Electricity Market Reforms: Short and Long Term Options

Natalia Fabra

Universidad Carlos III de Madrid and CEPR

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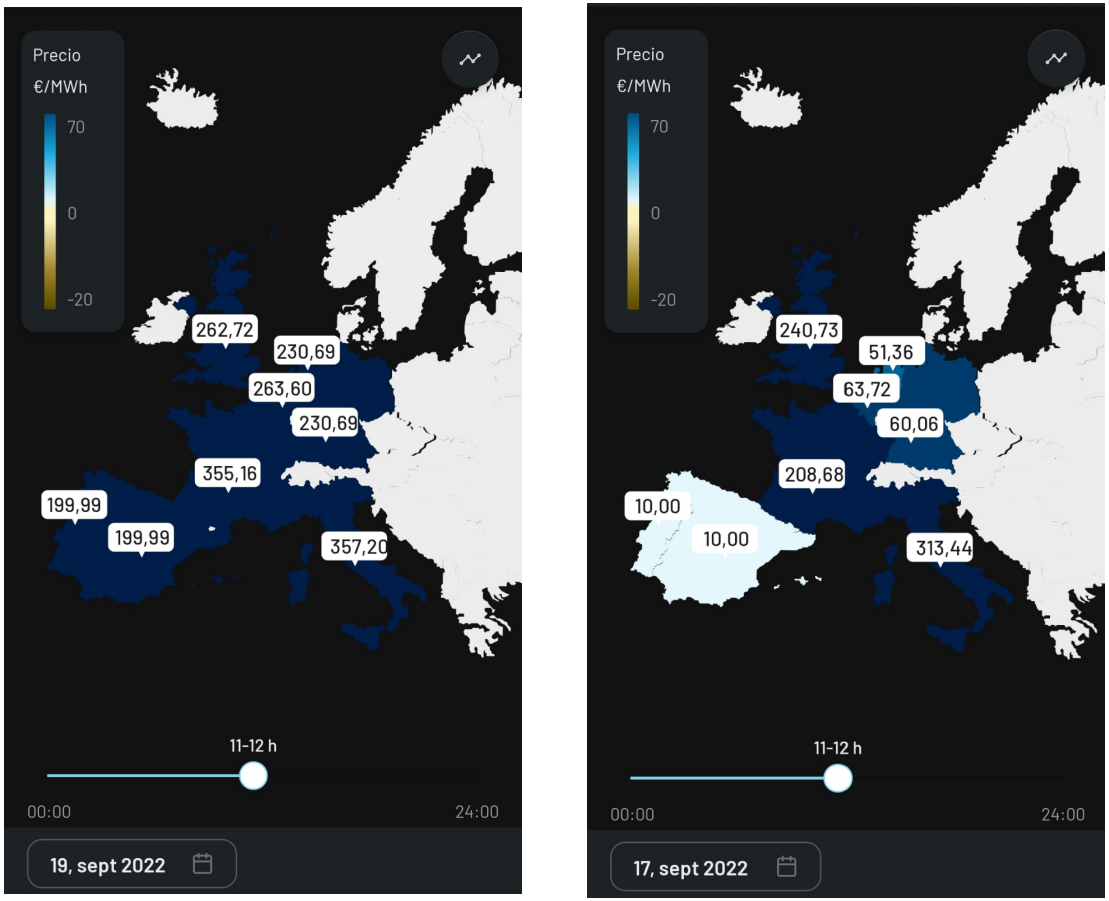
Not just a matter of addressing the current crisis

A Tale of Two States

Figure: Wholesale electricity prices in Europe



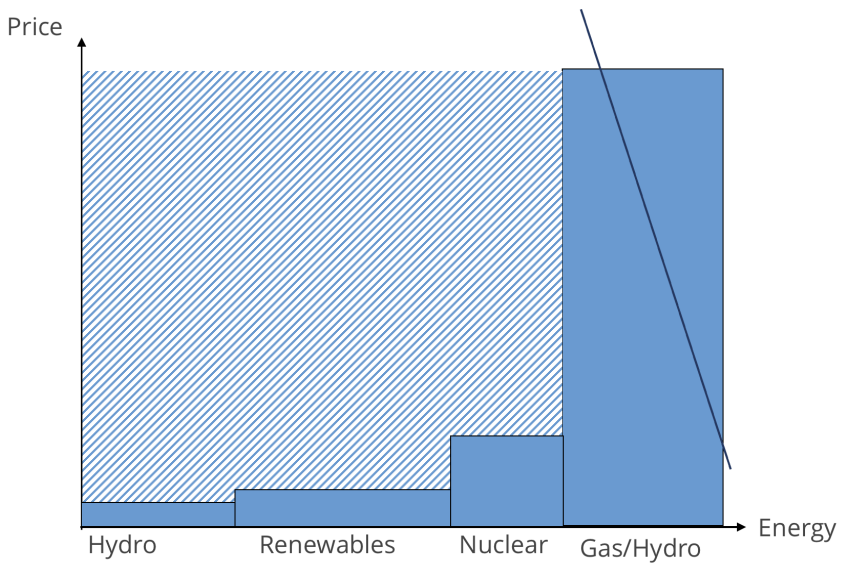
(a) "Energy crisis"

(b) "Energy transition"

The Need for Reform

A Tale of Two States

Figure: Merit-order dispatch, prices and revenues



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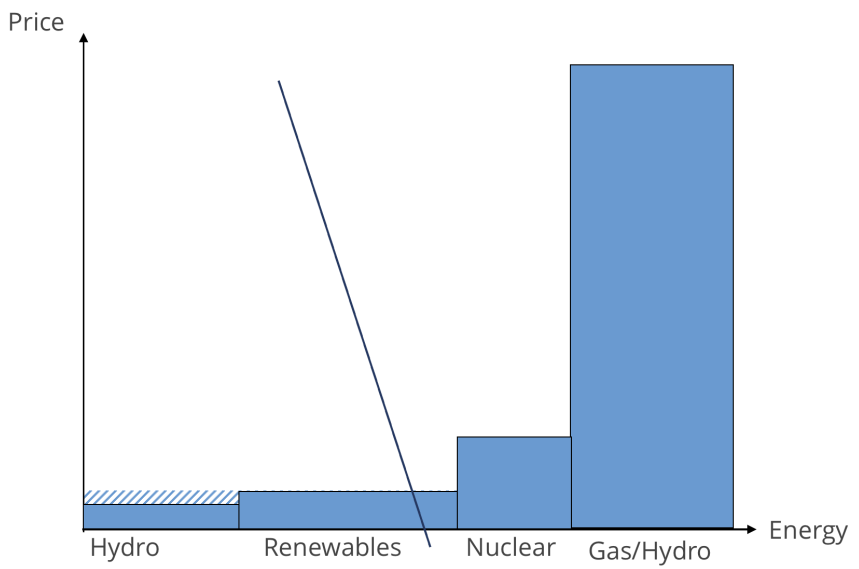

(b) "Energy transition"

The Need for Reform

What do these two states have in common?

1. Prices driven to the marginal cost of the price-setting technology
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Sources of inefficiency:

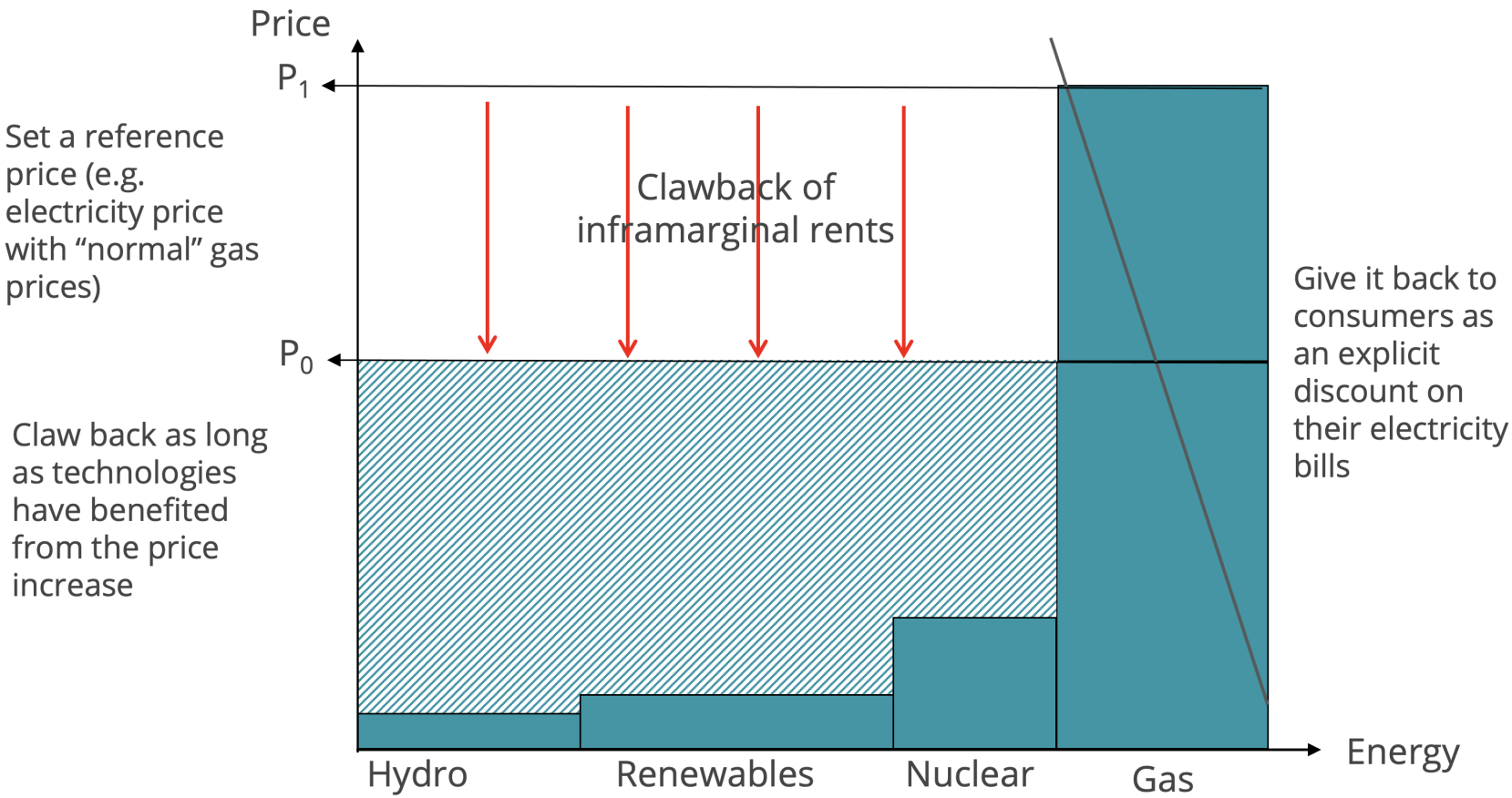
- Large risks for cost recovery $\rightarrow$ investment delays, risk premia...
- Externalities: security of supply, learning economies...
- Electricity as an input $\rightarrow$ loss of global competitiveness
- Increase in inflation and interest rates $\rightarrow$ likelihood of recession
- Electrification discouraged $\rightarrow$ energy transition at risk

Short-run emergency interventions

Price cap on inframarginal producers

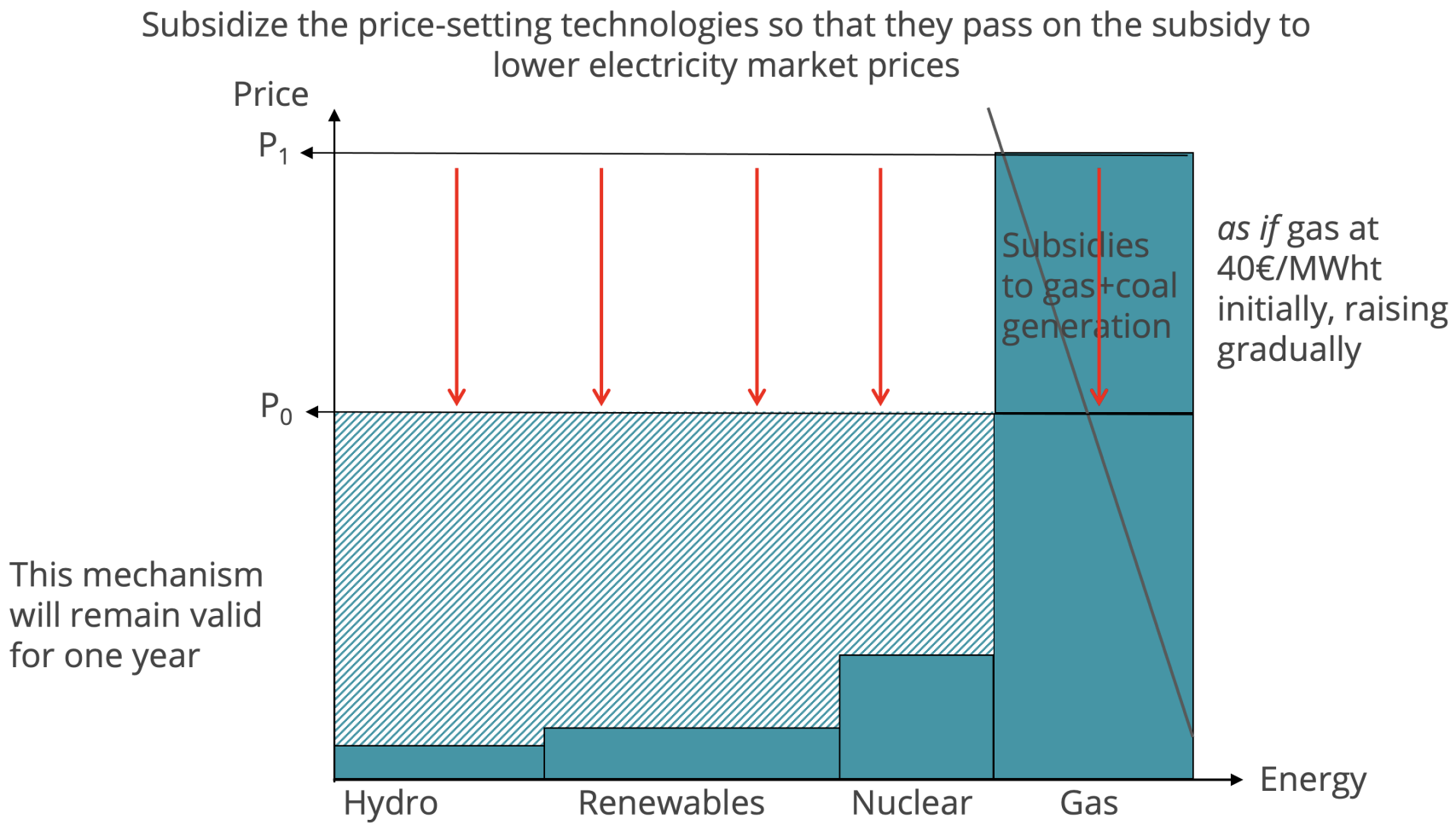
The EC has agreed setting a 180/MWh inframarginal price-cap

Clawback the extra-rents of those technologies whose costs have not increased but yet are receiving an inflated electricity price



Short-run emergency interventions

Iberian measure



A new electricity market architecture is needed

Which objectives?

1. **Short-run efficiency:** production and consumption
   - The least cost production units must be dispatched at all times
   - The price signal should reflect the system short-run marginal cost
2. **Long-run efficiency:** investments
   - Investments at the scale necessary
   - Investments of the "right" technology at the "right" locations
   - Investment risks allocated to the least risk-averse party
   - Electricity prices must reflect long-run marginal costs
3. **Equity**
   - Firms must not make excessive profits

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4. Technology-neutrality should not be the default:
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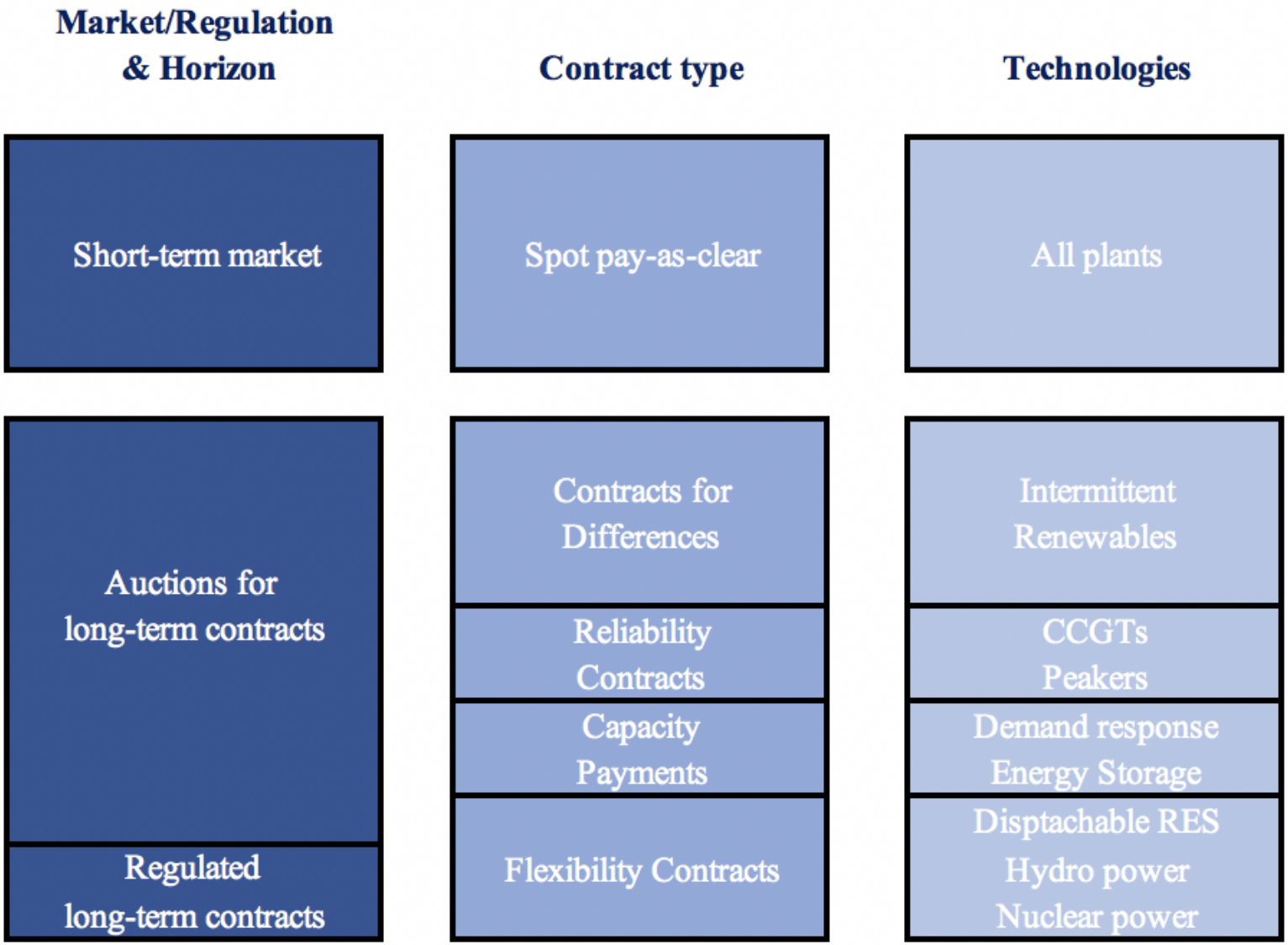
5. Competition is a powerful tool whenever the market is competitive:
   - Otherwise, regulation might be a preferable option.

Which Electricity Market Architecture?



Conclusions

- There is an urgent need to reform electricity markets:
  1. Tackle the energy crisis
  2. Support the energy transition
- New electricity market architecture: aim at efficiency & equity
  1. Liquid short-run markets
  2. Auctions for long-run contracts
  3. Contracts should respond to the characteristics of the technologies
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Power markets can be a powerful source of efficiency for our economies...as long as we design them right!

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Thank You!

Questions? Comments?

More info at nfabra.uc3m.es and energyecolab.uc3m.es