

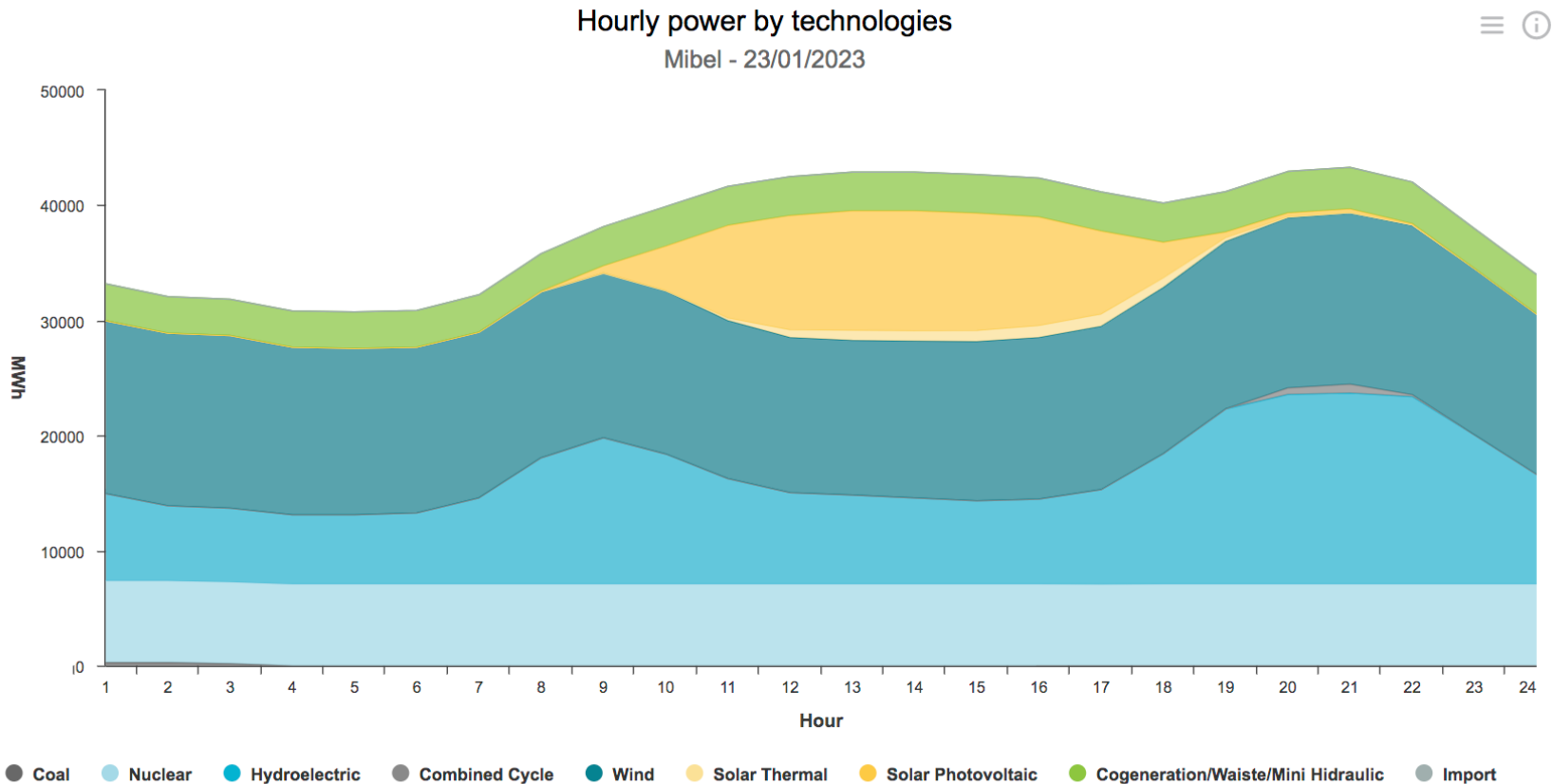
Competition Issues in Electricity Markets

IFC Annual Flagship Conference
Competition and Productivity

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Wholesale electricity markets

Generation technologies

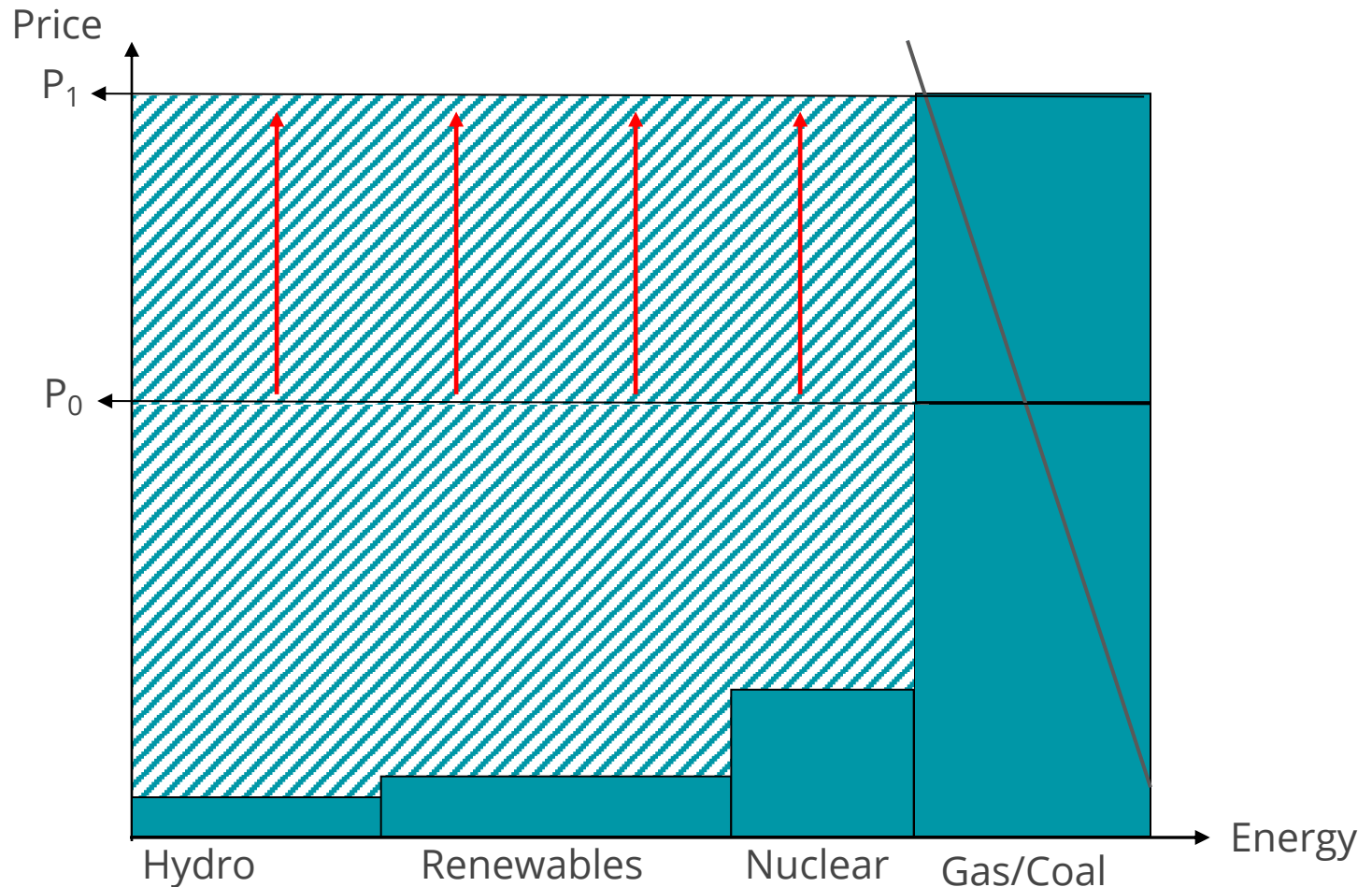


• The information of the estimate of the Portuguese renewable programming is published once the disaggregation of real production of REN has been received.

Generation by technologies during a representative day
Spanish electricity market (source: OMIE)

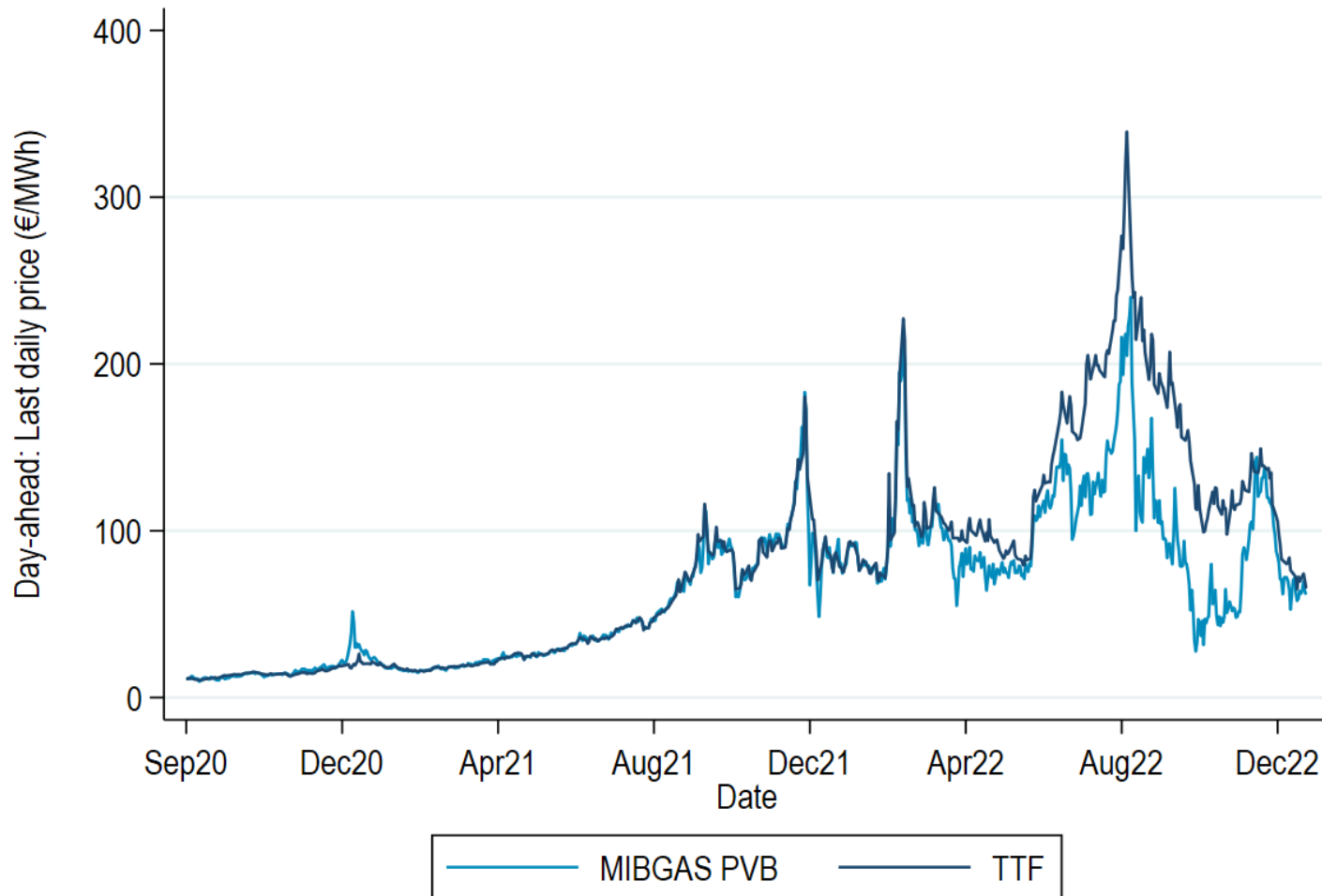
Wholesale electricity markets

Markets prices and inframarginal rents



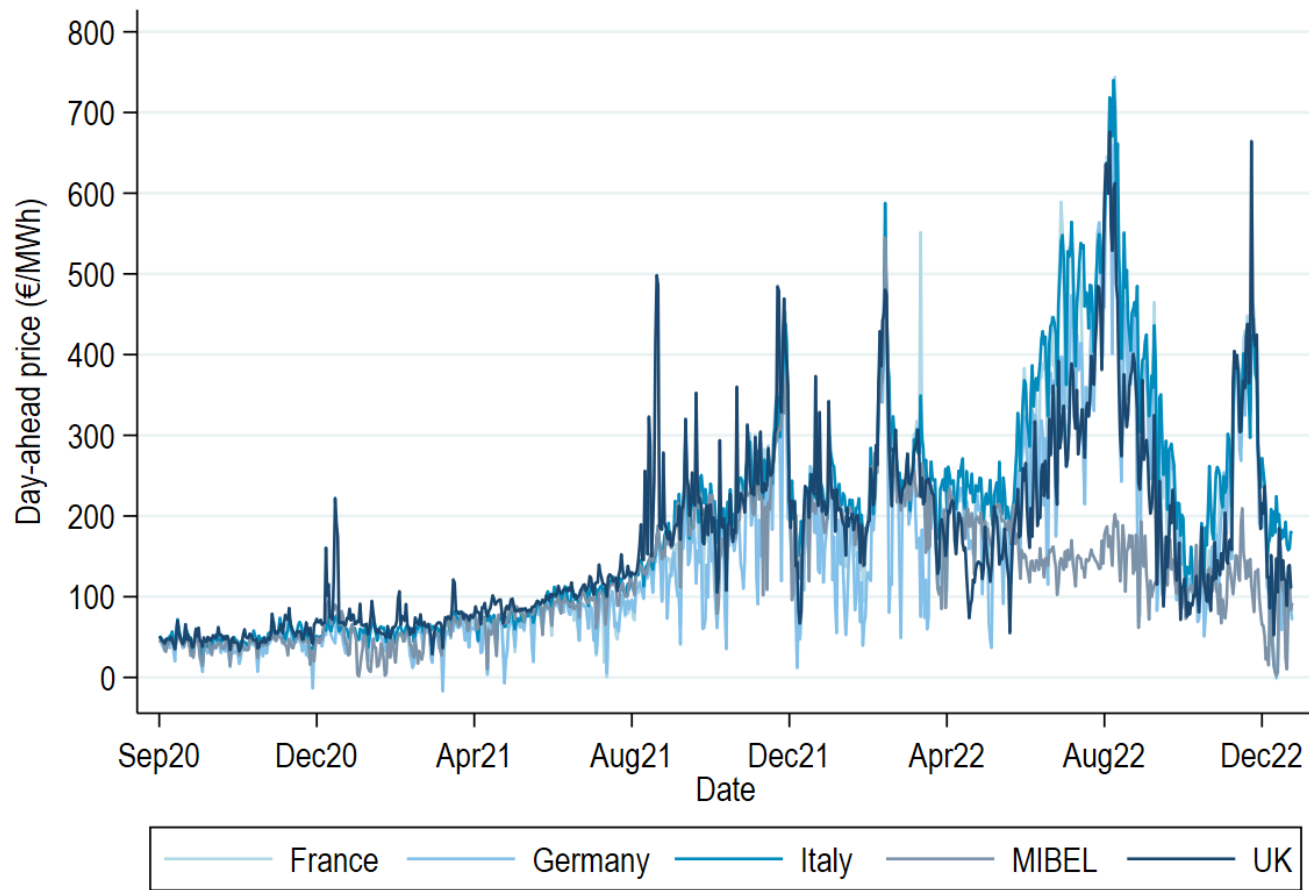
Stylized representation of market clearing in wholesale electricity markets

Gas prices in European hubs



Source: MIBGAS & investing.com

Electricity prices in European hubs



Source: Red Eléctrica

Wholesale electricity markets

Is there a competition problem?

Inframarginal rents cannot be competed away due to the lack of free entry & exit for some technologies

Even if the existing assets are bid in competitively, competition problems arise due to the **lack of free entry & exit**

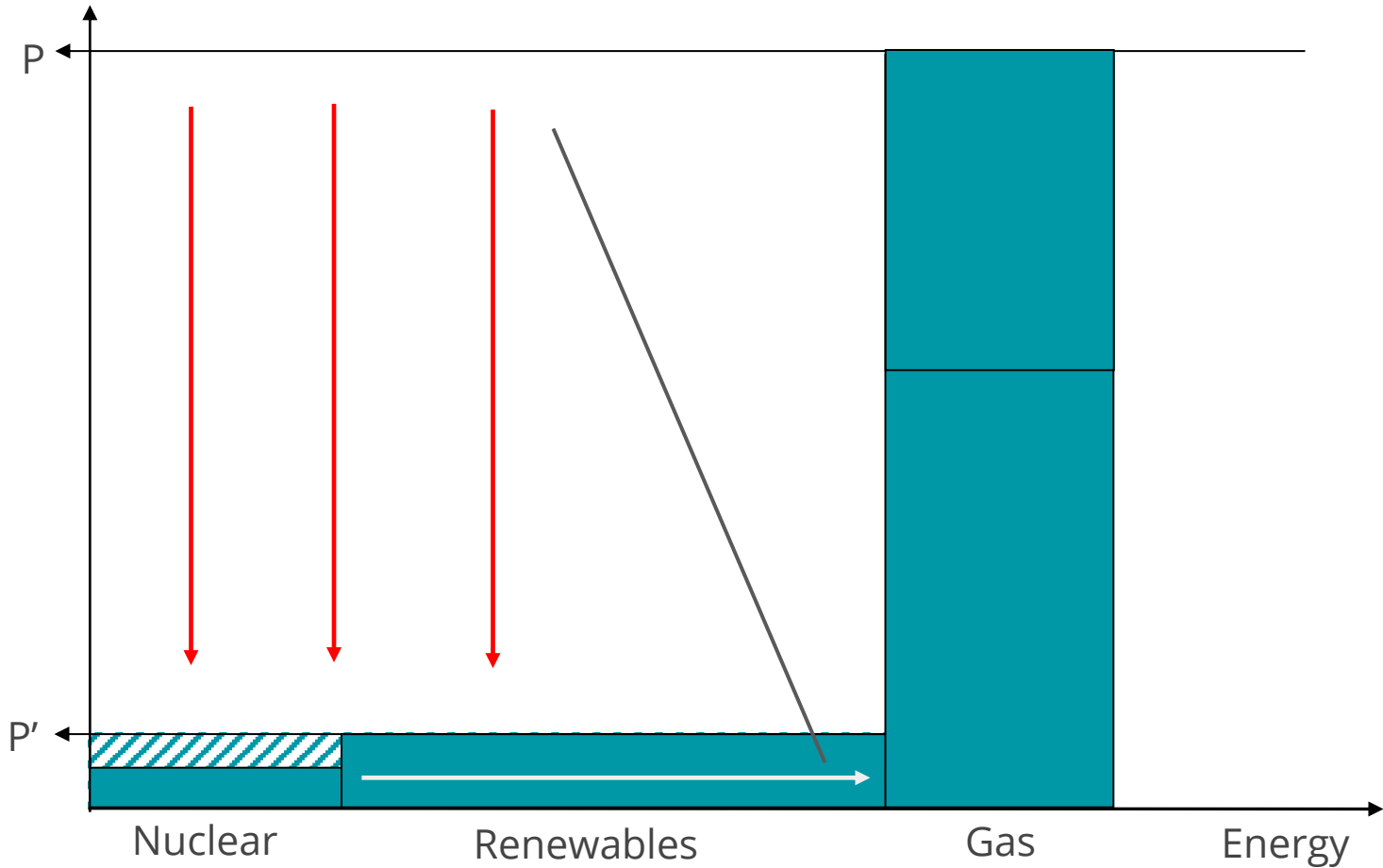
- └ Suitable sites for hydro plants exhausted
- └ Legal and social barriers to the expansion of nuclear plants
- └ Legacy plants were decided and paid for by regulators
- └ Lengthy permitting for renewables

Competition should move to the entry stage:

Auctions for long-term contracts-for-differences

Wholesale electricity markets

Too much competition among renewables?



Competition should move to the entry stage:

Auctions for long-term contracts-for-differences

Wholesale electricity markets

Is there a competition problem?

Generators might have incentives & ability to bid non-competitively

Typically, few electricity companies

Firms are subject to capacity constraints

Often, there are pivotal suppliers

Inelastic demand

Collusive concerns:

- └ Auctions are repeated daily
- └ High degree of transparency for firms
- └ Uniform pricing facilitates collusion (Fabra, 2006)

Regulatory decisions might help enhance competition:

Contracts-for-differences mitigate market power (Fabra and Imelda, 2023)

Retail electricity markets

Is there a competition problem?

Typically, few electricity companies

Many of them are vertically integrated generation-distribution-retail

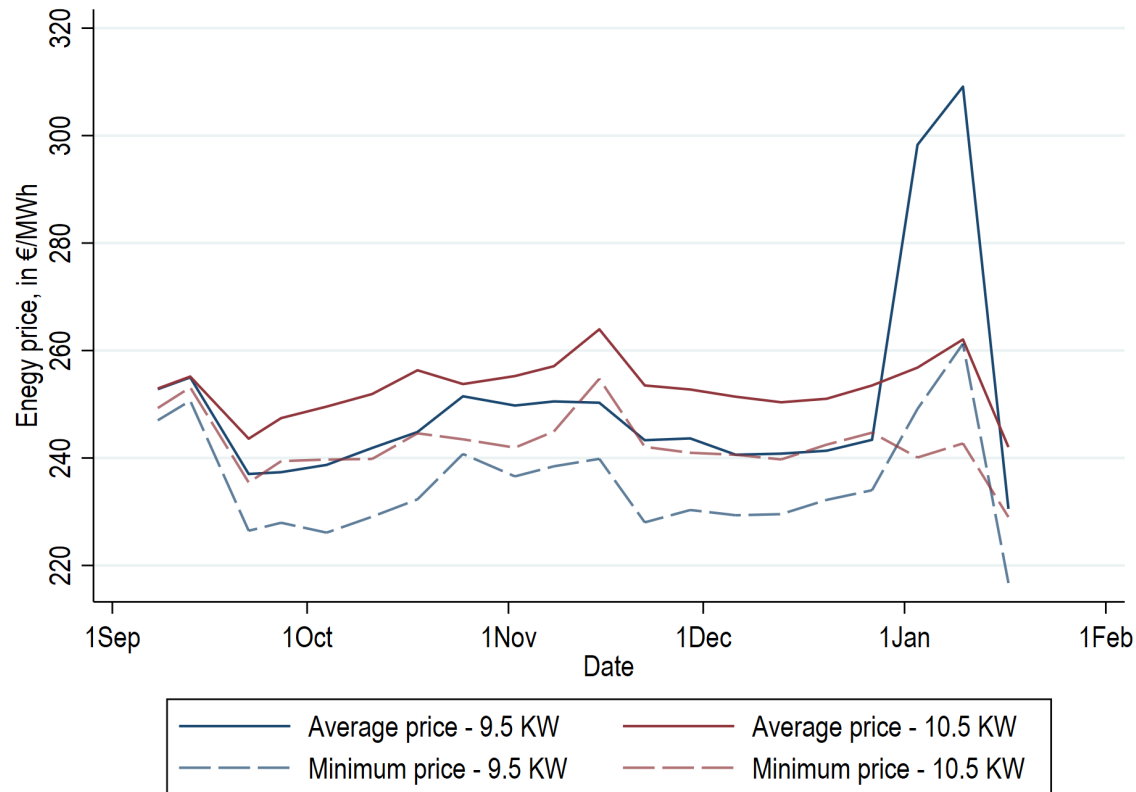
- └ Easier access to end-users
- └ Natural price hedge
- └ Margin squeeze to reduce competition in the medium run

Consumers' inertia and switching costs

Regulatory decisions might help enhance competition:

Default tariff reflecting a pass-through of wholesale prices

Retail electricity prices: the competitive effects of a default tariff



Ends-users in Spain with power <10kW can opt for the default tariff reflecting the pass-through of wholesale prices. This figure shows the retail prices offered to end-users with power 9.5 kW (blue) and 10.5 (red). One can see that the former get lower prices.

Thank You!

Questions? Comments?

<http://nfabra.uc3m.es/>
<https://energyecolab.uc3m.es/>