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# UNITED KINGDOM WITHOUT INCINERATION NETWORK

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## UKWIN BRIEFING

### **GASIFICATION FAILURES IN THE UK: BANKRUPTCIES AND ABANDONMENT**

'Waste to energy' firm to file for  
administration

18 May 2012 | By Charlotte Santry

28 AUGUST 2013  
**SEPA revokes Scotgen gasification  
plant licence**

25 AUGUST 2010

**BCB Environmental enters  
administration**

SOUTH WEST NEWS / 08 FEB 2011  
**COMPACT POWER HOLDINGS  
ENTERS LIQUIDATION**

**Energos calls in administrators**

**ANOTHER SETBACK FOR GASIFICATION SECTOR AS  
INCINERATION SPECIALIST ENTERS  
ADMINISTRATION**

By Edward Perchard | 13 July 2016

**Pickering firm Bioflame goes into liquidation**  
First published Wednesday 5 October 2011 in News

**Air Products to Ditch Plasma Gasification Waste to Energy  
Plants in Teesside**

**£9 MILLION TO GO  
UNPAID TO NEW EARTH  
SOLUTIONS INVESTORS**

By Edward Perchard | 21 July 2016

**Interserve shares dive after a waste of  
£70 million on energy plant**

NICK GOODWAY | Friday 6 May 2016

November 2016

<http://ukwin.org.uk/resources/>

## INTRODUCTION

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The United Kingdom Without Incineration Network (UKWIN) is a network of around 100 campaign groups opposing waste incineration. This provides the organisation with an overview of the gasification and pyrolysis sector, alongside intimate and detailed knowledge of numerous incineration proposals and waste companies.

Promoters of gasification and pyrolysis schemes, sometimes collectively called "Advanced Thermal Treatment" schemes, regularly make bold claims about the technological, environmental and financial performance of their proposed facilities with a mixed waste feedstock. In reality, where such configurations have been attempted they have either failed to live up to these claims or operators remain suspiciously quiet about reporting actual performance.

Because companies do not like to talk about their failures it is often hard to find out what went wrong. For example, Air Products remain tight-lipped about the serious high-profile problems they encountered at Tees Valley.

Would-be operators frequently point to existing and emerging demonstrator plants, declaring that they are proposing the same in an attempt to make their proposal sound deliverable, but as soon as the plants they cite start to fail (e.g. Isle of Wight, Dargavel, Avonmouth, Tees Valley) these companies suddenly try to explain how their proposal could not be more dissimilar to the failed projects from which they had previously tried to draw credibility.

Gasification and pyrolysis constitute some of the riskiest technologies in the waste industry and are synonymous with bankruptcies, failures and broken promises. This perception is well deserved, with the lack of examples of success starkly contrasting with a litany of failures.

This briefing provides some information about the following gasification and pyrolysis projects and companies:

- Air Products' Tees Valley Projects
- Ascot Environmental and its Subsidiary Scotgen
- BCB Environmental
- Bioflame
- Biossence Renewable Energy
- Caithness Heat And Power
- Clean Power Properties
- Compact Power Holdings
- Energos
- Interserve
- New Earth Solutions

## AIR PRODUCTS' TEES VALLEY PROJECTS

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In 2012, Waste2Tricity (who were involved in the Tees Valley projects) stated: "Air Products are the pathfinder in this sea change of energy conversion technologies".<sup>1</sup>

Air Products, a Fortune 500 company with significant capital,<sup>2</sup> failed to overcome the technological difficulties they faced with their Tees Valley gasification projects even after spending a billion dollars on the technology.

Air Products' April 2016 decision to abandon the thermal treatment market calls into question the viability of using gasification technology with a mixed waste feedstock.

In April 2014 the UK Government announced that: "...The new 20 year [Tees Valley gasification] contract with Air Products, worth 2% of government's energy spend, is expected to deliver £84 million in savings over the life of the contract through an innovative fixed agreement that will provide stability in what the public sector pays for energy...Air Products has longstanding expertise in building and operating large, complex industrial gas and energy plants ensuring its projects are delivered safely, reliably and cost-effectively".<sup>3</sup>

In October 2015 Air Products' CEO stated that: "We have always said that there is a chance that the technology will not work...so we are still working to figure out whether it does work or not... There's a good chance that it doesn't work, so we have to be aware of that and I have been mentioning that for the past year."<sup>4</sup>

In January 2016 Air Products' CEO explained: "...we're in an iterative process of trying to learn how the gasifier behaves and if we can make it work on a sustainable basis. There is a still significant outstanding question about if we will ever be able to get it to work on a sustainable basis. And as I said, we have given ourselves a few months to keep trying it, but there will come a time that we might stop trying. The technology is proving to be a lot more difficult than people thought at the beginning and I have to say we haven't made a lot of significant progress since we talked to you last time"<sup>5</sup>

In the end, Air Products gave up on their Tees Valley gasification projects due to what they called "design and operational challenges".<sup>6</sup> It was reported that: "Air Products...announced that the Company will exit its Energy-from-Waste business. As a result...Air Products expects to record a pre-tax charge in the range of \$900 million to \$1.0 billion in discontinued operations, primarily to write down assets associated with the EfW business..."<sup>7</sup>

According to a waste trade press article: "...Tees Valley could be remembered as one of the most expensive waste infrastructure blunders in years. Frustrating for all those involved – and embarrassing for the UK government, which was looking to Air Products to provide power on behalf of its Energy for Growth programme over a 20-year fixed period..."<sup>8</sup>

## **ASCOT ENVIRONMENTAL AND ITS SUBSIDIARY SCOTGEN**

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In May 2012 it was reported that: "A firm that struck a deal to build multiple renewable energy projects across the country has said it is to file for administration. Ascot Environmental carried out civil engineering and gasification work on waste treatment plants at numerous sites including at Bristol and Essex, working with waste disposal giant SITA and property management company Cyclamax Holdings."<sup>9</sup>

"The waste-to-energy plant [Scotgen's Dargavel gasification plant] opened in August, 2009, but has been bedevilled with problems. To date, it has failed to produce energy. It previously had a contract with part of a group of companies called Waste2Energy, which went into administration and left a £600,000 trail of debt in the Dumfries area."<sup>10</sup>

"Scotgen (Dumfries) Ltd has seen its permit to operate the Dargavel energy-from-waste plant revoked by the Scottish Environmental Protection Agency (SEPA) following its failure to 'comply with the requirements of the permit'...The revocation notice...was issued for the following reasons: Persistent non-compliance with the requirements of the permit; Failure to comply with an enforcement notice; Failure to maintain financial provision and resources to comply with the requirements of the permit; and Failure to recover energy with a high level of efficiency."<sup>11</sup>

## **BCB ENVIRONMENTAL**

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In August 2010 it was reported that: "...BCB Environmental...entered administration just three months after it pledged to appeal a decision blocking its proposal to build a £24 million waste-to-energy gasification facility in Tockwith."<sup>12</sup>

## **BIOFLAME**

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In December 2010 it was announced that: "Bioflame has developed its own patented partial-gasification technology – an advanced thermal treatment process..."<sup>13</sup>

Less than a year later, it was reported that: "...Bioflame ceased trading after its funding was pulled...It secured the investment in December 2010 to complete the commercialisation of the company's technology, attract project funding, and accelerate the rollout of projects. But the funder pulled out after investing £3 million..."<sup>14</sup>

## **BIOSENCE RENEWABLE ENERGY**

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Biossence was "established in 2006 to develop and deliver renewable energy projects".<sup>15</sup> However, the Biossence gasification project failed despite millions of pounds of pledged investment from the London Waste and Recycling Board and the company entered into administration in March 2014.<sup>16</sup>

## CAITHNESS HEAT AND POWER

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"From 2002, Highland Council embarked on a biomass project in Wick: They would build a combined heat and power plant which would use residues from nearby tree plantations to heat local housing and sell electricity to the grid. Few would fault the idea...When technical problems became apparent, Highland Council took full control of the scheme. Trials were started in October 2008 but by December that year, an expert report advised that the [gasification] plant would never work..."<sup>17</sup>

The Scottish public sector auditor, Audit Scotland, decided to carry out a full investigation into how Highland Council had lost £11.5 million and issued a highly critical report, which stated: "...Ultimately, the project failed because the company procured 'experimental' and high risk gasification technology which could not be commissioned successfully..."<sup>18</sup>

## CLEAN POWER PROPERTIES

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In May 2012 Clean Power Properties (CPP) boasted about their plans for more than a dozen gasification projects, but to date not a single facility has secured the necessary environmental permit, and there are no signs of any of their proposed facilities being built. CPP has suffered a series of setbacks, for example:

- Cwmgwili, South West Wales - CPP's planning application was refused in February 2016, and CPP did not appeal.
- Micheldever Station, Hampshire – CPP withdrew their planning appeal in October 2015.
- Washwood Heath, Birmingham – CPP withdrew their environmental permit application in May 2015.
- Thames Haven, Thurrock – CPP withdrew their environmental permit application in December 2014.
- Eastleigh, Hampshire – CPP withdrew their environmental permit application in November 2014.
- Castleford, West Yorkshire – CPP's planning application for an amended scheme was refused in June 2014. CPP subsequently withdrew their environmental permit application in November 2014.
- Brierley Hill, Dudley – CPP withdrew their planning appeal in May 2014. CPP withdrew their environmental permit application in November 2014.
- Leeds – CPP was refused planning permission in March 2014. The applicant appealed in October 2014, but days before evidence was due to be submitted, Clean Power Properties withdrew their appeal. CPP subsequently withdrew their environmental permit application in November 2014.

## COMPACT POWER HOLDINGS

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"Description of business: Development and exploitation of Company's proprietary technology for the processing of waste by advanced thermal conversion using the processes of pyrolysis, gasification and high temperature oxidation."<sup>19</sup>

In February 2011 it was reported that: "Avonmouth-based Compact Power Holdings has entered liquidation...Compact Power Holdings was established in 1992 with the aim of becoming a leading business in the renewable energy and environmental sector. However, in 2008, a number of companies within the group were placed into administration. This resulted in the loss of investors' cash totalling almost £20m."<sup>20</sup>

## ENERGOS

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In July 2016 it was reported that: "Gasification technology supplier Energos has entered administration, citing cash flow issues caused by contractual disputes on two of its major contracts"<sup>21</sup> and that: "Energos's entry into administration is the latest in a series of issues for gasification companies in the UK this year"<sup>22</sup> and that: "The company's business was based primarily around providing services and technologies...via a process known as gasification. Prior to its entry into administration, Energos had been contracted to construct four separate waste plants in Glasgow, Milton Keynes, Derby and on the Isle of Wight. However, administrators have explained that the company found itself faced with serious cash flow problems as a result of disputes with two of its main contractors."<sup>23</sup> According to the administrators, the cash flow issues arose from Energos' failure to deliver on their gasification contracts.<sup>24</sup>

## INTERSERVE

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In August 2016 it was reported that: "Construction firm Interserve has announced that it is leaving the energy-from-waste (EfW) industry months after revealing complications with on-going [gasification] projects had cost the company £70 million...In May, the firm confirmed that design, procurement and installation issues at Viridor's planned gasification plant in Glasgow had led to 'deterioration' in Interserve's contract, prompting a £70 million contract provision being imposed on the company."<sup>25</sup>

## NEW EARTH SOLUTIONS

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New Earth Solutions, New Earth Energy, and New Earth Advanced Thermal technology (NEAT) are associated with several failed gasification projects.

The NEAT gasification facility in Canford, Dorset was to have processed 8,000 tonnes a year of Solid Recovered Fuel (SRF) but was shut down in 2012.<sup>26</sup> The larger (100,000 tonne per annum) gasification facility built in Avonmouth, Bristol never operated as New Earth Solutions had expected, and the company abandoned the facility in 2014.<sup>27</sup> New Earth is also associated with abandoned gasification projects in Easter Langlee (Scottish Borders), Hooton Park (Merseyside), Winfrith (Dorset), and Blaise Farm (Kent).

The company told shareholders in July 2015 that: "...the level of performance has consistently fallen well short of targeted levels. The programme of works communicated in March, whilst undertaken, has proven to be unsuccessful. Operational, manpower, maintenance and repair costs have consistently proved to be much higher than originally planned. In April, New Earth engaged an external engineering consultancy to carry out a further technical and financial review on the future potential for the ERF [gasification] Plant. The consequence of this review is that further essential and significant capital expenditure has been identified in order to potentially improve the ERF Plant's performance. Based on history, this programme will still carry substantial technical risk...as with all technology there is often a steep learning curve and sometimes a high degree of uncertainty as to the outcome and these have unfortunately been amply demonstrated in the performance of the ERF to date..."<sup>28</sup>

In June 2016 it was reported that: "New Earth Solutions Group has entered administration...The announcement is likely to concern a number of local authorities that have contracts with New Earth, which operates five waste plants at Avonmouth near Bristol, Canford in Dorset, Sharpness in Gloucestershire, Cotesbach in Leicestershire and Blaise in Kent..."<sup>29</sup>

And in July 2016 it was reported that: "Creditors to the New Earth Solutions Group are likely to miss out on over £9 million after the waste management company was sold out of administration. A report issued by the company's administrator Duff & Phelps to its 260 creditors explains that £9,169,521 is owed, with no hope of repayment..."<sup>30</sup>

Investigative journalism blog <http://notjustsheepandrugby.blogspot.co.uk/> has been looking into New Earth Solutions and how Scottish Borders Council became one of the many victims of the company's failure to deliver. The more information that comes to light, through Freedom of Information and other means, the clearer it is that the Council should never have relied upon the company's unproven gasification technology to treat their waste. The failed Easter Langlee gasification project cost Scottish Borders Council at least £2.4 million pounds with nothing to show for it.<sup>31</sup>

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