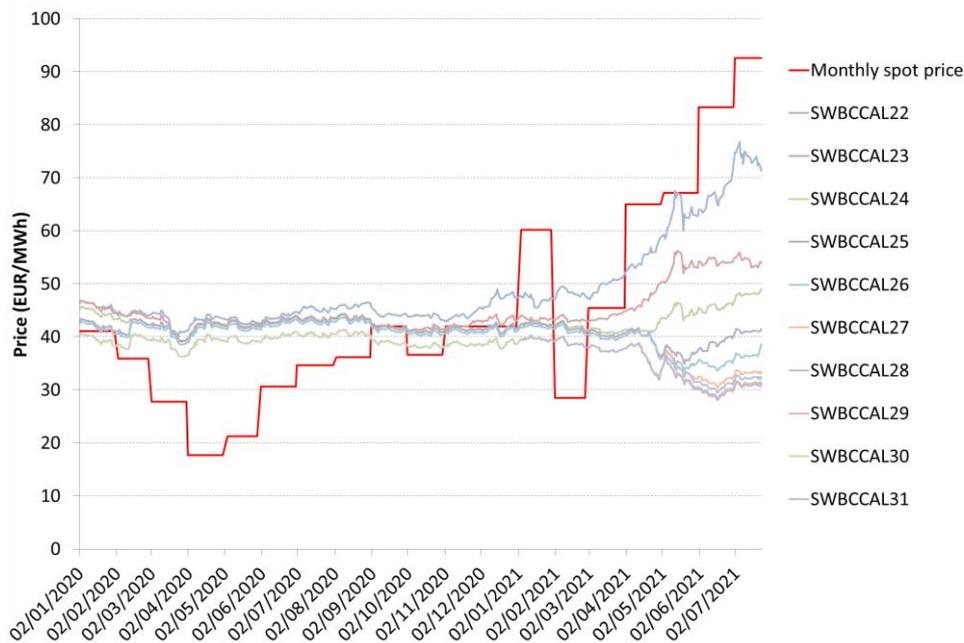


Renewables are destined to beat thermal power and reduce the price of electricity

The chart below shows that as the average price in the Spanish spot market has risen recently (in red is the monthly average price), the front-end of the the calendar contracts has risen but the tail has continued to drop. That suggests that the market still believes renewables will continue to increase and dominate in the medium term. That means that the recent increase in electricity prices driven mainly by increases in CO2 and gas costs will go into reverse as the role of thermal power plants fades.

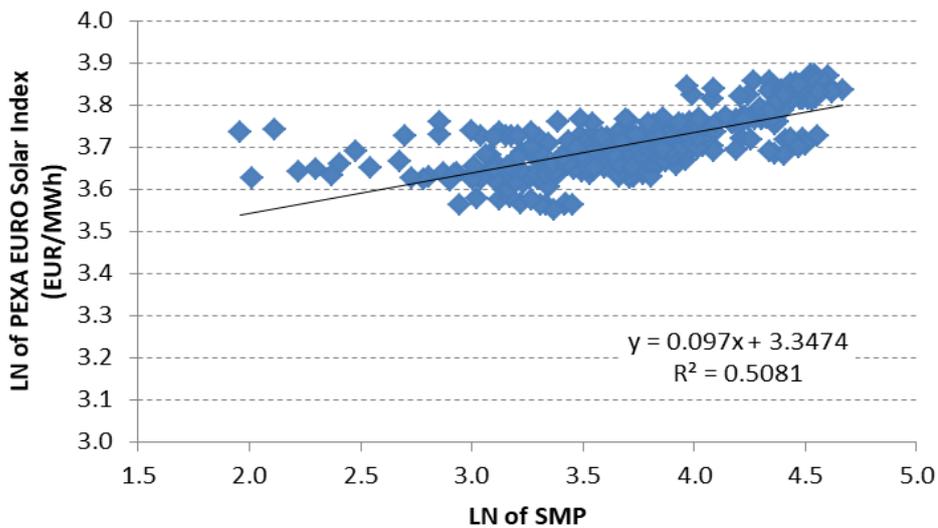
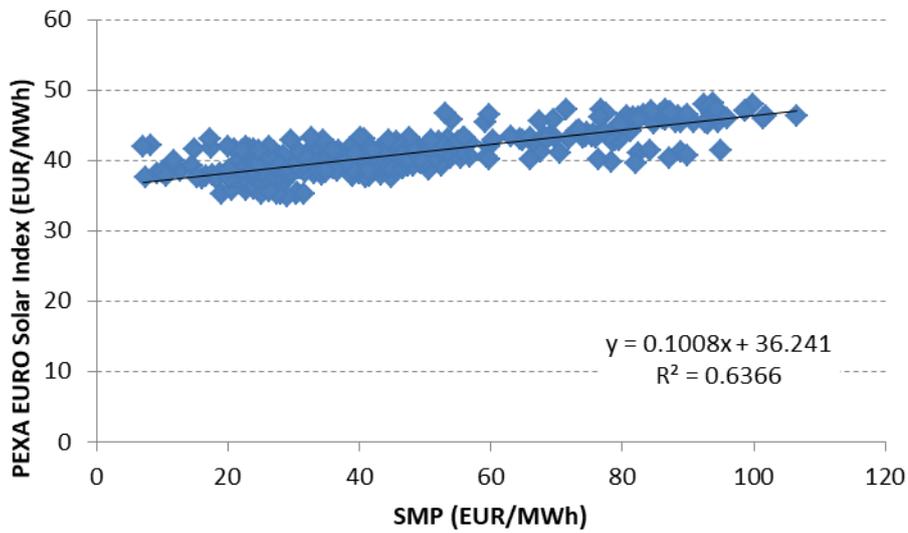
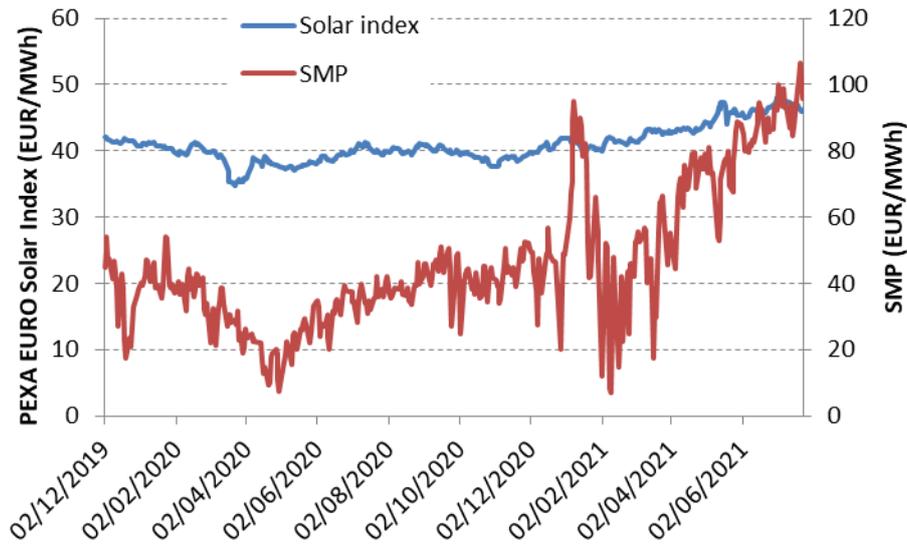


Sources: Futures price data from BME Clearing, Spanish hourly prices from ENTSO-E, and EKON calcs.

If electricity prices in the futures are still expected to be set by the LCOE of wind and PV, it is still feasible that PPA prices should adjust to reflect the changes in the futures markets. If prices are expected to be much higher in 2022-2024 than as the case a few months ago, a developer may be less inclined to enter into a 10-year supply contract at the same price as before, other things constant. We can observe some of this by examining the relationship between spot electricity prices and PPA index prices. Due to data availability limitations, we could only get hold of Pexapark’s EURO solar PPA index which is designed around a 10-year pay-as-produced contact.

Despite this limitation, we can identify a positive relationship between the daily average and Pexapark EURO solar index prices as shown in the charts below. Since December 2019, a 10% increase in the Spanish average daily price has been accompanied by an average increase of 1% in the PPA index, and vice versa. Another way to interpret this is to say that a 10EUR/MWh increase or drop in the daily average spot price leads to a 1EUR/MWh increase or drop in Pexapark's index.

These results are indicative of buyers and sellers adjusting their expectations based on market trends: spot and front-end contracts prices impact the price expectations for long-term PPAs. And to date the increase in spot and front-end contract prices has been having a greater impact than the drop in the back-end contracts so that the current increase in CO2 and gas prices is having an overall positive impact on PPA prices.



Source: PEXAPARK, ENTSO-E and EKON calcs.