

**Open letter of European economists on market premiums
to Commissioner Günther Oettinger and Joaquín Almunia**

The EU State aid guidelines to be finalized by April 9th require that renewable energy producers must sell renewable energy directly to the market, require them to be subject to balancing responsibilities, and require that member states provide aid solely in the form of a premium to the market price. The use of the fixed feed-in systems that have so far been successful in minimizing financing costs is prohibited from January 2015 for all but small installations. This shift to a “market premium” is likely to increase financing costs and might have negative effects on the efficiency of short-term markets and effectiveness of forward markets.

Financing costs

Financing conditions are central for capital-intensive technologies like wind and solar. In principle, generators and consumers would like long-term contracts, which allow generators to avoid low wholesale prices and consumers to avoid high wholesale prices. Such long-term contracts would reduce financing costs for investors and thus lower electricity costs and prices. Consumers would in particular like to hedge the cost of their uncertain future demand, and renewable generators would like to hedge their uncertain future output, neither of which are likely exactly to match. However, due to counter-party risks, mobility of households and firms, as well as EU guidelines, contracts of the necessary type and duration are unlikely to evolve without regulatory backing. Fixed feed-in tariffs effectively replicate such long-term contracts, thus facilitating financing and hedging consumers against future power price uncertainty.

With a shift from a fixed feed-in tariff to market premium systems, some of these benefits are lost. A premium system can be implemented as a fixed or floating premium. With a fixed premium, investors have to find private counter-parties for their energy output, preferably with 15 to 20-year contracts to provide for stable enough revenue streams to raise debt. In practice, only incumbent utilities have been buying renewable energy on such long-term contracts from project developers, arguably at unfavorable terms reflecting the risk and their monopoly position. Incumbent utilities would struggle to sign long-term contracts at the volume required to meet EU renewable targets as this would create large risk exposure to future power prices: thus, fixed premiums are likely to perform even worse in the future.

This motivated the development of sliding premium systems. A sliding premium pays to generation the difference between the envisaged remuneration level for a renewable technology and an average wholesale power price. While a plausible theoretical concept, sliding premiums raise a set of questions about the future remuneration level to be expected that could significantly impact access to finance and increase financing costs: (i) does the computation of the reference price match the generation profile and timing of energy sales of generation; (ii) how will evolving intraday and market design impact upon revenue and costs related to balancing and system services; and (iii) how will the system evolve if new pricing zones are introduced? To avoid such risks, the German sliding premium system has to date allowed project developers to move back to the fixed feed-in tariff at any point in time. Thus, financing has to date continued on the back of the fixed-feed in system.

Feed-in tariffs offer two more benefits for producers and consumers that are at risk under market premium systems. First, fixed renewable remuneration schemes can be designed to reduce costs to

consumers by tailoring remuneration levels to the local resource conditions – reducing the average remuneration level, for example, at high wind-speed sites. Second, renewable remuneration mechanisms can limit quantity risks for wind investors by responding to uncertainty about site-specific estimates on annual production volumes, thus reducing financing risks and costs.

Efficiency of short-term operation

Feed-in systems are often criticized for being incompatible with short-term markets and for creating negative prices. In fact, it is the priority dispatch rule and not the feed-in tariff that contributes to negative prices. The priority dispatch rule has been formulated to avoid discrimination against renewable energy technologies by incumbents and to ensure that renewable energy investors do not face undue delays in commissioning projects where institutions and regulation have not been adapted to the needs of renewables. With increasing shares of RE energy in the power system, the priority dispatch rule results in hours of negative prices, if inflexible generators (including not only wind and solar, but conventional resources) continue to be dispatched. The stringency of priority dispatch rules has been gradually reduced across Europe. A feed-in tariff can allow for wind or solar spill at negative prices, and can compensate investors for the energy that is spilled once priority dispatch is no longer needed. In contrast, premium systems provide for an additional payment to renewable technologies linked to their production volume. Wind or solar energy will only be spilled once the negative power price exceeds the level of the premium. Thus, premium systems are inherently more distortive to short-term markets than feed-in systems.

Premium systems are often advocated to ensure that renewable energy producers take responsibility for selling their power instead of passing it under a feed-in tariff to a public counter-party that has to sell the power. This is a valid argument if short-term markets are inefficiently structured and distorted through strategic actions. In such instances, it is preferable under a premium system to encourage private actors to use clever sales strategies rather than requiring a regulated and thus inflexible public entity to resell the power. But the world of wholesale power markets and wind forecasting is quickly evolving and, with increasing liquidity and increasing use of auction platforms at day-ahead and intraday stage, both public and private actors can buy the same wind forecasts, submit the same bid to sell power, and will receive the same revenue from selling the power. The requirement for all wind generators to balance their positions 24-7 and employ agents to contract to sell the power is arguably a barrier to entry for new developers and a protection for incumbent utilities, from whom the new entrants are effectively forced to buy these services, often at a heavy discount. Good power market design is ultimately the key for good market outcomes – irrespective of the design of the renewables remuneration mechanism.

Effectiveness of forward contracting

Forward contracting is a central component of effective power markets to hedge the risks of market participants. Spot prices of power can be very volatile, responding to cold weather spells, failures of generation assets, gas price spikes or foggy times with little wind and solar generation. Forward contracts with durations of one to three years stretch beyond most of these impacts – and can thus provide a more stable revenue stream to finance re-investment in generation and protect load from price-spikes. Given the importance of contracting, it needs to be considered how different renewable remuneration mechanisms can affect the capacity of all generation and load to hedge their positions. Feed-in tariffs are an effective hedge for renewable energy assets against volatile prices. The difference between the remuneration level and the wholesale price level is passed on to consumers and thus

comprises a component of the hedging portfolio of consumers, hedging the exposure to spot prices for the share of power that is provided through the feed-in tariff.

Floating premium systems provide the same hedge, if the average wholesale price level is below the remuneration level. However, if the wholesale price is above the remuneration level, then equity owners of renewable projects can retain the extra profits. The costs of the premium are passed-on to final consumers, but do not provide a full hedge, because at times of high wholesale prices, premium payments to generators are zero and not negative.

A fixed-premium premium, in contrast, exposes the developer to the full market risk which can at best only be hedged forward for a few years: a short time when compared to the desirable length of any debt issued. Again, this disadvantages new entrants and protects incumbent vertically integrated generators which can pass on the wholesale price risk to their customer. A market built around incumbent utilities is likely to exhibit lower liquidity of forward contracts as incumbents prefer to use their portfolio of generation assets and retail customers to hedge internally.

Market premiums risk the efficiency of short-term, and the effectiveness of forward contracting, markets and increase the costs of financing. They advantage incumbents, create barriers to new entrants, and raise the cost of meeting the renewable targets. They fail DG COMP's stated intention that aid for renewables should be at least cost to society. If the EU wants to achieve the policy objectives of advancing the EU energy market, reducing costs to consumers, and delivering the EU energy security, renewable and climate targets, it should allow for the option of using easier to manage feed-in systems.

We are open to further discussion.

Kind regards

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