

Groundbreaking initiatives to reduce environmental costs for the beer and pub sector

13th May 2015

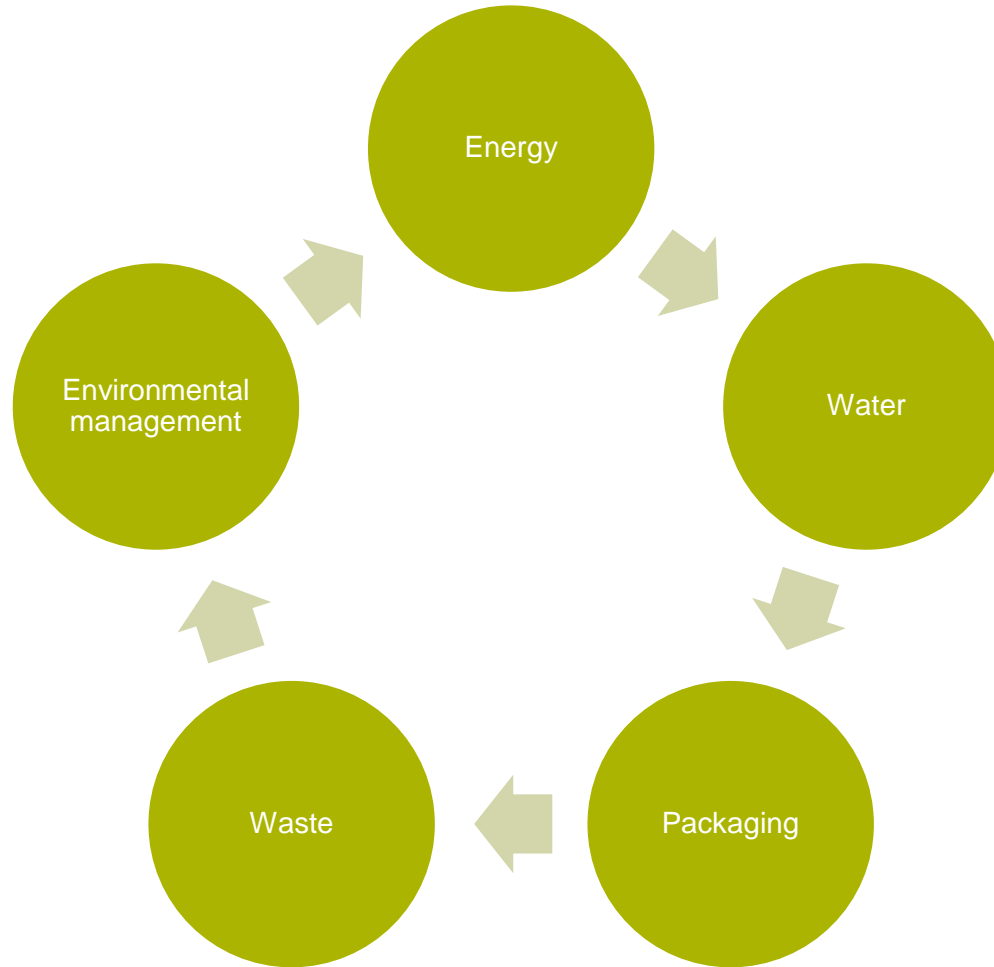
Overview

- BBPA – who we are and what we do
- Environmental policy landscape
- Packaging – Sustain
- Energy audits - ESOS
- Collaboration
- Celebrating our achievements – Brewing Green

BBPA

- Leading trade association for the beer and pub sector
- Members account for 90% of beer produced and consumed in the UK
- And own 20,000 pubs
- Represent the sector to Government on tax and regulation
- Share best practice amongst its members and the wider industry
- Celebrate the contribution we make to society

Environmental policy landscape



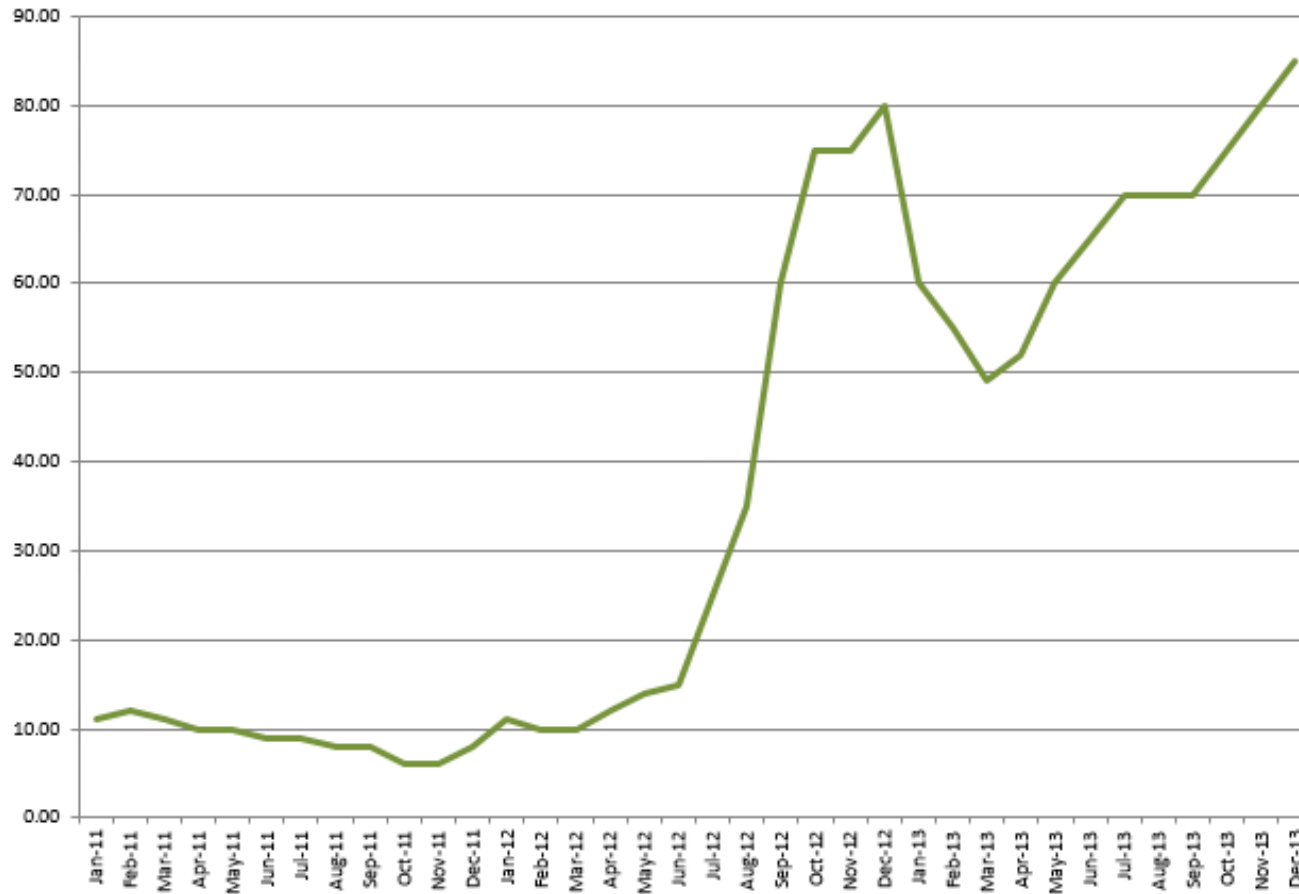
Packaging waste regulations

- Covers companies that have over £2m turnover and that ‘handle’ over 50 tonnes of packaging waste
- 50 tonnes equivalent to c.350bbbs of 500ml bottles
- Producer responsibility – you have to pay for the recycling of the products you send to market – by buying PRNs

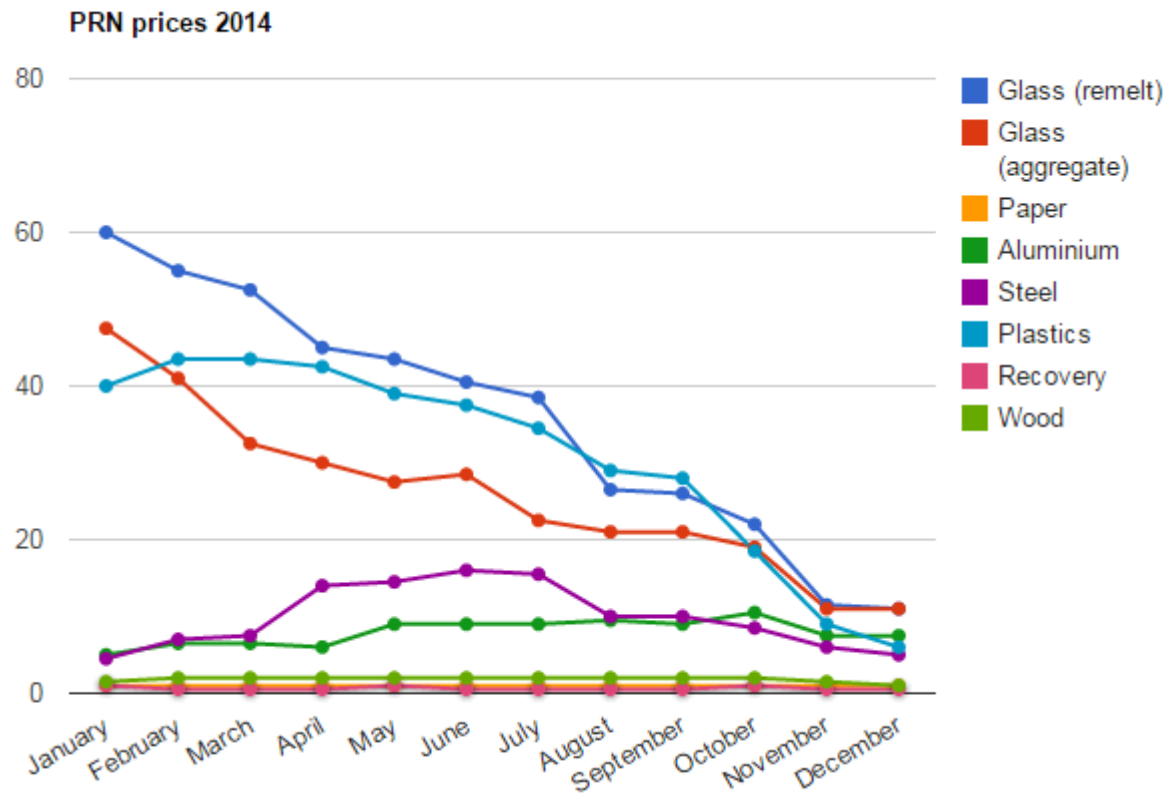
BBPA intervention

- Price spiked in late 2012 – number of factors
- Members came to BBPA asking for solution
- Lobbied Gov't for change in targets and achieved success
- Demand for more action
- Looked at options and best option was to set up compliance scheme
- Scheme set up and approved in a matter of months – detailed tender process for consultants to run the scheme

Price of glass PRNs



Price of PRNs - 2014



Sustain – a food & drink sector first



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we're a not-for-profit scheme
existing solely for the benefit of our
members

Sustain was devised and created in partnership with the BBPA, we're a not-for-profit organisation, existing solely for the



Aims of Sustain

- Not-for-profit
- Lowest possible cost and open-book accounting, transparency
- Improve the quality of data reporting – making members' lives easier
- Providing high-quality data
- Educating the sector about packaging obligations
- 19 members in first year – estimate fifth biggest glass PRN purchaser with plans to grow in 2016

Projected industry savings

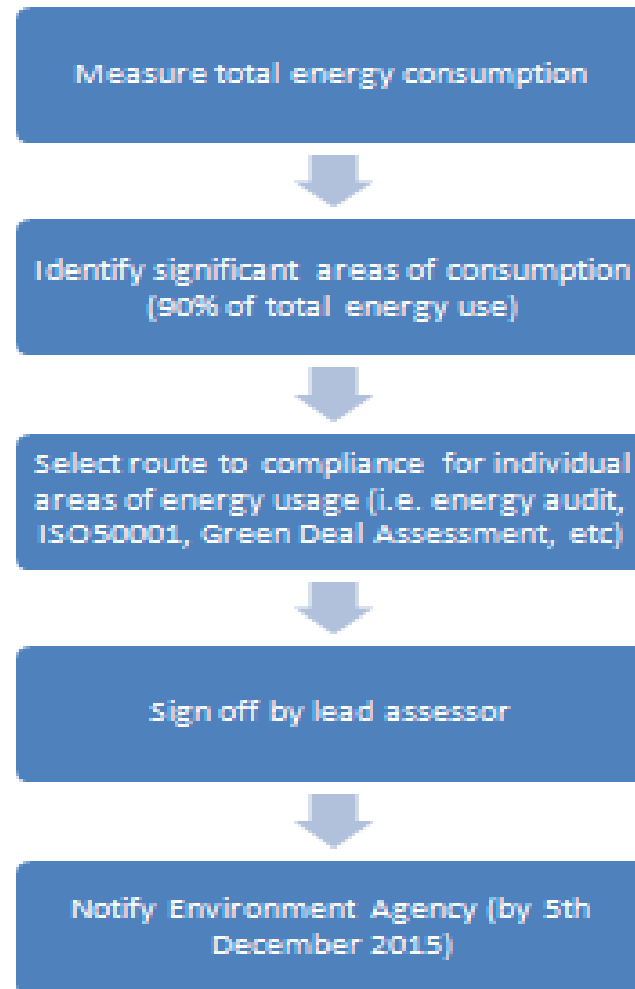
	Sustain	Other schemes	Saving	% saving
2015*	899,628	1,049,664	-150,036	-14.29%
2014	1,452,740	1,854,425	-401,685	-21.66%

- 2015 forecast based on year to date
- 2014 data based on price achieved by consultants vs member spend

ESOS

- What is it?
- New EU regulation – implemented in the UK through ‘Energy Savings Opportunity Scheme’
- Obligation to carry out energy audits every four years
- First ‘compliance’ period needs to be reported by 5th December 2015

What does it involve?



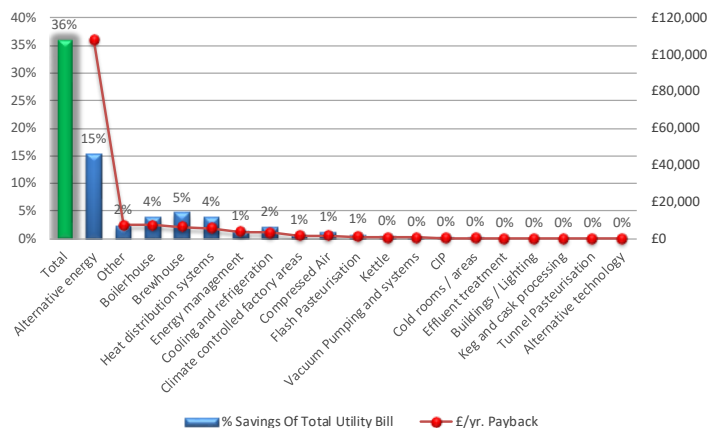
BBPA creates first sector scheme

- BBPA determined to reduce the burden of a 'tick-box exercise' whilst still identifying energy savings for companies
- Based on a technology benchmarking questionnaire developed for brewers to identify where they were against rivals
- Expand this to cover other significant energy uses – pubs, logistics, offices, etc
- Methodology patented and licensed to other sectors

Example ESOS Report


- Prioritised summary of savings
- Top 10 projects


% Savings of Total Utility Bill

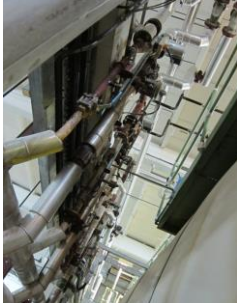


The blue columns show the percentage of the total utility bill that would be saved if all the opportunities within the site area were to be implemented. The red data points demonstrate the £/year payback each area would provide, which is how the areas have been ranked.

Area Of Site	Total Savings Potential	% of Total Utility Bill	Payback	£/yr. Payback	Overall Priority
Total	£60,873	36%			1
Alternative energy	£25,736	15%	0.2	£108,093	1
Other	£3,850	2%	0.5	£7,350	2
Boilerhouse	£6,449	4%	0.9	£7,223	3
Brewhouse	£7,742	5%	1.2	£6,376	4
Heat distribution systems	£6,449	4%	1.1	£5,763	5
Energy management	£1,977	1%	0.6	£3,460	6
Cooling and refrigeration	£3,390	2%	1.0	£3,311	7
Climate controlled factory areas	£875	1%	0.6	£1,532	8
Compressed Air	£1,917	1%	1.3	£1,519	9
Flash Pasteurisation	£1,107	1%	1.4	£782	10
Kettle	£693	0%	1.0	£702	11
Vacuum Pumping and systems	£355	0%	0.8	£452	12
CIP	£181	0%	1.2	£153	13
Cold rooms / areas	£152	0%	1.0	£152	14
Effluent treatment	£0	0%	0.0	£0	15
Buildings / Lighting	£0	0%	0.0	£0	15
Keg and cask processing	£0	0%	0.0	£0	15
Tunnel Pasteurisation	£0	0%	0.0	£0	15
Alternative technology	£0	0%	0.0	£0	15

4	Upgrade during move steam boilers or retrofit economisers			Carbon Saving (tCO2)	56
		Energy Saving %	1.3%	Cost saving (£)	7,200
		Implementation Cost (£)	25,000	Payback (Yrs)	3.5
	Description				
	We calculate current steam boiler efficiency to be around 81% (although this does need verifying with a proper combustion test). This is fairly acceptable for an uneconomised boiler. Retrofitting of economisers could be a problem as the current boiler house is very cramped, therefore if the boiler house relocation is carried out we would recommend a burner and economiser retrofit, or alternatively the purchase of new boilers. The fuel benefit will be in the order of 6% -10% for these two elements combined. Cost estimated as a retrofit to one boiler				
Actions Required					
Consider as part of a boiler house relocation as space may be an issue currently					

5	Economise HW boilers to Preheat boiler make-up water and provide domestic heating requirements		Carbon Saving (tCO2)	66	
		Energy Saving %	1.5%	Cost saving (£)	8,456
		Implementation Cost (£)	30,000	Payback (Yrs)	3.5
		Description Economising one or two of the HW boilers could provide a good source of heat. The HW temperature raised would probably be insufficient for direct use to preheat the returning water, however it could be a good source of hot water for preheating steam boiler hotwell make-up as well as domestic hot water and heating purposes. Costs are estimated based on an economiser fitted to one boiler and a secondary heat exchanger. We estimated around 130-260kW could be raised i.e. 5-10% of two boiler running kW.			
		Actions Required Consider as part of a boiler house relocation as space may be an issue currently			

7	Insulation of steam, MT&HT hot water distribution			Carbon Saving (tCO2)	129
					
		Energy Saving %	2.3%	Cost saving (£)	29,640
		Implementation Cost (£)	44,460	Payback (Yrs)	1.5
	Description				
There are a number of poorly insulated areas on the steam system, notable around the steamers and at the back of the dryers in Bay 3. Addition is a cost effective way to reduce energy, with a guaranteed payback. We estimate fuel savings up to 5% of fuel consumption. But have used 3% for conservatism in the payback calculation. Payback estimate 1-1.5yrs					
Actions Required					
Incrementally undergo a project of remedial insulation					

Collaboration

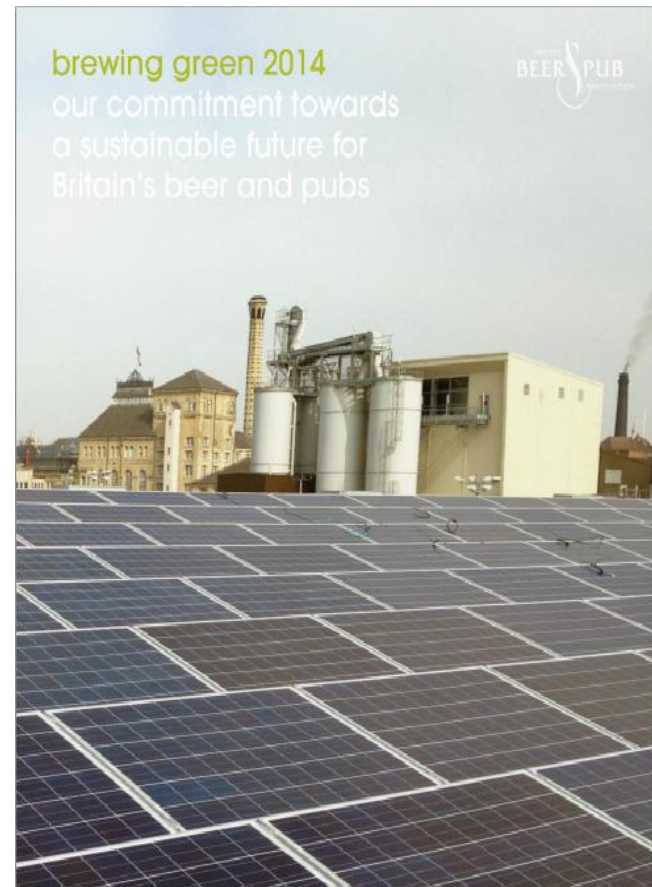
- Benchmarking
- Scheme solutions
- Site visits – to breweries and beyond
- Guidance notes, e.g. Effluent
- Successes and struggles
- Projects
- Climate Change Agreements

Waste

- Project Shandy – joint project with soft drinks sector – sponsored by WRAP
- Investigations held at Britvic and Carlsberg
- Case studies, guidance and checklists developed to share the findings and savings throughout the sectors
- <http://www.wrap.org.uk/content/waste-prevention-drinks-manufacture>

Brewing Green

- Sector commitment
- Ambitions for the industry
- Case studies of best practice
- Used to celebrate achievements and influence policymakers



Any questions?