EEX Group provides a market platform for energy and commodity products across Europe. It launched a financially settled wood pellet futures based on Argus wood pellet prices in 2017. EEX Senior Business Developer Robert Seehawer talked to Argus about the potential for the biomass market. Edited highlights follow:

**Argus:** EEX has a significant role in the wider power market. What role do you see biomass taking in the overall renewable energy mix going forward?

Seehawer: The advantage that biomass has compared with other renewables such as wind and solar is that it is storable. There is flexibility in how a plant is operated, there is flexibility in how the feedstock is storable. That is not the case for wind and solar, and therefore biomass needs to be integrated in that mix of renewable energies in order to achieve the climate goals we have at the European level, and each European country has on the national level.

If you consider cold, less windy and dark periods where you can make use of [biomass'] storability and where the megawatt hour per se has a higher price, then biomass should become more valuable. It should become more integrated into the renewables mix, to only produce power when it’s needed by the market, when no other renewable energy sources are available, or less available on average.

Biomass generation struggles to compete with other renewables on price. Is there any way that can be achieved? Price will always be an issue for biomass, because if you compare the feedstocks for wind and solar they come for free. Nevertheless, the storability and flexibility that come with biomass should be used in a more advanced way.

Only reducing the comparison to the pricing level is — I am not saying too simple, but it is not holistic enough. For wind and solar, there is a lot of talk about grid expansion, and that comes at a cost. If you factor that cost in to wind and solar, they are not as cheap as you are seeing right now. The advantage [for biomass] next to storability is that it is based on existing infrastructure. Grid expansion costs or infrastructure costs are much lower for biomass — which also needs to be factored in for the whole analysis on how valuable a megawatt hour of biomass [generation] is.

In Europe and elsewhere, most biomass is very subsidy dependent. How do you see the market evolving, particularly when existing subsidies run out?

To me, there is a clear ‘must’ that flexibility needs to be utilised through spot market activity, through the short term balancing of portfolios. That will put biomass in a position to be burned when the megawatt hour is in the money for production. Then the whole market and the whole commodity is less dependent on subsidies.

Subsidies helped to create the market, but they do not enable that flexibility, because the flat feed-in tariffs obviously support long-term flat contracts. The current structure does not replicate the full potential that the biomass market has.

So you think the biomass market will develop in maturity once the subsidies expire?

It has to, yes. The more flexible and the more valuable biomass is, the less dependent it is on subsidies and the better it gets integrated into wind and solar. The expansion of capacity for wind and solar will continue, which will make the whole market even more dependent on the back-up, swing-producing renewable power producers. So the demand for power from biomass should increase if it is properly integrated into that flexible market.

So far both producers and end users have seemed to prefer long-term contracts and more limited spot-market activity. Do you see that changing?

It made sense when the market started and needed banking financing for plant conversions and for production plant
set up. We will reach the time — and that is also the reason we have launched the [wood pellet futures] product — that subsidies should be less in focus for consumers and producers, and a market-based mechanism should be the state it should achieve. Therefore EEX is offering an exchange product supporting that market-based mechanism.

From the outset, EEX is committed to being a partner in the process of transitioning towards more renewable energies and also transforming the biomass market from a rather long-term inflexible pricing structure to a more short-term traded and more valuable market.

Do you think it is possible to increase wood pellet spot trade? What segments of the market would most benefit from that?
I think all segments of the market would benefit. If there is more spot market activity and more trading making use of the flexibility and storability of biomass, obviously the power producers would benefit. They can integrate power production better into the system with wind, solar and other renewables. If the market itself is less dependent on subsidies and proves that it is able to work, producers and others should benefit from it, because it is not subsidised demand, rather market-based demand where biomass has its role.

If there is more spot activity and hedging around that spot activity, that should commoditise the market further. Increased spot market activity will also encourage optimisation trades and ‘cost of carry’ trades. That cost of carry trading will involve additional companies such as warehouse operators and financial firms. Finally, the ‘commoditisation’ of the market will further lower the biomass feedstock costs.

Can you expand on what you mean by ‘cost of carry’ trades? For example, a warehouse operator buys on the spot and sells on a forward basis by just making use of his warehouse and factoring the internal cost of his carry, of his warehouse operations, onto the forward trade. People in the industry do so already when prices are very low. Cost of carry trades can eventually reduce the transfer or the warehousing cost, reducing the biomass feedstock costs.

You mention hedging around the spot market. EEX launched its futures product late last year but it has not developed as quickly as some hoped. Why do you think that is and how do you see it developing going forward?
There was a requirement for that product from our market participants. However, as long as flat subsidies dominate — which represent [market] risk-free money — the incentive to optimise and trade in spot markets is limited. But the current market structure is coming to an end, and biomass itself has to become more commoditised to prove it can be integrated into that mix of renewable energies where obviously wind and solar are the biggest components.

We at EEX are still convinced the timing is correct for all of the reasons previously mentioned. We see an end for the subsidies and therefore a requirement for a much more market-based mechanism. Biomass for power and heat production fits perfectly into the existing EEX product portfolio, [but the biomass] market itself needs to be more in line with the demand from the power market.

What are the pros and cons of a financially settled futures contract such as EEX has compared with a physically settled futures contract?
To me, there are only pros. EEX runs the financial future, Argus is determining all the physical aspects through its methodology, all the quality aspects, the whole price assessment of the spot market and linking the physical with the financial world. So counterparties using our financial future have to do the hedge according to their needs.

However, they still have to do the physical spot transition when expiry time comes. That physical spot transaction furthermore needs to be done in a way that it is considered by Argus to be determining the index so it delivers a proper hedging instrument and a proper risk mitigating tool for the counterparties. The difference to a physical contract is that no-one receives physical pellets delivered in any port where the pellets are not wanted.

One of the tensions in the evolution of the biomass market has been that very short-term trading has not been compatible with the long lead times that this commodity needs for physical delivery. But short-term balancing is becoming more and more critical in the power system. How do you think the wood pellet market can respond to that tension?
I think the market has to learn that both segments can exist and will exist, like in any other commodity market. There is nothing against long-term contracts for a fixed volume. It is very likely that the price will differ, so there is a short term price and there is a price for long-term contracts. These are two different worlds. Short term prices can go dramatically up, or dramatically down. EEX is offering the hedging tools that we have listed on our platform to manage that market price risk.
There seems to be a tendency in emerging markets, such as those in northeast Asia, to replicate the tendency we talked about in terms of long term contracts and flat feed-in tariffs. What implications do you think that has for global trade and risk mitigation?

That absolutely makes sense when that market is set up for the first time. It gives market participants security and it also shows governmental support for being in that market in the long-term. But what people should realise is that the same pattern which is now obvious in Europe will follow.

There is also the switch to renewables in Asia, which includes wind and solar. So the same story repeats. Wind and solar is dependent on when the wind blows and when the sun is shining, so there is a lot of variability in the production of power from those energy sources. Therefore balancing the biomass portfolio requires short term activity and people can hedge their risks by using the EEX futures product.

What do you see as the biggest challenge facing the biomass industry at the moment?

To me, the biggest challenge is that the biomass market needs to continuously develop itself into that commoditised state of a market as a lot of other markets have done before. There is a lot of progress already in terms of standardisation of sustainability [criteria]. The industry just has to make use of [biomass'] decisive advantages — storability, flexibility — and therefore integrate itself more into that mix of renewable energies. It will be challenging, but I am convinced that it is doable.