

Cynulliad Cenedlaethol Cymru <a href="#">Pwyllgor Amgylchedd a Chynaliadwyedd</a>	National Assembly for Wales <a href="#">Environment and Sustainability Committee</a>
Egwyddorion cyffredinol <a href="#">Bil yr Amgylchedd (Cymru)</a>	General principals of the <a href="#">Environment (Wales) Bill</a>
Ymateb gan Calor Gas Ltd	Response from Calor Gas Ltd
EB 09	EB 09





Consultation response

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## General principles of the Environment (Wales) Bill

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## Introduction

Calor Gas is the UK's leading supplier of LP-gas fuels. LP-gas fuel has a wide variety of applications, providing a versatile fuel for heating and transport applications. LP-gas has a lower carbon footprint than commonly used alternative fuels including heating oil and solid fuels such as coal and charcoal.

## Part 2: Climate Change

- **Do you agree with the proposals for the 2050 target?**

Calor Gas supports the Welsh Assembly Government's objectives for cost-effective decarbonisation of heating and tackling fuel poverty. The company commercialises a range of solutions that support these objectives ranging from efficient gas heating technologies to green gas biopropane that can be used in existing LP-gas boilers.

It is our view that policymakers are yet to realise the full potential of low carbon LP-gas technologies for the cost-effective reduction of emissions in areas of the economy where transformation may be hardest to achieve i.e. off gas grid rural areas. Leading companies are commercialising an array of efficient gas technologies such as gas driven heat pump, hybrid heat pump, micro CHP and fuel cell. These technologies are available for the LP-gas sector and represent a cost-effective low carbon alternative to the current range of LP-gas and Heating Oil Boiler technology. Efficient LP-gas technologies do not require investment in new infrastructure and can reduce consumers' energy bills by up to 50% and address UK decarbonisation goals. **Table 1** presents energy bill and carbon emission savings from LP-gas driven heat pumps, hybrids, micro CHP and fuel cells compared to standard condensing boiler options.

Policy support is required at both a UK and Welsh Assembly Government level to start the UK market and achieve capital cost reductions to close the capital gap with standard condensing boilers. In particular, it is crucial that Westminster funding for the RHI and FiT schemes is secured at the next Spending Review and that inclusion of new cost-effective technologies is considered. At a Welsh Assembly Government level, ECO should also be reviewed, with the aim of securing ECO funding to compliment existing Welsh schemes such as NEST and Arbed, to ensure uptake of energy efficiency measures in off-gas grid homes.

Over the long term, a clear path could be set for future changes in Welsh building regulations Part L with respect to replacement of heating systems. At present, condensing boilers must be fitted. In



future it may be possible to set a new minimum performance standard (for example, requiring controls, or a minimum efficiency for heating equipment or installations).

A long term plan to transition to more efficient low carbon LP gas heating in rural Wales would generate significant policy and economic benefits and render the Government a leader in this emerging field.

**Table 1. Carbon emissions and energy bills from LP-gas driven technologies<sup>1 2</sup>**

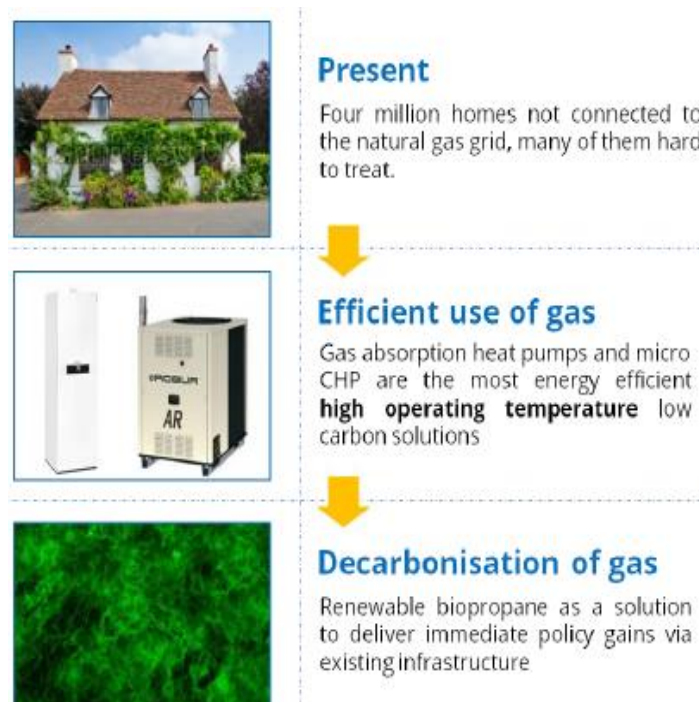
Technology	Carbon emissions tCo2/year	Carbon emissions tCo2/lifetime (10yrs)	Energy bills (£/year)	Energy bills £/lifetime (10yrs)
Heating oil boiler	3.39	28.19	£593	£4,933
LP-gas boiler	2.95	24.57	£952	£7916
<b>LP-gas driven micro-CHP</b>	<b>2.82</b>	<b>23.47</b>	<b>£900</b>	<b>£7,485</b>
LP-gas driven heat pump	<b>2.04</b>	17.01	<b>£659</b>	<b>£5480</b>
LP-gas driven hybrid heat pump	172	14.36	<b>£682</b>	<b>£5675</b>
LP-gas driven fuel cell	1.36	<b>11.32</b>	<b>£407</b>	<b>£3390</b>

In 2014 Calor's parent company SHV Energy announced a major deal with Finnish biodiesel producer, NESTE Oil, to market and sell biopropane to be produced at Neste Oil's Rotterdam refinery. The agreement to supply some 160,000 tons of biopropane over a four-year period is the first of its kind anywhere in the world. SHV Energy plans to sell the biopropane in several European

<sup>1</sup> Based on fuel demand of 13,975kWh/year

<sup>2</sup> Lifetime emission and energy bills discounted at 3.5% social discount rate

markets including the UK. Replacing existing fossil fuels with biopropane will result in significant carbon savings (carbon footprint for HVO biopropane is 10 g CO<sub>2</sub>e/MJ as per RED's Annex V, Section D, Disaggregated default values for biofuels and bioliquids.) Indeed the volume of biopropane which could be available for the UK market (i.e. 40,000 tonnes per year) is sufficient to supply fully renewable LPG to 30,000 homes - the equivalent of all of Calor's customers in Wales. There are a number of international research projects investigating other potential production routes for biopropane – including ones at Imperial College and the University of Manchester's Institute of Biotechnology. This makes biopropane a strong long-term low carbon technology option for homes and businesses in off gas grid rural areas – used alongside low carbon gas technologies such as those described above.



- **For your views as to whether the interim targets should be on the face of the Bill? No response**
- **Do you believe that the introduction of carbon budgets is a more effective approach than the 3% annual emissions reduction target that is currently in place in Wales?**

As a business, carbon reduction targets impact on our planning as they provide a viewpoint regarding the future balance of fuels and services required to fuel the economy in the future. Provided the ambitious targets are realistic, medium and long-term carbon budgets can support our planning and investment approach. The important aspect is that Government should not try and pick winners, but leave property owners to decide how to best meeting any targets or regulations.



- **What are your views on what emissions should be included in targets? All Welsh emissions or those within devolved competence?** No response
- **Do you agree with the Bill's proposals as to what should happen if the Welsh Ministers fail to meet emissions targets or carbon budgets?** No response
- **What should the role of an advisory body on climate change be?** No response

## Appendix

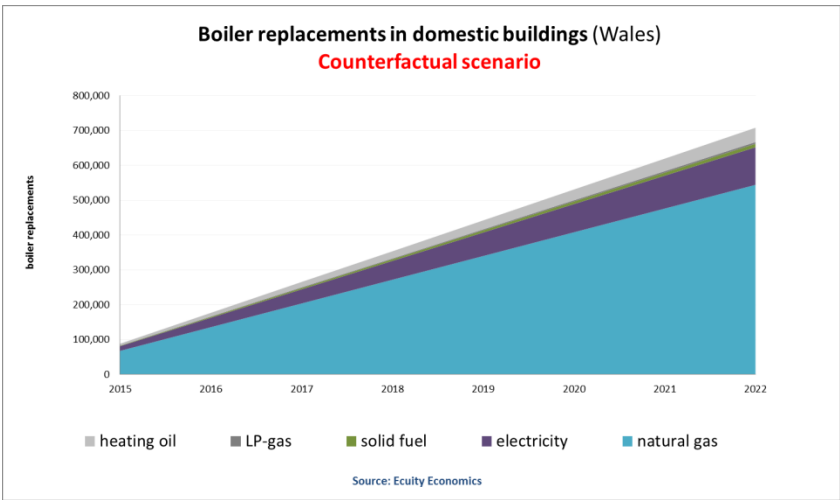
### A1: Boiler replacement assumptions

Heating technology	Boiler replacements/year (UK) <sup>3</sup>	Boiler replacements/year (Wales) <sup>4</sup>
Heating oil boiler	87,000	5,140
LP-gas boiler	12,000	709
Gas boiler	1,152,000	68,056
Electric heating (including heat pumps)	228,000	13,469
Solid fuel	21,000	1,241

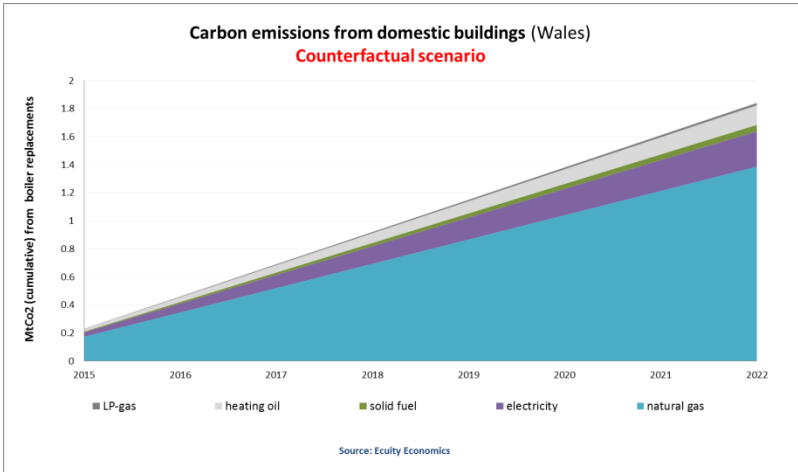
### A 2: Boiler replacements - Counterfactual scenario

<sup>3</sup> Meeting Carbon Budgets – 2014 Progress Report to Parliament, CCC (2014)

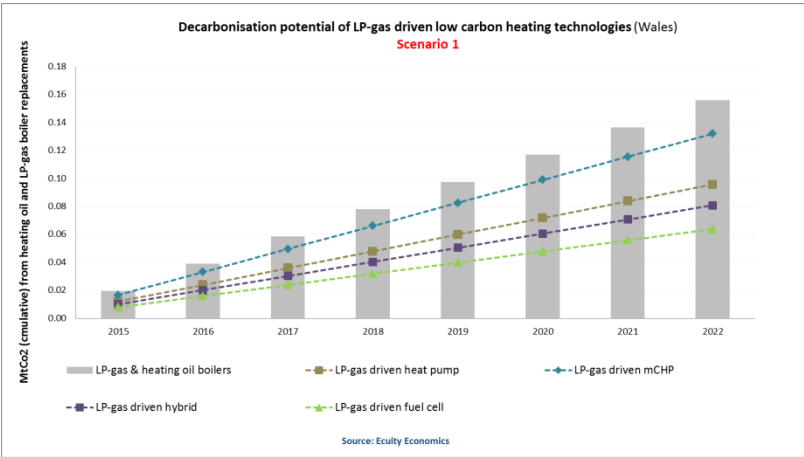
<sup>4</sup> Off-gas consumers, Consumer Focus (2013)



**A 3: Carbon emissions – counterfactual scenario**



**A 4: Carbon emissions – Scenario 1**



A 5: Carbon emissions – Scenario 2

