

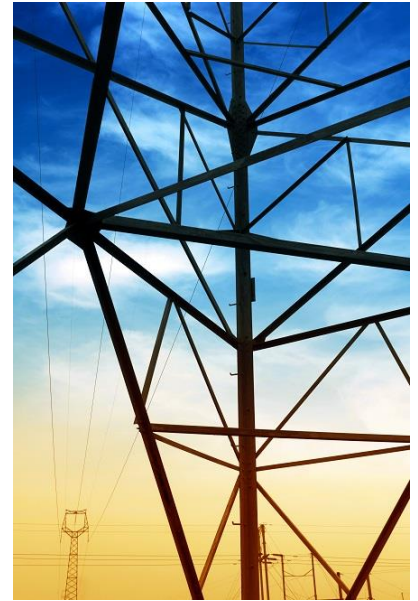
## ENERGY, THE MARKET AND THE LAW: A EUROPEAN DIALOGUE BETWEEN ECONOMISTS AND LAWYERS

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### LONG TERM CONTRACTS TO FURTHER PUBLIC GOOD IN THE EU: WILL THE LAWYERS ACCEPT THE ECONOMISTS' ARGUMENTS?

Long-term contracts are usually analysed under two opposing perspectives (1) under a perspective of competition law, where they are seen as anti-competitive devices akin to vertical integration (e.g., Aghion and Bolton, Dewatriport). If long-term contracts are concluded with a government or a government agency, they are suspected in addition of channelling forbidden state aid to the contracting party. (2) The second perspective sees LTCs as necessary to ensure investment, in particular investments creating positive externalities, where long-term contracts are deemed useful in overcoming both risk and risk aversion.

The hard-wired reflex of the European Commission is to adopt the first perspective. While the EC allows in principle support for contributions to general economic interests, it sets the bar very high. Long-term contracts to remunerate activities of general economic interest must first prove the existence of identifiable market failures. Proportionality and the absence of over-compensation are additional criteria. The two relevant possible market failures in the energy sector concern the environment and the security of supply, i.e., the adequacy of capacity investment. Except for feed-in tariffs for renewable energy justified on environmental grounds, no other area of the energy sector enjoys a blanket exemption to introduce long-term contracts. However, market failures in the energy sector are a concern in particular the area of security of supply and investment adequacy.

It is the task of the energy economists to prove or disprove the existence of such a security-of-supply market failure. The key question is can competitive energy-only markets with periodic episodes of VOLL pricing ensure adequacy of supply in a decarbonising electricity market? For the sake of argument, I will postulate “they cannot” and provide three arguments in favour of this position:

- 1. Capital intensity of low carbon technologies:** Almost all technologies required for low carbon electricity markets are highly capital intensive – wind, solar, hydro, nuclear, storage, smart grids, energy efficiency... all require huge up-front costs and as long as prices are volatile are at a competitive disadvantage to fossil-fuel based technologies. A broken carbon market and the crash of oil, gas and coal prices do not help either. Without long-term contracts, investors will always opt for the technologies with lower up-front capital costs even at identical LCOEs (discounted average lifetime costs) due to the lower financial risks in case of a price decline.

2. **Security of supply externalities during VOLL-pricing periods in energy-only markets:** the VOLL pricing model that provides the theoretical justification for the claim that energy-only markets can provide adequate investment in the absence of long-term contracts presupposes rolling brown-outs during a limited number of hours. Such involuntary interruptions have social costs beyond the private costs of VOLL. Think of being stuck in an elevator in an office building whose supply contract you are no party of. Such negative externalities constitute a market failure that justifies in particular capacity mechanisms, which are a form of LTC.
3. **Skewed investment incentives in markets for non-storable goods:** markets for non-storable goods such as electricity are characterised by extreme demand inelasticity. This means even a slight excess above the optimal amount of investment will induce drastic price drops. For the individual investor with a discrete sized, “lumpy” investment this means he will, having the choice, underinvest rather than overinvest in an energy-only market thus re-enforcing a tendency of the energy-only market to provide less than optimal amounts of capacity, over and above the optimal under-provision inherent in VOLL-pricing.

In conclusion: there is a strategic disconnect between energy-only markets without long-term contracts and both decarbonisation and security of supply. These two market failures justify long-term contracts for low carbon technologies and capacity support. The situation is critical. Will the lawyers let us fix it?

CONFERENCE

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Tuesday 12 January 2016  
14h00 - 18h30

Université Paris-Dauphine  
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