

19<sup>th</sup> September 2017

The Hon. Paul Green MLC  
Parliament House  
6 Macquarie Street  
Sydney, NSW, 2000

Dear Sir,

**Re: Portfolio Committee No. 6 - Inquiry into 'Energy from Waste' technology  
Proceedings on Monday 7<sup>th</sup> August 2017 – Outotec answers to Questions on Notice**

Further to my appearance before the Committee on 7<sup>th</sup> August, some questions were taken on notice. I am pleased to be able to answer those questions as per below:

## 1. Question from The Hon. Lou Atamo

**“The Hon. LOU AMATO:** What sort of intake population do your plants facilitate? It is like a city?

**Mr BLIGH:** It is around about a million, that kind of number. I should have those kind of numbers. I could take that point on notice.”

### **Outotec Answer:**

As an approximation, our plants in UK and Europe treat approximately 100,000 to 250,000 tonne / annum of RDF and serve a population in the range from 200,000 to 400,000 people.

## 2. Question from The Hon. Matthew Mason-Cox

**“The Hon. MATTHEW MASON-COX:** Would you be able to find us the figures that underpin the economic case? Is that something you are able to do without breaching commercial-in-confidence?

**Mr BLIGH:** Yes, we could probably do that. “

### **Outotec Answer:**

Please find attached some public information regarding the situation in the UK. in relation to gate fees prepared by Anthesis Consulting Group (file name is “UK Gate Fees report 2017”)

In relation to the power prices applying in the UK, below are some interesting comments and a current/forecast power price table from early this year provided by an energy broker:

“The current [high prices] have been caused by issues with nuclear power stations in France, issues with the interconnector to/from France and the fluctuations in prices caused by the exchange rates.

It is reasonable to expect that by 2019, both of the French issues will have been resolved, and long term that the currency markets may have calmed down. Hence the lower prices for 2019 and beyond.

This, of course, ignores the potential for further supply issues as part of the Brexit negotiations, which should be well underway by 2019, it also ignores the exchange rates, which could be anywhere, the Trump effect and the results of the various European elections that will take place before 2019. Notably France and Germany, both of which have the potential to impact heavily on the UK.”

## UK Power Prices (£/MWh)

Price Period	Current Open	Change
Day Ahead	54.00	9.00
Feb-17	57.75	1.50
Mar-17	50.71	-0.88
Apr-17	49.35	-0.09
Q2 2017	47.35	-0.15
Q3 2017	45.95	-0.15
Summer '17	46.65	-0.15
Winter '17	50.48	0.88
Summer '18	42.30	0.84
Winter '18	46.30	0.89
Summer '19	40.50	0.95

In addition, there is a subsidy currently in place in the U.K. in the form of “Renewable Obligation Certificates”, or ROCs, for energy generated from biomass provided that ‘advanced conversion technologies’ are applied.

Outotec does not claim to be an expert on the changing legislation in the U.K. however the below official website provides additional information that may be of value to the committee.

<https://www.ofgem.gov.uk/environmental-programmes/ro/about-ro>

And for the new subsidy scheme Contracts for Difference (CfDs) there is a short paper available explaining:

<https://www.pinsentmasons.com/PDF/Consenting-with-Contracts-for-Difference.pdf>

Outotec’s technology is categorised in the U.K. as an Advanced Conversion Technology and for a number of our projects there, the plant is intended to operate on a mixture of RDF and biomass fuels.

### 3. Questions from The Hon. Shayne Mallard

**“The Hon. SHAYNE MALLARD:** When did they phase out the landfill?

**Mr BLIGH:** That is a good question. I do not know, but I could find out when it was phased out.

**The Hon. SHAYNE MALLARD:** Was it after a transitional period of time and then were their financial incentives to develop alternatives? We would be very interested in that information.

**Mr BLIGH:** I will find that out. When I was living there was 2006-08 and I think it was already phased out then, but maybe it was legislated.

**The Hon. SHAYNE MALLARD:** Across Germany?

**Mr BLIGH:** I will find out. Certainly Frankfurt could be different from across Germany.

**The Hon. SHAYNE MALLARD:** Could you give us the information on that?

**Mr BLIGH:** I will do that.”

### Outotec Answers:

In relation to the legislation banning landfill in Europe (and the timing of their introduction), I can advise as follows:

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The German law is called TASI (Technische Anleitung Siedlungsabfall) and came into force nationwide in 2005. This law severely restricts disposal to landfill any material that is untreated and/or has more than 5% organic content. This was a very strict cut at the time but municipalities were prepared and several new waste to energy plants were built.

At the EU level it's the Landfill Directive:

The **Landfill Directive**, more formally Council Directive 1999/31/EC of 26 April 1999 is a European Union directive that regulates waste management of landfills in the European Union. It was implemented by its Member States by 16 July 2001.

The Directive's overall aim is "to prevent or reduce as far as possible negative effects on the environment, in particular the pollution of surface water, groundwater, soil and air, and on the global environment, including the greenhouse effect, as well as any resulting risk to human health, from the landfilling of waste, during the whole life-cycle of the landfill". This legislation also has important implications for waste handling and waste disposal.

You can find additional information you could find under:

[https://en.wikipedia.org/wiki/Landfill\\_Directive](https://en.wikipedia.org/wiki/Landfill_Directive)

Also attached is an interesting summary of the recent history of landfill in Germany from research done by the UK Department of Environment, Food and Rural Affairs (DEFRA). The web address was:  
*randd.defra.gov.uk/Document.aspx?Document=WR1202\_8227\_FRA.pdf*

Outotec's technology group in Frankfurt can get access to the Frankfurt WtE Plant in case there was an interest to visit.

We trust that the above answers assist to inform the committee regarding the role played by energy from waste technology in achieving waste management targets in New South Wales.

Yours sincerely,

**ROGER BLIGH**

Director, Sales, Metals Energy and Water  
Outotec South East Asia Pacific

Attached files:

""UK Gate Fees report 2017.pdf"

"WR1202\_8227\_FRA.pdf"