The costs of counterparty risks in long-term contracts

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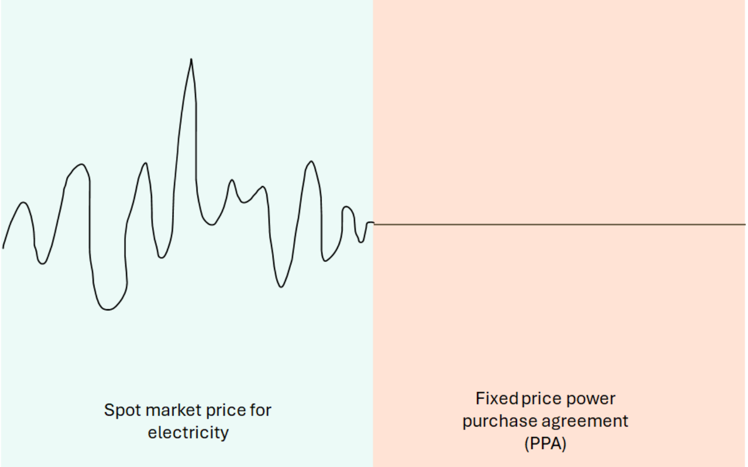
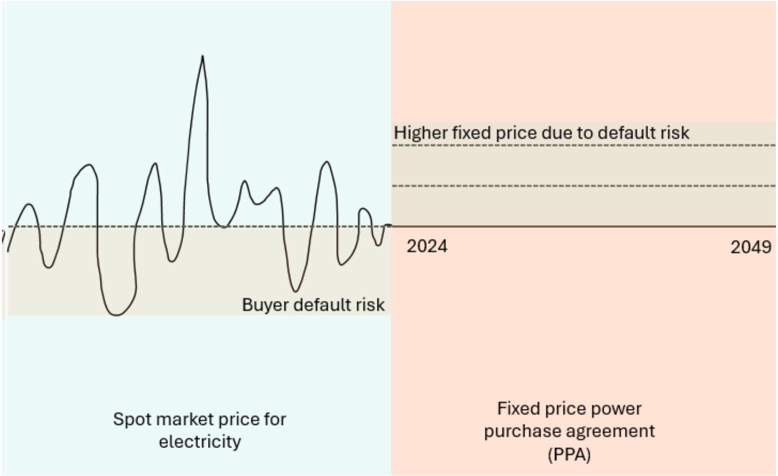
Visual Summary

Spot market vs. bilateral contracting



Two parties enter into a contract

There is counterparty risk



The paper suggests some ways to handle default risk

1. Buyers provide collateral in case of default
2. Government guarantee in case of default
3. Subsidies if seller enters into contract

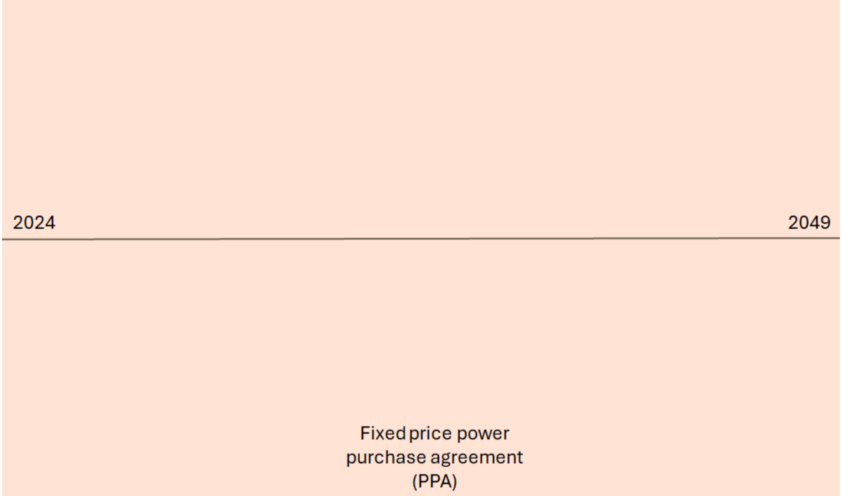
But paper acknowledges that all of these come with some costs.

Super interesting model which explains why PPAs aren't as prevalent and standardised as mortgage agreements!

Discussion

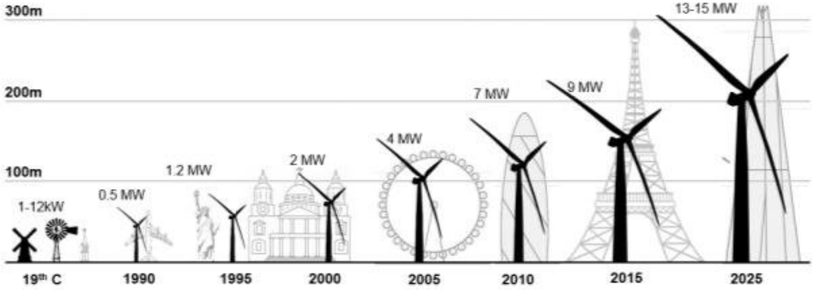
Moving from the spot market to bilateral contracting is introducing rigidity into the electricity market

These are long-term contracts



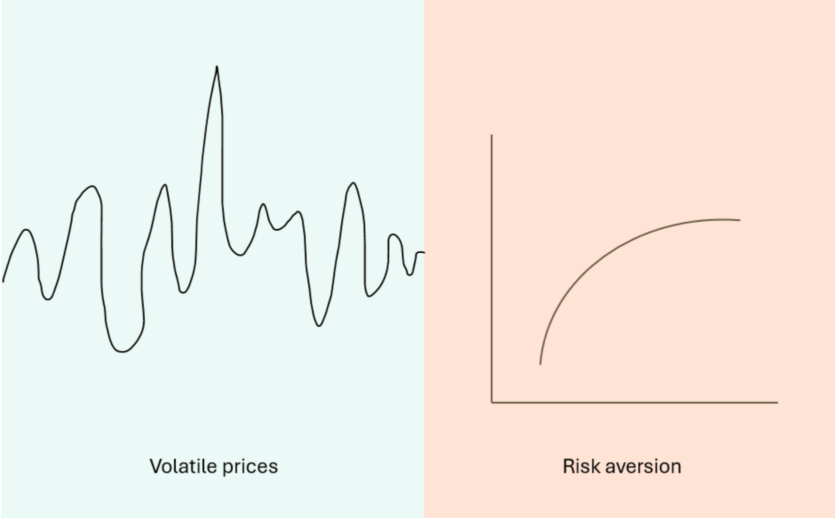
Long-term contracts introduce rigidity which helps investment but hurts dynamic efficiency

One case: getting locked into an older vintages -



In Uruguay, older turbines under PPAs are not exposed to market competition. Therefore, newer vintages cannot come in.
→ Welfare calculations in paper could consider loss of dynamic efficiency via long-term contracting.

More fundamentally, what is the market failure?



When might a long-term contract make sense?

Credit market failure:
Limited insurance or
private risk hedging

Socially-beneficial
tech

Early-stage
technology with
small market share

Infant industry

Feed-in-tariffs helped kickstart investment in solar power in the UK in the early days (Srivastav 2024). Back then: solar $<1\%$ of market, limited insurance for solar, and societal need to push out coal.

Today, it is a different context...

1. Renewable energy has larger market share. Insulating renewable energy firms from market price can have distortionary consequences that cannot be ignored away.
2. In 2024, insurance and private risk hedging for renewables are prevalent.
3. If there is still a credit market failure, why not introduce more forward contracts or innovative insurance schemes instead of intervening in power market?

The idea of using long-term contracts to attract investment into energy is not new

1. In the 1990s, Asian govts used PPAs to attract private investors. They alleviated counterparty risk via government guarantees, currency hedges, etc.
2. But shadow value of public funds matters and this created power sector debt that is larger than combined healthcare, education and social security budget in Pakistan (Dobermann, Hayat and Srivastav 2024)
3. How much counterpary risk reduction is too much?

Markets are better against corruption than bilateral contracting

Much larger scope for corruption and illicit transfers in opaque bilateral contracting model as opposed to selling on the spot market (Dobermann, Hayat and Srivastav 2024)