

CHARLOTTE MORTON SPEECH AT UK AD & BIOGAS 2015

Wednesday, 1 July, 10:30 – 10:45

Followed immediately by Julian O'Neill, as part of your 400th milestone announcement, and our two event sponsors.

Welcome to what is now the 6th UK AD & Biogas Show, which is also now the second largest such event in Europe.

Five years ago, at the first UK AD & Biogas trade show, this industry looked very different:

- About 80% of AD plants were operating within the water sector.
- There were only 17 on-farm AD plants.
- There were no biomethane plants in operation.

Since then, AD's multiple benefits have caught the imaginations of government, farmers, big business, fleet operators and even the high street banks – indeed the last Government committed in its Coalition Agreement to supporting “a huge increase in energy from waste through AD”. As we will see shortly there has been a huge increase, but we are still a long way from delivering our potential so over the course of today and tomorrow we will be discussing what conditions are required to ensure that our industry is able to continue to build on the strong foundations we have laid to deliver the industry's exceptional potential.

We have set out those foundations and that exceptional potential in ADBA's first comprehensive AD market report, which I am delighted to launch today. If you haven't already got a copy, they're available from the ADBA stand.

Our Market Analyst, Ollie, has been burning the midnight oil to bring us the very latest market data from across the AD industry – and I am delighted to announce today that we have passed a major milestone: 400 AD plants are now operating in the UK.

Biogen will be formally unveiling their new food waste plant in South Wales later this month, which will add an additional 1.2MW to our overall industry capacity. This means that AD's various sectors are together delivering a combined electrical equivalent capacity (electricity and biomethane) of almost 480 megawatts – that's equivalent to the capacity of one of the UK's nuclear power plants, Wylfa, which is being decommissioned later this year.

This huge growth is testament to the hard work, dedication and entrepreneurship of all the many people working in the AD industry, and the support of government officials both national and local, and regulators. These plants are delivering exceptional value to the UK, making a significant contribution to the green economy and an excellent return on the Government's investment.

THE ENERGY BEHIND THE AD REVOLUTION

I am delighted that Biogen's Chief Executive, Julian O'Neill, has kindly agreed shortly to tell you a little more about their latest plant, which is a joint venture with the local authority, and to add his thoughts on what this milestone achievement means for the industry. The unveiling of the 400th plant marks a surge in the number of AD plants by well over 600% in the past five years alone, creating a lot of new jobs across the UK in the process. Let's take a look at how that breaks down. *You can see from the graph on the screen an up-to-date breakdown of exactly how each sector has contributed to that extraordinary growth.*

Despite building few new plants in recent years, the water sector – illustrated on this graph as the dark blue line – still represents AD's largest single sector by number of plants and capacity. Approximately 160 water treatment sites have AD plants treating about 80% of the UK's sewage; it is an established and proven technology.

But that doesn't mean the sector is standing still: the water companies are demonstrating how investment, research and development can make more of their existing assets. A focus on innovation and process efficiency has driven up the energy generated from sewage by a quarter since 2010, without adding many more plants.

You can also see from the graph that the total number of plants outside of the water sector has outstripped the number within the water sector for the first time, thanks in part to a rapidly developing farming sector.

AD is a perfect fit for farming businesses, which is why there are seven times more plants on farms than in 2010 – indeed, the number of agricultural plants more than doubled over the past year alone to 147.

But this is a drop in the ocean: the NFU estimated a long time ago that there could be 1,000 on-farm AD plants; we think, given the complementary support AD offers farming businesses, that the potential here is far greater even than that.

The waste sector offers more of a mixed bag. And no-one in the AD industry wants to see a mixed bag.

Look across the UK, and you see healthy growth in waste-based AD. Over 90 plants currently recycle about 1.6 million tonnes of food waste and there are plenty more plants in the pipeline. The UK is emerging as a European leader in food waste technology and expertise.

Look more closely, however, and you see the impact of stronger policy positions from the devolved administrations.

There has been a dramatic increase in source segregated food waste collections across the regions:

- In Wales virtually every household has a form of food waste collection;
- Northern Ireland is slightly behind Wales with almost 80% of households being offered a food waste collection.

- Scotland matches the UK average, with just under half of all households having either separately or with garden waste, but that figure has risen sharply since the introduction of Scotland's Zero Waste policy and continues to grow.

In contrast, progress has stalled in England, with only just over 40% of households having access to a food waste collection scheme.

Segregating food waste is important: by redirecting inedible food waste to AD, industry could extract over 9TWh per year from it – that's enough green gas to heat half the homes in central London.

Alternatively the green gas from inedible food waste could be used in the transport sector to fuel 60% of the UK's bus fleet. We know council budgets are being squeezed, but our waste resources contain enormous value – tomorrow we have a number of local authorities demonstrating how they have introduced a separate food waste collection and saved money.

The number of biomethane injection plants has tripled over the past year alone to 30. Whilst a proportion of biomethane from those plants will be being used as a transport fuel, biomethane isn't yet being produced for direct use as a vehicle fuel, ie other than via the gas grid, principally because the Renewable Transport Fuel Obligation is not high enough compared to the RHI to incentivise AD developers to produce compressed or liquefied biomethane for direct use as a vehicle fuel.

New biomethane vehicles are, however, being unveiled all the time – as you can see in the vehicle showcase area of the conference hall – and the number of gas refuelling points supplying biomethane content has increased to eleven, with the EU looking at mandating refuelling points every 400km by 2025.

The AD industry is now producing enough installed capacity to replace one of the UK's nuclear power plants. Having taken into account new innovative feedstocks when considering our full industry potential, as you will see *from this chart*, we have recently revised our assumptions about the amount of methane the industry could produce in a supportive environment, and now believe that 80TWh of gas is achievable. .

Our ability to do that, however, is dependent on this Government agreeing with us that the AD industry is delivering value for money. Chris Huhne who follows will go into more detail about how we propose demonstrating our value to Government, so that as an industry we can 'step on the gas' and deliver that potential.

There are a few necessary conditions to ensuring that the AD industry continues to thrive over next five years; these include:

1. Stable government incentives;
2. A supportive waste management framework;
3. Positive engagement with the farming community;
4. Positive engagement with those of us who control food waste – which is pretty much all of us – so that people can see the value of - reducing first then - separating out food waste; and

5. Innovation and entrepreneurship – to continue to improve performance, increase the value of our products and decrease costs.

The question for the UK market is whether we will get these conditions given current short-term policy uncertainty:

- The Feed in Tariff is about to be reviewed, and the RHI biomethane incentive, which is funded from taxation - will need political support to continue after April 2016.
- The direct incentive for biomethane in transport is too low. But even if this was not the case, AD cannot deliver its full potential towards UK renewable heat and low-carbon transport targets without firm commitments on advancing food waste policy in England.
- For renewable energy subsidies, Government is rightly focussed on demonstrating value for money, and technologies like solar PV are reducing costs much more quickly – in some countries solar is already at grid parity.

On the screen you will see our industry potential. I'm sure you'll agree that these are all big numbers – and demonstrate the very real value for money this industry can deliver.

We need to match this industry potential with a coherent message that clearly outlines what AD could realistically achieve with a policy framework that backs investors and operators to grow industry – and that includes combating public misconceptions.

You will see that with the right policy support, and hard work on innovation, we could deliver energy equivalent to 30% of UK domestic gas demand.

What value does this offer? Well, renewable technologies will become increasingly vital to UK energy security as old capacity comes off line and competition for limited fossil fuel reserves becomes increasingly acute. Ofgem has reported an increased risk of blackouts, and despite recent stagnation fossil fuel prices are likely to rise again over the next decade.

So low carbon is essential for low bills in the long term. By 2030, the Committee on Climate Change reports that the price of energy should fall, as support payments for existing low-carbon generation begin to expire.

But also take the cost of energy now. If you compare the UK incentive for biogas – in p/kWh – with solar PV, it's about 50% more expensive. But that doesn't take into account that biogas electricity is dispatchable.

As intermittent renewables offer ever more electricity to the grid, storage becomes more important – the French environment agency, ADEME, recently put the cost of storage at between €46 and €138 per megawatt hour.

So our first message is to look at the whole cost to the electricity system, not just the production price.

Second, the AD industry can cut the UK's greenhouse gas emissions by 4% - that's a substantial contribution. This represents a 21 million tonne CO₂ saving which, taken at the Government's Carbon Floor Price of £70 per tonne, would be valued at around £1.5 billion.

We must, therefore, highlight AD's central role in reducing greenhouse gas emissions through not only providing green energy, but also as an effective manure management solution, nutrient recycling technology and ultra-low carbon vehicle fuel. World leaders will be gathering for the Paris Climate Change conference in December to strike a deal on carbon.

The pledges that are made at the conference could be all the more important since a court in the Netherlands passed a landmark ruling last week compelling the Dutch government to reduce emissions by 25% within five years to protect its citizens from climate change.

It's interesting to note the subsequent remarks at the beginning of this week by Mark Carney, Governor of the Bank of England, who called on businesses to disclose their carbon footprints.

Many companies are already doing that, and some are using Green Gas Trading's Biomethane Certification Scheme, which is now on the road to certifying 7 biomethane plants and will shortly be UKAS accredited. For example M&S is decarbonising its gas supply through the purchase of Biomethane Certificates. As pressure increases to decarbonise, the value of BMCs will increase. You can find out more about the Scheme from Grant Ashton, on the ADBA stand.

Thirdly, the biofertiliser we produce contains nutrients and organic matter that are essential to improving the health of our depleted soils. Digestate from AD could replace around 10% of our artificial fertiliser needs and could carry a nutrient value of around £200 million.

AD is proving vital to the UK's long term food security and production, supporting farmers to keep farming.

Of course it will be important to demonstrate that we are a sustainable industry which would require us to tackle head on the perception that crop production has to be about food vs fuel.

We want the biogas market on UK farms to continue growing strongly, and we want sustainably grown crops to be part of that story.

The UK government goes further than the Commission demands, however, already requiring 60% greenhouse gas savings for bioenergy sustainability criteria.

For our part, ADBA encourages members to follow our Best Practice guidelines for crop feedstocks. I will be talking about those in more detail tomorrow.

Our fourth message is that there are potentially new high-value products that can be produced from digestate; such as bioplastics, biochemicals and graphene. Taken together, these could be major contributors to the government's plans for a £100 billion bioeconomy.

Finally, AD is one of the few commercially functioning parts of the circular economy.

The Green Investment Bank recognises this too and ranks AD as one of the top ten *vital* technologies that is already positioned to improve urban design – intrinsic for greener, smarter cities.

Individually each of these additional benefits demonstrate AD's excellent value for money. Taken together, that value looks even better.

So it is vital that we demonstrate to Government - and voters - the value the AD industry is already delivering in return for its incentives.

Five years ago, I was talking about all of the potential in this sector. Now I am able to talk about the major contribution we are making too.

- Recycling 1.6 million tonnes of food waste per annum, four times more than 2010;
- Generating over 7TWh of biogas per annum, compared to around 2TWh in 2010;
- Providing over 20,000 m³ of biomethane every hour, after biomass we are the second biggest contributor to UK renewable heat targets; and
- Employing 4,500 people.

But now is not the time to stop – now is the time to step on the gas.

Having understood the opportunities that our industry offers towards accomplishing so many government goals, we must now make that case to business, policymakers and householders.

Don't just take my word for it however – to tell us more about the 400th UK plant and what this milestone means for the industry, I'm delighted to hand over the Biogen's Chief Executive, Julian O'Neill.

Thank you.