Desenhos de Mercado Grossista de Energia Eléctrica

Workshop GESEL / ISEG

Lisboa, 9 de Fevereiro de 2017

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Timeline overview: are we entering a third phase?

- First wave of electrification
- Hydro, thermal, nuclear
- Public, vertically integrated utilities

1990’s
- European Directives (“Energy Packages”)
- Single Energy Market
- Unbundling
- Privatization
- “Dash-for-gas”

2010’s
- UK Electricity Market Reform
- Clean Energy Package
- Decarbonization
- Decentralization
- Digitalization

“Beyond Liberalization”? “Re-regulation”?
Two opposing views

A

“Renewables are now mature – they should participate in the market without subsidies”

- Any additional remuneration on top of the wholesale price is a subsidy
- Current marginalist market model can remunerate new investments and ensure efficient dispatch
- No structural flaws exist, only incremental improvements needed (no caps/floors, real-time, meaningful CO₂ prices)

B

“The current market design is not fit for purpose – long term contracting is needed”

- Decarbonization requires CAPEX-only technologies which are pure price takers in current market design, creating unmanageable risks for investors
- Wholesale price unable to promote new investments, even with high CO₂ price, as RES growth structurally pressures it down
- Ex-ante auctions for long term contracts ensure cost efficiency and visibility
A Some recent supporting evidence ...

**Bloomberg**

*Offshore Wind Farms Offer Subsidy-Free Power for First Time*
April 13, 2017

- “EnBW, DONG bid to build projects in Germany with no support
- Record low price for power is below prevailing market rate”

**Expresso**

*Vem aí uma corrida ao sol no Alentejo*
15/04/17

“Vaga de grandes centrais solares vai sair do papel, já com licenças para produzir, mas sem subsídios”

Source: Bloomberg, Expresso
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... but is there more than meets the eye?

Bloomberg

Bloomberg reported that a number of pension funds are reconsidering their stakes in DONG, as the company won OW projects without any subsidy.

The development makes an investment in DONG riskier, which requires a better price.

Industriens Pension, which has reportedly invested DKK1 bn in DONG’s projects, is also concerned that stable cash flows are threatened (...).

Expresso

(...) De facto, os projetos que avançarão no regime geral de produção (isto é, sem tarifa subsidiada) só conseguirem financiamento se apresentarem garantias sólidas, nomeadamente contratos de venda da energia (...)

(...) A <promotor> está a negociar contratos de venda de energia a cinco, dez e quinze anos, devendo os preços rondar €40 a €50/MWh (...)

April/2017

15/04/2017

Source: Bloomberg, Expresso
EDP Produção
The need for a market redesign is already recognized by mainstream media

“Green energy has a dirty secret. The more it is deployed, the more it lowers the price of power from any source.”

“Policymakers are already seeing this inconvenient truth as a reason to put the brakes on renewable energy.”

“In short, policymakers should be clear they have a problem and that the cause is not renewable energy, but the out-of-date system of electricity pricing. Then they should fix it.”

Source: The Economist
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Clean energy’s dirty secret – a.k.a the merit order effect

Marginalist market model

Impact of RES in price clearing

[Graphs showing the impact of RES on price clearing]
The retail version of clean energy’s dirty secret – a.k.a the consumer divide and the death spiral

Cost structures

1. Revenues data for Portugal calculated for all voltage levels; Cost and revenue data for Portugal refer to 2016
Key elements of a future market design

**At the wholesale level**

- Evolve towards ex-ante auctions for long term contracts for CAPEX-only technologies (mostly RES)
- Remunerate back-up capacity
- Improve short term market to ensure efficient short term dispatch
- Rebalance the ETS to ensure a meaningful CO₂ price

**At the retail level**

- Increase share of fixed component in end-user tariffs, aligning it with the cost structure
- Share decarbonization costs across all energy sectors, avoiding making electricity – the privileged decarbonization tool – less competitive
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