

Final electricity retail prices in euro cents/KWh



Final gas retail prices in euro cents/KWh

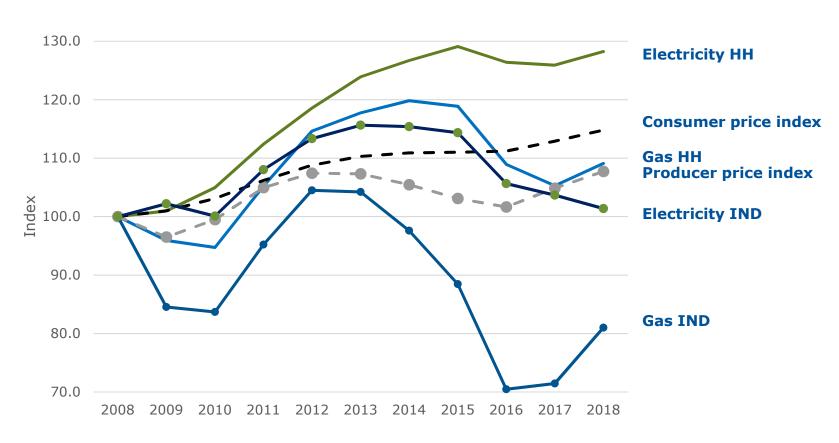






Set against relevant price indexes only electricity household prices exceed inflation 'since liberalisation'

Evolution of electricity and gas retail indexed prices set against price indexes - 2008-2018

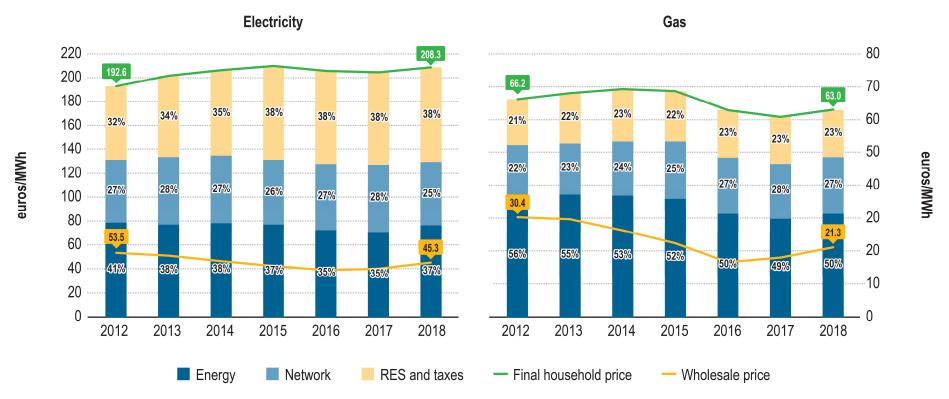






After years of decline the share of the energy component in both electricity and gas seems to be stabilizing

Breakdown of final retail prices for electricity and gas household consumers 2012-2018

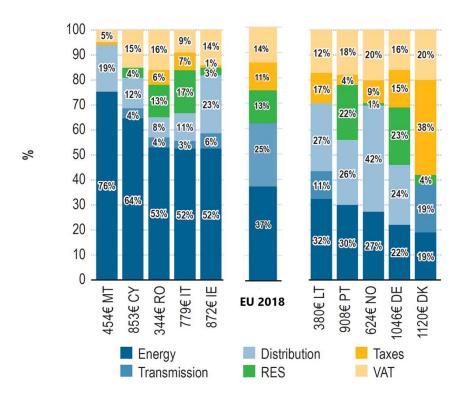




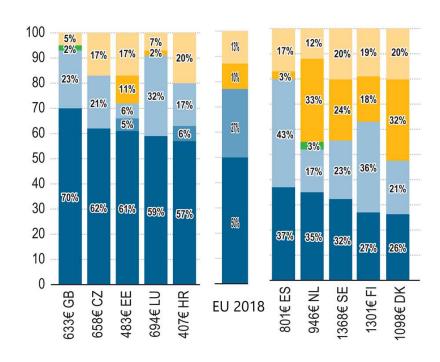


Still large variations exist across MSs in overall prices and price decomposition

Breakdown of incumbents' electricity offers for households for selected capitals – 2018 (%)



Breakdown of incumbents' gas offers for households for selected capitals -2018 (%)

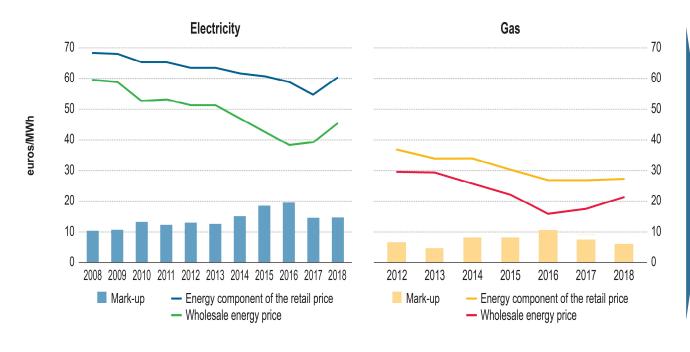






Since 2016, electricity and gas mark-ups show a decreasing trend

Evolution of aggregated EU mark-ups in electricity and gas retail markets



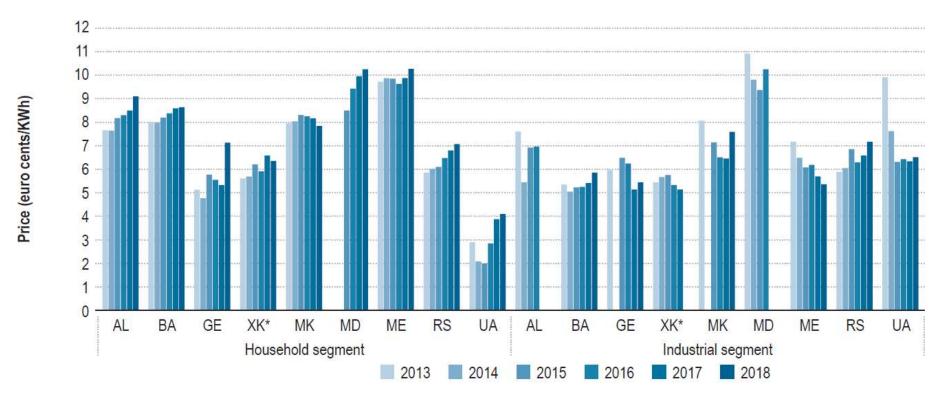
- Mark-ups vary substantially among MSs
- A few MSs still have negative mark-ups as they regulate prices below cost of energy,
 - acting as an absolute barrier to market entry
 - Leading to wasteful energy consumption
- The degree of responsiveness of the energy component of retail prices to wholesale prices for gas is higher than for electricity





Final electricity prices in nominal terms for households and industrial consumers

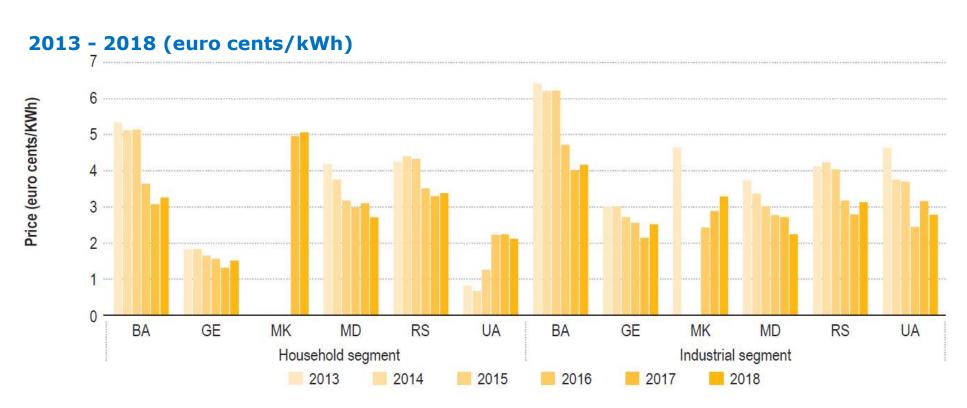
2013 - 2018 (euro cents/kWh)







Final gas prices in nominal terms for households and industrial consumers

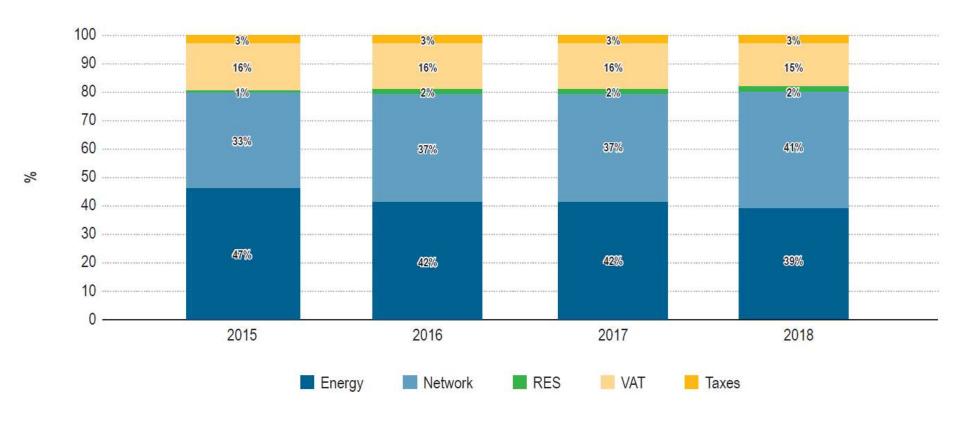






Weighted average breakdown of incumbents' standard electricity offers for households in capitals

2015 - 2018 (%)

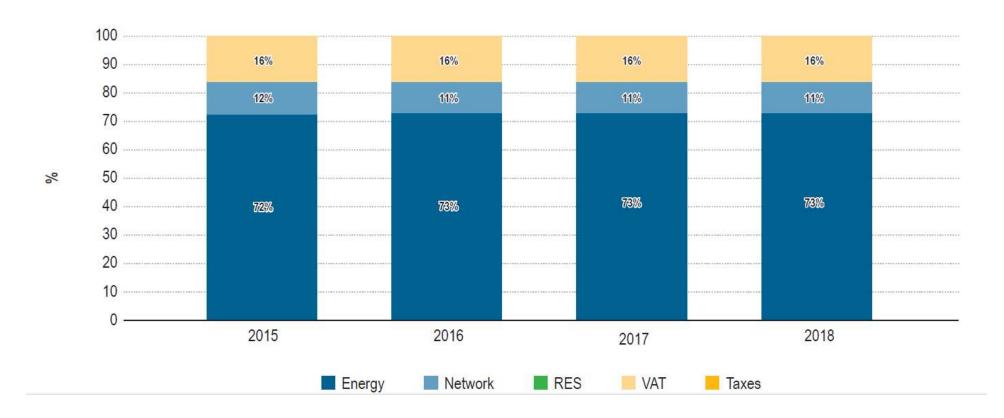






Weighted average breakdown of incumbents' standard gas offers for households in capitals

2015 - 2018 (%)







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- Performance of European retail markets





- Complementary to ACER-CEER Retail Volume: it provides further analysis in order to better understand competition dynamics
- The data used stems entirely from NRAs' input to CEER's National Indicators Database, no external sources
- Main topics covered in the report:
 - Market structure
 - Customer switching activities and offers
 - 2 case studies on switching and offers (Spain, France)
 - Intervention in price setting and price regulation

ONLINE ON 21/11/2019





CEER Monitoring Report on the Performance of the European Retail Markets 2018 – Market Structure

- EU average number of active nationwide supplier increased in both segments: highest number in CZ, NO, ES for electricity and in CZ, GB and ES for gas.
- Entry-Exit activities level remain high in many countries: ES with the highest net entrance in gas and electricity markets, GB with the highest exit.
- Slight decrease recorded in terms of HHI in Europe, but general level of concentration remains high: only 7 MS in Electricity (household) and 3 MS in Gas score below 2000.
- Non-household segment seems to be less concentrated.
- GB and NO with the lowest HHI for Electricity and HR and IT for Gas: there are still some MS with high concentration levels, mainly in non-liberalised markets





CEER Monitoring Report on the Performance of the European Retail Markets 2018 – Switching activities a. offers

- High differences between MS in terms of switching activities
- Households: NO the highest external rate (21,4%) for electricity; BE (22%) for gas.
 Highest increases recorded in NO; FR for electricity and CZ, FR, IT an IE for gas.
- In the majority of MS the rate was higher than the 5-years average.
- Non-households switch more than households
- The variety of offers in MS is increasing, particularly in South & East Europe (HR; CZ; GR; LV; RO)
 - 5+ Electricity Offers available in 22 out of 27 MS: it is 4 more MS than in 2017
 - 5+ Gas Offers available in 14 out of 23 MS: it is 2 more MS than in 2017
- NEW! (data recorded for the first time!) Bundled products are available in:
 - 18 out of 27 MS (electricity)
 - 8 out of 23 MS (gas)