



Department  
of Energy &  
Climate Change

# Tackling Non-Financial Barriers to Gas CHP

## Summary of Call for Evidence Responses

July 2015



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URN 15D/359

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# Executive summary

1. DECC launched a Call for Evidence on non-financial barriers to natural gas-fired Combined Heat & Power on 9<sup>th</sup> February 2015. This sought evidence to confirm indicative non-financial barriers identified by DECC's research and evidence on the effectiveness of six potential measures to address these barriers. Four stakeholder events were held during the Call for Evidence, in London, Leeds, Glasgow and Belfast (in conjunction with the Scottish and Northern Ireland Governments respectively). The Call for Evidence closed on 30<sup>th</sup> March 2015. Fifteen written responses were received and thirty stakeholders attended the stakeholder events. This document summarises the responses received and the key points from discussions at the stakeholder events.
2. There was general agreement that the non-financial barriers identified by DECC's qualitative research and quantitative analysis were correct (lack of senior champions; lack of Local Authority and Small and Medium Enterprise (SME) technical resource and expertise to assess CHP opportunities; disinclination to engage in energy market opportunities; lack of understanding of available benefits; and pre-conceptions about cost effectiveness). However, responses cited a number of additional barriers to investment in gas CHP. Several responses suggested policy/regulatory uncertainty and heat offtake risk were barriers. CHP suppliers not always acting in the best interest of their customers was mentioned in three of the stakeholder events, but was not a common theme in written responses.
3. In general, stakeholders felt Government's role should be to set direction and support the sector in delivering measures to address the barriers. A few responses felt that Government should have more of a leading role, in order to provide an impartial source of guidance and support. Delivering any Government interventions as part of broader activity on energy efficiency was a common theme from the stakeholder events.
4. Of the potential measures included in the Call for Evidence, there was general support for Awareness Raising Workshops and Funding for Feasibility Studies as helpful in overcoming barriers. Several responses also supported Detailed Case Studies and a Guidance Service as being of value.
5. Very few sources of evidence on the likely uptake or effectiveness of the measures were identified in the responses. The Carbon Trust and engineering consultancies were suggested as potential sources of evidence on the proportion of CHP feasibility studies proceeding to deployment. Projected retirements of combustion plant under the Industrial Emissions Directive and Association for Decentralised Energy data on packaged CHP sales were suggested as possible sources of data on uptake of potential measures.
6. DECC is considering these responses in developing policy on addressing non-financial barriers to gas CHP and on broader measures to promote energy efficiency.

# 1. Introduction

1.1. Gas CHP offers useful near-term carbon savings and significant energy cost savings for business users. Our analysis suggests that gas CHP will become increasingly cost-effective under current policies between now and 2020, driven largely by changes in energy prices. However, research<sup>1</sup> identified a number of indicative non-financial barriers which might prevent deployment of this CHP capacity. We ran a Call for Evidence from 9<sup>th</sup> February – 30<sup>th</sup> March 2015, seeking evidence to confirm these indicative barriers and on the potential uptake and effectiveness of a range of measures to address them.

1.2. The indicative barriers included the following key points;

- Lack of senior champions
- Lack of technical resource and expertise in Small & Medium Enterprises (SMEs) and public sector organisations
- A disinclination to engage in energy markets, including in the Capacity Market
- Lack of understanding of CHP and the available benefits
- Pre-conceptions about the cost effectiveness of CHP

1.3. The Call for Evidence sought evidence on the likely take-up and effectiveness of the following package of measures;

- A Guidance Service
- Funding for Feasibility Studies
- Best Practice Sharing Forum/Fora
- Best Practice Guidance
- Publication of detailed Case Studies
- Awareness Raising Workshops

1.4. In particular any available evidence of the following types was requested;

- Government, commercial or academic research studies
- Formal evaluation of policies
- Statistics on take-up and/or cost of policy measures
- Your experience of the barriers faced by organisations considering and developing CHP projects
- Your experience of the effectiveness of specific measures in addressing similar barriers and in supporting your development of CHP or other projects
- Examples of policies which have been effective at addressing similar barriers in other countries or other policy contexts than CHP

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<sup>1</sup> Factors affecting the uptake of gas CHP - December 2014,  
[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/388981/Factors\\_affecting\\_the\\_uptake\\_of\\_gas\\_CHP\\_Final\\_v6.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/388981/Factors_affecting_the_uptake_of_gas_CHP_Final_v6.pdf)

- 1.5. During the Call for Evidence four stakeholder events were held at which the contents of the Call for Evidence were presented and attendees discussed the Call for Evidence questions. At two of the events delegates split into two groups each discussing a different subset of the Call for Evidence questions.
- 1.6. Fifteen written responses to the Call for Evidence were received. The type of individuals/organisations responding are summarised in Table 1. In addition 30 stakeholders attended workshops. The types of organisation which have contributed to the Call for Evidence is summarise below.

<b>Written Responses</b>	
<b>Type of organisation</b>	<b>Number of organisations</b>
Energy consultants	2
Trade associations	4
CHP equipment or service providers	3
Energy suppliers	3
Local authority	1
Industrial consumer	1
Government agency	1
<b>Stakeholder Event Attendees</b>	
<b>Type of organisation</b>	<b>Number of organisations</b>
Energy consultants	7
Local Authorities	5
Energy suppliers & network operators	4
Industrial consumers	3
CHP equipment or service providers	2
Trade associations	2
Government Agencies	2
Academics	2
Other	3

- 1.7. The following sections summarise the responses to the questions in the Call for Evidence and the key messages from the discussions at the stakeholder events.

## 2. Non-Financial Barriers and Policy Map

Call for Evidence Questions: Barriers	
Are the above barriers correct and complete?	
Agree with Barriers Listed	Disagree with one or more Barrier
6 responses	2 responses

- 2.1. One trade association agreed with the barriers identified by DECC's qualitative research, in particular lack of interest in engaging in energy export opportunities. They noted that most potential new CHP in their sector is in Medium Enterprises who cannot be expected to divert attention to becoming an electricity market player without additional support and resource. One organisation felt that the barriers were all variations on a single issue, lack of knowledge about CHP amongst potential developers.
- 2.2. Another organisation agreed with the barriers, but felt that Energy Service Companies (ESCOs) were in a better position than Government to provide tailored support to overcome these. However, they felt there were additional barriers to the ESCo market (see paragraph 2.10) which needed to be addressed by Government to enable this.
- 2.3. Whilst agreeing with the majority of the barriers, another trade association did not agree that pre-conceptions about cost effectiveness are a barrier to CHP. They noted that any basic analysis would consider energy costs for the lifetime of a potential CHP asset. They were also of the view that disinclination to participate in the Capacity Market was a result of the policy design.
- 2.4. One response noted that Lack of Senior Champions, DNO connection difficulties and Disinclination to participate in the Capacity Market were not relevant for very small (sub 50kW electrical capacity) CHP, but agreed with the other barriers.

Call for Evidence Questions: Barriers
Are there other barriers to gas CHP?

- 2.5. Additional barriers raised by two or more responses are summarised in the table below. More detail is provided in the text beneath the table, along with a discussion of additional barriers raised only in a single response.

Additional Barrier	Number of Responses
Policy and regulatory risk	7 responses
Low electricity export value, grid connection issues and Supply Licensing (in the case of exporting CHP)	4 responses
Economic barriers/uncertain spark spread	4 responses
Heat offtake risk	4 responses



Environmental Permitting Regulations	3 responses
Complexity of accessing available benefits e.g. CHPQA	2 responses
Building Regulation National Calculation Methodologies	2 responses
Policy and regulatory design	2 responses
Lack of gas grid connection	2 responses
Lack of standard contracts for CHP operation	2 responses

- 2.6. The organisations who raised policy and regulatory risk as a barrier for investment in CHP gave withdrawal of CHP Levy Exemption Certificates and National Grid proposals to change Embedded Benefits as examples of changes contributing to policy uncertainty. One trade association noted that this was particularly dissuasive for potential CHP developers as energy is not their core business and they are therefore less well placed to quantify this risk. They felt that current growth in smaller CHP was because this was less exposed to policy risk. They argued that small CHP plant tend not to export much electricity to the grid, isolating them from changes in electricity market policy and that plant below 2 MW have lower exposure to carbon pricing.
- 2.7. Four responses cited economic barriers, but another response commented that there were few large complexes where CHP was not cost effective.
- 2.8. Two trade associations were of the view that energy policies such as the Capacity Market were invariably designed from the perspective of Government officials or large scale generators and hence discouraged participation by energy consumers. They cited lack of aggregation for sub 2 MW new build, and current lack of secondary obligation trading as specific Capacity Market design barriers. **[DECC note: Government recognises the importance of a diverse technical mix within the Electricity Market and the Capacity Market has implemented specific design features to encourage the participation of smaller providers and customers. Government has committed to consulting on aggregation of new build plants with different legal owners, and on secondary trading, in an autumn consultation.]**
- 2.9. One association cited UK dependence on imported gas, and hence fuel price uncertainty, as a barrier.
- 2.10. One of the organisations which specified heat offtake risk as a barrier commented that, whilst this risk may be low on average, the impact is so great that it may be dissuasive for individual investors, in particular in the case of third party projects supplying industrial consumers. Another organisation argued that Government action to address this risk would open up the ESCo market enabling commercial organisations to deliver solutions to the non-financial barriers identified by DECC.
- 2.11. One response noted that organisations were motivated by fear of failure and hence risk aversion was a barrier. They felt that this can be addressed by allocating risk to a competent ESCo/third party supplier, but that lack of regulated pricing for heat or published heat price indices make it difficult for organisations to be confident in the benefits they would receive over the lifetime of such contracts. They and another respondent stated that a lack of standard contracts increased the challenge of managing risk and also increased legal costs for potential developers. Rise in use of rented

property, and split incentives between landlords and tenants in terms of installing CHP were also cited as a potential barrier. The same respondent also raised lack of common heat metering and secure data standards as barriers.

- 2.12. Two organisations suggested that National Calculation Methodologies used for Building Regulations were a barrier to CHP. One suggested that the recommended CHP sizing (to meet 45% of total thermal demand) in section 6.1 of the Non-Domestic Building Compliance Guide 2013 led to over-sized, sporadically used systems which were not cost effective. The other suggested that National Calculation Methodologies did not account for the whole system benefit of heat supply from a CHP fed District Heating network.
- 2.13. One organisation suggested that domestic electricity tariffs not reflecting the value of generation from CHP was a barrier to CHP below 50 kW electrical capacity.
- 2.14. Another felt that barriers differed depending on the type of CHP e.g. industrial CHP, district heating CHP and individual building CHP may face different barriers. They suggested that lack of strong policy drivers to co-locate power generation and heat loads, and Government's view that gas CHP is only a transitional technology were also barriers to investment.
- 2.15. One response noted that clear guidance on NOx abatement and forecasting in the Environmental Permitting regime was necessary to avoid discouraging CHP. Another commented that the high upfront costs created by Environmental Permitting and Planning Consent were a barrier.
- 2.16. One organisation noted that small heat networks of Local Authority buildings were frequently unable to reach critical mass to achieve cost effectiveness. They suggested that engagement of central Government buildings in these networks, where possible, would add critical mass and credibility.
- 2.17. One trade association made the point that, in some areas where its members operate, lack of gas grid connection or offers only of interruptible gas supply were barriers.
- 2.18. Poor practice amongst some CHP suppliers, poor understanding of CHP-heat load compatibility, lack of consultancy expertise were raised as additional barriers by one organisation.

#### Messages From Stakeholder Events

- 2.19. In line with written responses, three of the four events quoted policy uncertainty as a significant additional barrier not covered in the Call for Evidence. Three also highlighted third party implementation of CHP not maximising benefits for customers. This second message partly reflects third party providers own profit margin, but delegates at two of the events felt that these providers did not always act in the best interest of their customers, as also suggested by one written response.
- 2.20. Each of the following were noted as additional barriers at two of the events;
  - i) Complexity of, and difficulty accessing, existing support measures/financial benefits,
  - ii) Lack of consultancy expertise in maximising value from the electricity market e.g. via the Short Term Operating Reserve (STOR), Triad avoidance etc,
  - iii) Securing DNO connection at reasonable cost, and uncertainty over these costs when considering the financial case for a project,
  - iv) Higher risk than counterfactual (boiler + grid import) energy supply options,

- v) A risk-averse culture amongst potential public sector developers,
- vi) ETS arrangements failing to act as an incentive (either due to allocation of free allowances to industries at risk of carbon leakage or compensation arrangements discouraging electricity generation).

**Call for Evidence Questions: Barriers**

**Which of the barriers has the greatest impact in preventing investment in gas CHP?**

2.21. Responses to this question are summarised in the table below.

Barrier	Number of Responses
Policy and regulatory risk	3 responses
Heat offtake risk	2 responses
Lack of senior champions	2 responses
CHP outside of core business	1 response
Lack of understanding and awareness of CHP and available benefits	1 response
Policy and regulatory design	1 response
Lack of regulated pricing for heat	1 response
Complexity of accessing available benefits	1 response
Low value for exported electricity	1 response
Financial performance	1 response

Call for Evidence Question: Logic Map	
Are the assumptions (red boxes) in the logic map accurate?	
Yes	No
1 response	4 responses

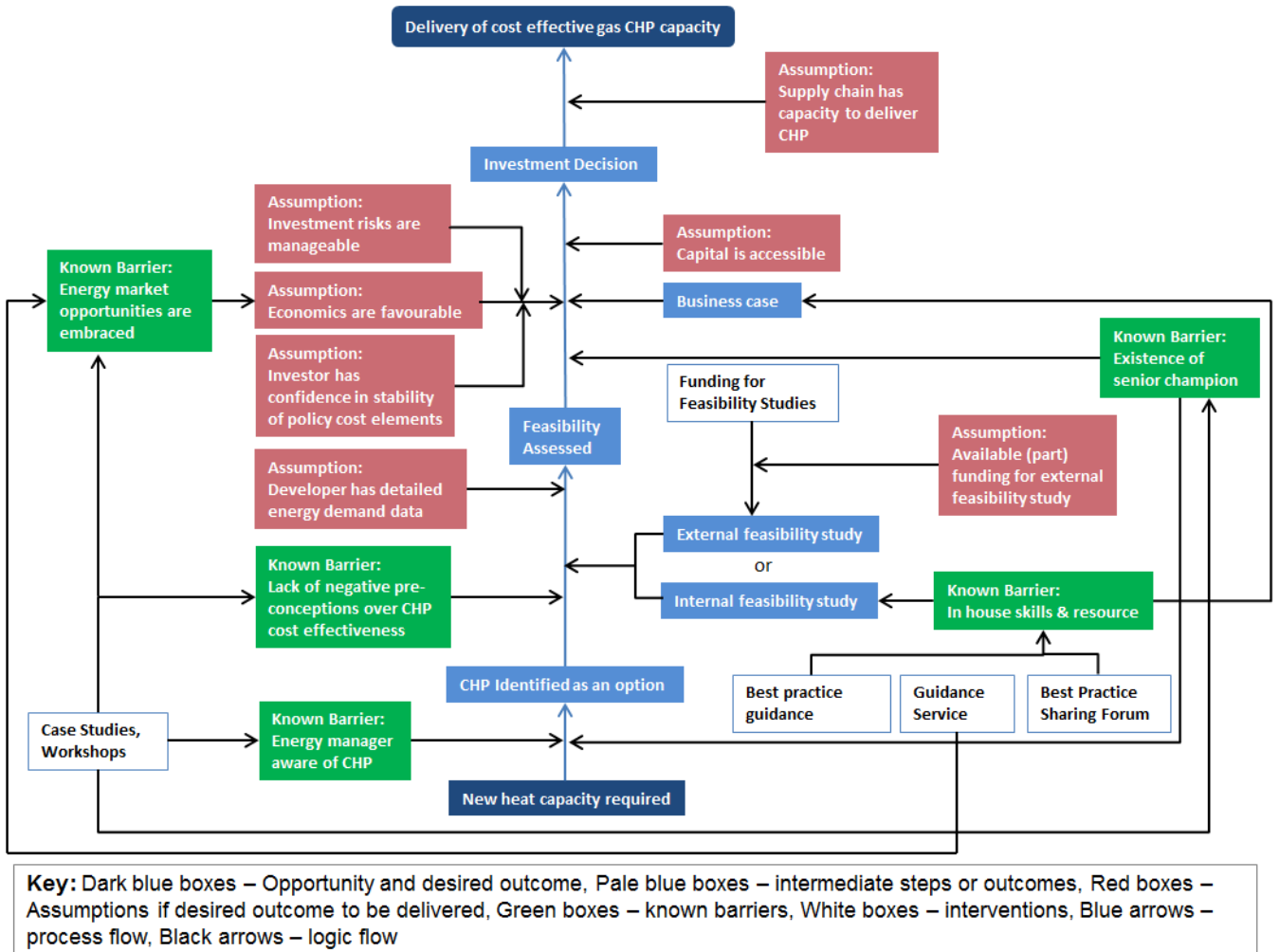


Figure 1. Gas CHP Policy logic map as included in Call for Evidence

- 2.22. One trade association's view was that the assumptions were correct in general, but they noted that Capacity Market participation was an additional stage late in the process. A final investment decision could only be made after the auction results, creating a hiatus in project development. One organisation thought the assumptions and map were correct in principle, but presupposed complete knowledge on the part of the developer at the start of the process, which was unlikely to be the case. Another commented that an options analysis usually takes place before a feasibility study.
- 2.23. One respondent noted that there were large areas of risk not addressed in the map e.g. mechanical failure, design risks, profiteering by suppliers, skills retention etc.
- 2.24. Another organisation felt that the map was not very applicable to the smallest CHP (below 50kW electrical capacity), in particular noting that feasibility studies were not required or were provided free of charge as part of the product offering.

2.25. Another noted that the process did not always start with new heat capacity being required. CHP was also considered as a replacement for existing systems with remaining life.

**Call for Evidence Question: Logic Map**

**Are there other assumptions which would need to hold true for investment to occur?**

2.26. One response suggested that technical and operating risks need to be allocated to a competent ESCo who can aggregate them across their fleet. Another emphasised the importance of political leadership is also necessary.

### 3. Package of Potential Measures

**Call for Evidence Question: Package of Potential Measures**

**Are there any key policy design considerations which are likely to be critical to the success of these measures?**

- 3.1. One trade association noted simplicity and ease of access from an energy user's perspective as being critical.
- 3.2. Another response suggested that the number of CHP systems installed should be a Key Performance Indicator of any programme. They suggested a focus on small CHP as large plant "justify attention" by their owners and operators and would hence take care of themselves.
- 3.3. One organisation emphasised the importance of considering the potential for, and barriers to, sub 50kW CHP, which is not currently well represented in DECC's analysis.
- 3.4. Two organisations suggested that care in avoiding duplication of effort would be critical. An audit of existing measures delivered by sector groups, associations and trade bodies before any new measures were developed and implementation of any new measures as a single co-ordinated package were suggested.

**Call for Evidence Question: Package of Potential Measures**

**Are you aware of evidence on the effectiveness of similar types of measures in other nations or other policy contexts?**

- 3.5. The only specific source of evidence cited was Carbon Trust data on uptake of Funding for Feasibility Studies and the proportion of these subsequently proceeding to deployment. The following qualitative comments were also received;
  - a) Costs of many energy efficient technologies have come down over time and with deployment e.g. hybrid cars, condensing boilers, small generator engines and power electronics.
  - b) Germany has the most supportive regime for sub 50kW CHP, resulting in 31,000 units being installed.

- c) HNDU guidance and grant funding for Local Authority feasibility studies had been successful and similar funding for commercial or industrial CHP applications would be likely to identify projects that might otherwise not be given sufficient consideration due to initial feasibility costs.
- d) The Danish District Energy Partnership provides similar measures to those discussed in the Call for Evidence.

<b>Call for Evidence Question: Package of Potential Measures</b>		
<p><b>Is there any commercial or sector/trade body delivery of these measures already? What should Government's role be in each of these measures, should it;</b></p> <ul style="list-style-type: none"> <li>- <b>Lead on delivering these measures;</b></li> <li>- <b>Support sectoral associations in delivering these measures; or</b></li> <li>- <b>Leave commercial services and sectoral associations to deliver these measures?</b></li> </ul> <p><b>Which of these delivery routes would lead to the greatest uptake of the measures and why?</b></p>		
<b>Government should lead</b>	<b>Government should support</b>	<b>Government should not intervene</b>
2 responses	5 responses	1 response

- 3.6. In support of the above responses one respondent commented that Government should lead by example, installing CHP capacity across the Government estate and publishing data on its operation. Government should also endorse high standards and require transparency, publishing CHP operational data online. Two organisations felt that the need for impartiality implied that Government should lead on some measure e.g. a Guidance Service.
- 3.7. In addition to the above responses on Government's role, the following information was provided on existing delivery of measures by non-governmental organisations.
- 3.8. ADE deliver outreach to consultants and customers to improve CHP design and operation, guidance documents and case studies. There was concern (from suppliers) that Government intervention in this area may not provide additionality. Two organisations felt that Government's role should be to set direction and support trade associations and commercial bodies (including with funding) in delivering the measures. CIBSE Guidance was noted as another measure already delivered by the sector.

#### Messages From Stakeholder Events

- 3.9. In line with the majority of the written responses, three of the four events, took the view that Government's role should be to set direction and play a supportive role, but that delivery of most of these measures should be led by commercial organisations. In line with views expressed by two of the written responses, one group at one of the events disagreed with this and saw Government as having a leading role to play, noting the impartiality and independence Government would provide.
- 3.10. In the case of the Guidance Service measure, two events favoured trade associations leading on provision of guidance (although it was noted that non-members would not then have access to guidance). Another event (with solely public sector delegates) felt a Government-funded Guidance Service would be valuable, in particular for helping potential developers navigate access to support. One of the discussion

groups at the fourth event also supported a Government-funded Guidance Service, noting the value of independent and impartial advice.

#### Call for Evidence Question: Package of Potential Measures

**What level of take-up of these measures might be expected? How many organisations / projects might make use of the measures? Are you aware of any evidence of the level of resource required to deliver similar services?**

3.11. One organisation commented that take-up for sub 50kW CHP would be very low.

#### Call for Evidence Question: Package of Potential Measures

**What proportion of organisations which did access these measures might proceed to deployment of CHP as a result of them i.e. projects which would not have been deployed in the absence of this support? Is there evidence on this from similar past/current policies?**

3.12. Two organisations felt that the package of measures would not lead to a step change in CHP deployment. One of these felt that CHP was already well known, understood and that there was no shortage of high quality guidance, support, consultancy and other services.

3.13. Another organisation felt that a high proportion of positive Feasibility Studies were likely to proceed to deployment. Another noted that they had achieved a 49% conversion rate from Feasibility Studies to deployment.

#### Call for Evidence Question: Package of Potential Measures

**What types of factor might prevent projects which did access these measures from proceeding to deployment of CHP?**

3.14. One respondent noted that lack of affordable heat metering and pre-payment options might be a barrier in District/Community Heating applications. [**DECC Note:** *Under the Heat Networks (Metering and Billing) Regulations 2014, newly constructed buildings (or buildings undergoing major renovation) connected to district heating networks are required to install individual heat meters. Existing networks are also required to retrofit individual heat metering, if this is cost effective and technically feasible (reassessed every 4 years). Metering costs are expected to fall over time.*] They suggested that adding a secure heat metering and prepayment channel onto the smart electricity metering rollout, and requiring electricity network operators to also operate heat metering, would marginalise costs.

3.15. Two organisations felt financial barriers were a key factor which might prevent deployment. A third noted that operating risk might act as a barrier. They felt that third party delivery of CHP services was the most appropriate mechanism to address this.

3.16. Changing priorities of the organisation was also mentioned by one organisation as potentially preventing projects from proceeding.

#### Call for Evidence Question: Package of Potential Measures

**Would joint Government/industry funding of these measures be viable? If appropriate, what contribution to costs might your organisation be prepared to make?**

3.17. One trade association indicated that they would be keen to work closely with Government on implementation of any measures. Two other organisations also felt that

joint funding would be viable. A fourth organisation added the caveat that Government should further consult and achieve consensus before proceeding with any measures.

3.18. One organisation did not see this as viable for sub 50kW CHP as they felt these measures would not be helpful for this type of unit.

3.19. One respondent suggested that housing organisations might be willing to contribute to capital and operating costs (in the case of CHP supplying District Heating) based on the avoided costs of alternative stand-alone heating systems.

**Call for Evidence Question: Package of Potential Measures**

**What would be the estimated cost to your organisation to access support under these measures e.g. for staff time, administrative costs and inconvenience?**

3.20. One respondent noted that a procurement framework of approved suppliers would reduce public sector procurement costs. Another noted staff time, travel and opportunity cost. Another noted that their time (as an energy consultant) was charged at £75/hour.

**Call for Evidence Question: Package of Potential Measures**

**Are there any measures which might be dropped from the package without significantly reducing its effectiveness?**

Measure	Number of responses
Best Practice Guidance	1 response
Best Practice Fora	3 responses
Case Studies	1 response
Awareness Raising Workshops	1 response

3.21. One trade association did not support implementation of Best Practice Guidance. They felt that CIBSE applications manual AM-12 already provided comprehensive guidance for buildings CHP and that larger CHP was too bespoke for guidance to be helpful. Three responses felt that Best Practice Fora were unlikely to add value to existing activity delivered by the sector. One organisation felt that Case Studies also added little to existing material delivered by the sector. Another felt that Awareness Raising Workshops would add little to activity delivered by the Association for Decentralised Energy (ADE).

**Call for Evidence Question: Package of Potential Measures**

**Would the package of measures be applicable to all types of CHP, and if not why not? What might broaden the applicability of the package?**

3.22. One trade association felt that the package of measures was most applicable to small scale CHP where there were significant knowledge barriers. They felt that larger CHP would have a greater need to access the electricity market and, consequently, policy and regulatory risk were more of a barrier. They proposed that these risks be addressed by implementing protection in law for gas CHP developers against future policy risk such as adverse changes in tax or supply licensing arrangements. They also proposed that DECC should engage with CHP stakeholders in the early stages of all energy policy



design. They and another organisation thought that DECC should consider how Government might help reduce heat offtake risk.

- 3.23. One response commented that the measures would not be applicable to sub 50kW CHP. Another organisation felt that different types of CHP faced different barriers and hence the proposed measures would not be applicable to all types of CHP, whilst a third felt that the package would be applicable to all types of CHP.

<b>Call for Evidence Question: Package of Potential Measures</b>	
<b>Might the package of measures distort competition within sectors utilising CHP?</b>	
<b>Yes</b>	<b>No</b>
1 response	3 responses

- 3.24. One organisation felt that the measures might distort competition at the margins between less than and greater than 50kW CHP. They also noted that companies which provide feasibility study services would gain commercial advantage from the availability of funding for feasibility studies.
- 3.25. Another organisation noted that to avoid competitive distortion, any measures should be available to all types of investor.

## 4. Guidance Service

Call for Evidence Question: Guidance Service	
<b>Is a Guidance Service likely to be effective in;</b> <b>(a) overcoming lack of LA and SME technical resources and expertise; and</b> <b>(b) helping encourage CHP developers to engage in energy market opportunities, including participating in the Capacity Market?</b>	
Yes	No
4 responses	2 responses

- 4.1. One trade association felt that the Guidance Service would be helpful to SMEs, but less so for Local Authorities, who could already access HNDU support for CHP as part of heat network projects. Another trade association felt that a Guidance Service would be a welcome addition if it could help SMEs better engage with existing policies. One organisation felt that there were a number of potential applications for sub 50kW CHP where lack of expertise was a barrier to uptake which a Guidance Service would be helpful in addressing.
- 4.2. Another response suggested that Guidance Service would be a useful resource for developers who were already interested in CHP, but would not help overcome lack of resource due to the time required to engage with the Service. They felt that Capacity Market engagement would not be in the interests of all projects. Another organisation felt that a Guidance Service would have no great benefit and might hinder progress.
- 4.3. In the view of another response, an acceptable, low risk CHP offer (e.g. an ESCo CHP service with indexed pricing, standard terms and published performance) would have to be available before Guidance would be successful.
- 4.4. The final respondent to this question felt that a Guidance Service may help identify opportunities and guide potential developers, but that it was unlikely to be detailed enough to help developers with, for example, navigating the complexities of Capacity Market participation. They felt that ESCos were better placed to provide this detailed guidance, provided that the ESCo market was opened up by Government addressing heat offtake risk.

Call for Evidence Question: Guidance Service
<b>What type of skills and expertise would be most important for a Guidance Service delivery body to possess?</b>

- 4.5. The following skills and expertise were suggested by respondents;
- i) Understanding/experience of customer sectors (3 responses) or the communication skills necessary to gain this understanding.
  - ii) CHP system integration/installation experience (3 responses)
  - iii) Practical experience of procurement and operation of CHP (2 responses)
  - iv) Heating system development experience (2 responses)

- v) Impartiality (2 responses)
- vi) Ability to provide support to non-technical users (1 response)
- vii) Experience with small scale technology including MCS and FiTs (1 response)
- viii) Technical and commercial skills (1 response)
- ix) Client-side consultancy skills e.g. preparing feasibility studies, business cases etc (1 response)
- x) Expertise of both CHP and competing technologies (1 response).

**Call for Evidence Question: Guidance Service**

**Are there any design features of the contract for delivering this measure, which would be critical to its success?**

- 4.6. One trade association suggested provision of support on the stages between delivery of feasibility studies and commissioning, in particular, support on preparing a business case, accessing capital investment, obtaining legal advice and procuring CHP.
- 4.7. One response envisaged a framework of approved CHP service providers and proposed Key Performance Indicators on numbers of units installed, operational underperformance risk being borne by the suppliers with at least 3 suppliers per region so they could be dismissed for underperformance.
- 4.8. Another suggested a Helpline with technical expertise, but also the ability to communicate with non-technical customers.

## 5. Funding for CHP Feasibility Studies

**Call for Evidence Question: Funding for Feasibility Studies**

**Is Funding for Feasibility Studies likely to be an effective way of overcoming lack of LA and SME technical resources and expertise e.g. by enabling this expertise to be outsourced?**

Yes	No
7 responses	1 response

- 5.1. One response suggested that providing funding to consultants based on the number of installations they achieved might be an efficient way of ensuring that studies are only conducted where installation is likely. Another felt that Funding for Feasibility Studies is likely to help investment, but noted that the complexities of a competitive allocation process could create more barriers than it solves.
- 5.2. Another organisation felt that Feasibility Studies would help overcome lack of technical resource, but noted that, by outsourcing studies, expertise was not developed within the organisations.

### Messages From Stakeholder Events

5.3. Two of the stakeholder events expressed the view that Funding for Feasibility studies should be very helpful for SMEs (delegates at one event suggested that large enterprises should not be eligible for this measure).

#### **Call for Evidence Question: Funding for Feasibility Studies**

**Would a requirement for matched funding (or a significant contribution to total costs) from applicants significantly reduce take-up? What proportion of costs might your organisation be willing to contribute?**

5.4. Three organisations felt that requiring organisations to meet 50% of feasibility study costs themselves would reduce take up. Another response felt that at least a token amount of funding from applicants was appropriate, but more than this would be inappropriate for small CHP. A third noted that under some arrangements Feasibility Studies can be self-funding, so whilst helpful, Government funding was not essential.

5.5. One organisation commented that matched funding was fair. Another suggested available funding should scale with the electrical capacity of the project.

### Messages From Stakeholder Events

5.6. Matched funding was considered to be acceptable by two of the stakeholder events. However, it was suggested that refunding the organisations own funding if the project proceeded to deployment would be beneficial. It was proposed that available funding should scale with CHP size.

#### **Call for Evidence Question: Funding for Feasibility Studies**

**What criteria would be most critical in competitively assessing applications for Funding for Feasibility Studies?**

5.7. Five organisations suggested energy cost savings/financial viability should be a key criterion. It was suggested that the CHP Focus financial assessment tool<sup>2</sup> should be used to assess applications. One organisation suggested that financial need on the part of the applicant should be a criterion.

5.8. There were also five responses that suggested carbon saving (or primary energy saving as a potentially simpler alternative), should be one of the assessment criteria, although one noted this would add complexity and gaming risk.

5.9. One response suggested that demonstrating fuel-switching to gas (from more carbon intensive fuels), senior management buy-in, need for new heating systems in the relevant buildings and appropriate development plans/timescales should form part of the assessment criteria.

5.10. One trade association suggested a three-stage process, as used for assessing CHP potential for Climate Change Agreements, might be appropriate e.g. initially assessing CHP suitability by looking at heat:power demand plus operating hours, then looking at technical suitability plus a simple payback assessment and finally a detailed technical and financial viability assessment. Another response suggested that a short questionnaire should be used to establish heat load compatibility and suitable load duration.

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<sup>2</sup> [http://chptools.decc.gov.uk/CHPAAssessment/\(S\(gjtjzidg5ncdafio01bzig5p\)\)/default.aspx](http://chptools.decc.gov.uk/CHPAAssessment/(S(gjtjzidg5ncdafio01bzig5p))/default.aspx)

5.11. One respondent suggested willingness to accept funding conditional on projects proceeding to deployment should be a key criterion.

#### Messages From Stakeholder Events

5.12. At two of the events it was suggested that the CHP Focus online financial assessment tool should be used as part of the application/assessment process to ensure Feasibility Study funding went to projects which were likely to be commercially viable.

#### **Call for Evidence Question: Funding for Feasibility Studies**

**What level of take-up of Funding for Feasibility Studies might be expected? What proportion of Feasibility Studies might proceed to deployment of a new CHP plant? Are you aware of any evidence of the level of resource required to deliver similar services?**

5.13. Two responses felt take-up might be high. Another felt a high proportion of successful Feasibility Studies might proceed to deployment, whilst a fourth commented that the proportion proceeding would depend on financial viability and political will.

5.14. One response suggested that Carbon Trust would have experience, from the CHP Feasibility Studies they funded, on the proportion proceeding to deployment. They noted that in their own experience in the NHS sector 49% of feasibility studies proceeded to deployment.

#### Messages From Stakeholder Events

5.15. At one of the stakeholder events it was suggested that large engineering consultancies would have experience of the proportion of bespoke, industrial CHP projects that proceeded from the Feasibility Study stage to deployment.

#### **Call for Evidence Question: Funding for Feasibility Studies**

**What would be the estimated administration and inconvenience costs for your organisation of submitting a competitive application for funding for a Feasibility Study?**

5.16. One response suggested costs could be up to £5000 for some organisations. It suggested feasibility might be assessed for smaller organisations based on gas and electricity bills, perhaps from Energy Certificate Survey data. [**DECC Note:** *The CHP Focus financial assessment tool enables users to enter their bill data*] Another response emphasised the need to keep the application process simple.

#### **Call for Evidence Question: Funding for Feasibility Studies**

**Are there any design features of the delivery body/contract which would be critical to its success?**

5.17. Two trade associations suggested that feasibility studies should not be limited to CHP, but should cover wider energy management and energy efficiency opportunities. This might involve building on Energy Savings Opportunity Scheme audits where available. One of them also suggested allowing consultants to aggregate feasibility studies and submit batch applications for funding.

5.18. One respondent suggested that all feasibility studies should be published, remain available online and that Financial Directors in the subject organisations should be sent regular reminders of conclusions if no action was taken to progress feasible projects. They also suggested piloting the scheme in a limited area and for small CHP to assess

effectiveness and optimise promotional methods. Using multiple contractors was suggested to promote innovation and enable comparison.

5.19. Two responses suggested impartiality would be the most critical criterion for a delivery body. Another noted sector experience in order to be able to provide tailored advice.

#### Messages From Stakeholder Events

5.20. Two of the stakeholder events suggested that consultants should be able to submit the application for funding on behalf of their clients. Two events also proposed that funding should extend beyond feasibility studies e.g. to cover funding for detailed design work and third party project management of CHP deployment.

5.21. Two of the events also proposed that funding should be made available for internal feasibility studies and not just external studies to help build or maintain internal expertise. It was noted that external consultants have less ongoing commitment to projects so, if expertise is available in-house, internal studies were preferable. This chimed with a message in one of the written responses, that outsourcing studies did not enable expertise to be developed within the organisations.

## 6. A Best Practice Sharing Forum

### Call for Evidence Question: Best Practice Sharing Forum

Is a Best Practice Sharing Forum likely to be effective in;

- (a) overcoming lack of LA and SME technical resources and expertise; and
- (b) in encouraging organisations to engage in energy market opportunities (including participation in the Capacity Market)?

Yes

No

4 responses

4 responses

6.1. Four organisations noted that there are a number of existing fora and initiatives and that any additional action by Government in this area would require care to build on and complement existing initiatives. One organisation felt that, unless skilfully chaired, this could be a waste of time and resource.

6.2. Competitive pressures might mean that organisations would only be able to share Best Practice on high level principles in the view of one respondent.

6.3. Another response noted that, although Fora would in their view be helpful, resource to attend such events might be a barrier.

#### Messages from Stakeholder Events

6.4. Feedback at three events supported establishing Best Practice Fora, but one delegate at one of these events expressed the counter view that this was unnecessary as there were plenty of existing fora for this.

Call for Evidence Question: Best Practice Sharing Forum	
Would a single forum be most effective or separate fora for different sectors?	
Single forum	Separate fora
3 responses	2 responses

- 6.5. One response suggested Best Practice Sharing should be delivered through extension of existing sectoral events. Another suggested that separate fora for CHP above and below 5 MW would be appropriate.
- 6.6. One organisation noted that a single forum would minimise time and resource demands. Another felt that a single forum for both Local Authorities and SMEs would help increase Local Authority commercial awareness.

#### Messages from Stakeholder Events

- 6.7. Two events suggested that separate fora for different sectors, sizes of CHP or temperature demands, would be preferable to a single “one-size fits all” forum.

Call for Evidence Question: Best Practice Sharing Forum		
What would be the most effective medium for a forum e.g. physical meetings, webinars etc		
Physical meetings only	Both	Webinars only
No responses	4 responses	1 response

- 6.8. One respondent suggested physical meetings, but with videoconferencing enabled and video proceedings posted online. Webinars should also be used to supplement this approach. Another, also favouring a combination of both media, suggested that an online forum where questions could be posed and answered by a panel of CHP experts would be helpful.
- 6.9. The one respondent favouring webinars only did so as these minimise demands on time and solve geographic coverage issues.

## 7. Best Practice Guidance

Call for Evidence Question: Best Practice Guidance	
Is detailed Best Practice Guidance likely to be effective in overcoming lack of LA and SME technical resources and expertise?	
Yes	No
3 responses	7 responses

- 7.1. Four organisations noted that significant best practice guidance existed e.g. via CHP Focus, CHPQA, CIBSE, Carbon Trust, ADE and that CHP Suppliers also publish guidance. They were sceptical of the benefits of further guidance. One of them suggested that the time commitment required to read Guidance, and the need for interactive questions and answers to aid understanding, may limit effectiveness of traditional Guidance documents.
- 7.2. Two respondents felt that Best Practice Guidance would be valuable in increasing knowledge, but would not on its own overcome lack of technical resource and expertise. Another thought that it would only help those who already possess a certain level of knowledge and was not an alternative to a platform for discussion / questions and answers.
- 7.3. One of the positive responses suggested reviving and updating Energy Efficiency Best Practice and Energy Consumption Guides and merging these with updated DECC Guidance. They highlighted the need to avoid using specific financial values in Guidance as these quickly become out of date.

### Messages from Stakeholder Events

- 7.4. Updated Best Practice Guidance available online was felt to be helpful by two of the events and one of two discussion groups at a third event. It was noted that much freely available guidance was out of date and older guidance publications were no longer accessible. However, the view at the fourth event was that sufficient guidance already existed.

Call for Evidence Question: Best Practice Guidance
What up to date Best Practice Guidance already exists and is publicly available? What subject areas does this cover and what gaps are there?

- 7.5. Four responses noted that available best practice guidance included CHP Focus, CHPQA, CIBSE, Carbon Trust, ADE guidance and that CHP Suppliers also publish guidance. Another also referenced the Carbon Trust Guidance. One organisation felt that updating of this guidance and making it more readily accessible would be helpful. Another suggested that raising awareness of existing material would be more valuable.
- 7.6. One response noted that Legal costs can be a barrier and that generic Framework Agreements, covering procurement and performance, might help address this.



<b>Call for Evidence Question: Best Practice Guidance</b>	
<b>What would be the most effective medium for Best Practice Guidance e.g. would online publication be sufficient or would hardcopies also be required?</b>	
<b>Online only</b>	<b>Hardcopies also</b>
3 responses	2 responses

<b>Call for Evidence Question: Best Practice Guidance</b>	
<b>Would development of Codes of Practice or Standards for CHP be feasible and more effective than Guidance documents? What evidence exists to support the feasibility and benefit of such an approach for CHP?</b>	
<b>Yes</b>	<b>No</b>
3 responses	5 responses

- 7.7. Two organisations expressed doubt about what benefit Codes of Practice would provide over Guidance, in particular given the bespoke nature of some CHP. Three supply-side organisations were opposed to Codes of Practice. It was suggested that the market was not mature enough for Codes of Practice and that this might stifle innovation and would not be viable for larger bespoke CHP. One of them suggested this might be viewed negatively by some as a step towards regulation.
- 7.8. However, three customer-side organisations felt that Codes of Practice would be helpful. One suggested that these would be much more effective than Guidance. It was suggested that Codes of Practice help indicate the maturity and reliability of the technology, reduce costs of establishing contracts and would restore confidence in CHP suppliers. They may also help combat risk aversion to some extent. Regular updates and archiving of old issues was suggested, to allow for innovation and learning. Another of these organisations felt that Codes of Practice were helpful, alongside Guidance, and helped ensure that client and customer had a common understanding.

## 8. Publication of Detailed Case Studies

<b>Call for Evidence Question: Case Studies</b>	
<b>Are detailed Case Studies likely to be effective in;</b>	
<p>(a) Raising awareness of CHP?            (b) Encouraging engagement in energy market opportunities including participation in the Capacity Market?            (c) Overcoming pre-conceptions about the cost effectiveness of CHP?            (d) Creating Senior Champions for CHP?</p>	
Yes	No
6 responses	2 responses

- 8.1. Two organisations commented that there were a large body of existing case studies and it was unclear what value further, detailed Case Studies would add.
- 8.2. One respondent, whilst supporting sectoral Case Studies, noted the risk that a profusion of Case Studies covering novel technologies or situations could cause confusion. Another noted that Case Studies could provide exemplars for replication. A third felt that Case Studies would be valuable except in respect of basic CHP awareness-raising. They felt they were likely to be accessed only by those with an initial level of awareness.
- 8.3. Another felt that Case Studies were in principle effective, but commercial constraints would in practice prevent them being of any value.
- 8.4. One respondent suggested that there was a specific need for Case Studies to raise awareness of Fuel Cell CHP. They felt that the commercial availability of Fuel Cell CHP and its high electrical efficiency was not well known.

<b>Call for Evidence Question: Case Studies</b>	
<b>Might commercial confidentiality prevent organisations volunteering to act as Case Studies? What might be effective in overcoming this?</b>	
Yes	No
3 responses	1 response

- 8.5. One respondent suggested that organisations might be more amenable to hosting site visits than volunteering as subjects for Case Studies. He suggested that publication of operational performance data for large numbers of plant might be valuable and make individual organisations more willing to participate. Another organisation felt that commercial confidentiality was unlikely to be an issue, provided that the subject organisation had some involvement in the editorial process. Anonymisation of Case Studies was suggested by one response as helpful to overcome confidentiality concerns. Another suggested simply excluding any sensitive information in order to overcome confidentiality issues.
- 8.6. One response suggested that all projects which received Funding for Feasibility Studies should be required to produce published Case Studies.

## 9. Awareness Raising Workshops

<b>Call for Evidence Question: Awareness Raising Workshops</b>	
<b>Are Awareness Raising Workshops likely to be effective in;</b>	
<ul style="list-style-type: none"> <li>(a) Raising awareness of CHP?</li> <li>(b) Encouraging engagement in energy market opportunities including participation in the Capacity Market?</li> <li>(c) Overcoming pre-conceptions about the cost effectiveness of CHP?</li> <li>(d) Creating Senior Champions for CHP?</li> </ul>	
Yes	No
8 responses	1 response

- 9.1. Although respondents generally felt that Awareness Raising Workshops would be effective, the difficulty of attracting attendees was noted. A general energy management focus targeted at heat users was suggested by one trade association. Another organisation suggested targeting architects, Local Authorities, housing associations, and designers.
- 9.2. Two responses suggested delivering awareness-raising through existing sectoral events and/or site visits was likely to be more effective, in particular at reaching senior leaders.
- 9.3. One organisation noted the need to raise awareness of fuel cell CHP in particular.
- 9.4. The organisation that did not support awareness raising workshops noted that many attendees were likely to have at least a basic level of awareness already. In particular they felt that workshops would not be effective in helping create Senior Champions, although they would be a valuable resource for existing Champions. Another organisation, whilst not opposed to Awareness Raising Workshops felt that this measure was effectively already being delivered by trade bodies.

### Messages from Stakeholder Events

- 9.5. One event, and one of the discussion groups from a second, felt that Awareness Raising Workshops would be useful. However, one group from a further event felt that delivery of workshops could be left to the ADE.

<b>Call for Evidence Question: Awareness Raising Workshops</b>
<b>What skills and expertise are likely to be most important in a successful delivery body for Awareness Raising Workshops?</b>

- 9.6. Two organisations expressed the view that an understanding of the economic sectors with which they were working was just as important in a delivery body as CHP expertise. Two highlighted commercial experience as key, two cited technical expertise. Another noted that speakers must be engaging and have access to robust data. Ability to simplify and communicate complex information was also suggested.
- 9.7. One respondent cautioned against a “sales” focus and another emphasised the importance of impartiality.

9.8. For the sub 5MW CHP sector, experience of 4 key stages of project development Feasibility Study, Procurement & Specification to transfer Risk, Installation Integration and Life Time Performance Monitoring was suggested by one respondent as being the key expertise required of a delivery body. They proposed that workshops be structured around these stages.

**Call for Evidence Question: Awareness Raising Workshops**  
**Are you aware of evidence on the level of resource likely to be required to deliver an effective programme of Workshops e.g. number and size of workshops, number of locations etc?**

9.9. One organisation suggested a minimum of 6 events to provide geographic spread, and emphasised the importance of publicising events well.

9.10. The Carbon Trust was suggested as a possible source of evidence on this.

**Call for Evidence Question: Awareness Raising Workshops**  
**What would be the most appropriate medium for delivering Awareness Raising Workshops e.g. would these be best delivered as webinars or physical meetings?**

Physical meetings	Both	Webinars
1 response	5 responses	No responses

9.11. One organisation suggested video material should be available online before physical meetings started, to enable those invited, but were unable to attend, to access information. They emphasised the value of delivering awareness-raising through existing sectoral events, site visits and presentation of success stories by developers/operators/customers.

## 10. Other Issues

Call for Evidence Question: Other issues	
Might any of the measures identified have unintended adverse impacts on you or other organisations?	
Yes	No
No responses	3 responses

- 10.1. Focussing on promoting smaller CHP, in the view of one respondent, was less likely to have adverse impacts on consultancy businesses. One organisation advised caution on Codes of Practice or Standards and suggested that these should only be proceeded with after further consultation. Another noted that devoting time to pursuing CHP had an opportunity cost for potential developers in terms of delivery of other services. One response felt that care was required to avoid Building Services Consultants feeling marginalised. Any measures should not run counter to their “% of CAPEX fee-earning requirement”.

Call for Evidence Question: Other issues	
Are you aware of any external factors not identified above which might compromise the effectiveness of these measures?	
Yes	No
1 response	2 responses

- 10.2. One response noted that (unspecified) changes in the electricity market and manufacturing economies of scale potentially favoured installation of power-only generators at sites rather than CHP.

Call for Evidence Question: Other issues	
Are you aware of any other policy measures which might be more effective in addressing barriers to CHP than those listed here? What evidence is available on the effectiveness of such measures?	

- 10.3. Two trade associations proposed that Government implement legal protection for gas CHP developers against policy risk, such as adverse changes in tax or supply licensing arrangements in future. This would be similar to Change in Law provisions in the Contract for Difference for supporting low carbon electricity generation. They proposed that this should provide protection over the 20 year lifetime of the investment. Another organisation also suggested that Government should address policy risk, but did not make specific proposals on how this should be done.
- 10.4. The same two trade associations also proposed that DECC should engage with CHP stakeholders in the early stages of energy policy design, either by requiring an assessment of the impact of electricity market policies on CHP, or by appointing champions within each

directorate to represent distributed generation, industrial and commercial energy user interests. In addition they proposed that Government should consider how they might help reduce heat-offtake risk i.e. the risk of a CHP project's intended heat customers closing or seeking alternative heat supply arrangements.

- 10.5. One respondent suggested that requiring new buildings to be enabled for District Heating with standard connection points and that Building Regulations should give credit for thermal storage. They also suggested standardisation of CHP engine block fixings to enable engines to be easily swapped for units of a different size and that online tools like a virtual financial spreadsheet, prepopulated with realistic default values would be helpful. [**DECC Note:** *The CHP Focus financial assessment tool provides much of this functionality for CHP for buildings heating. The Environment Agency will shortly be publishing an Environmental Permitting Cost Benefit Assessment sheet which delivers this for large installations.*]
- 10.6. One organisation suggested that Government should simplify CHP Quality Assurance programme requirements for sub 50kW systems, and that increasing the value of exported power, introducing domestic Time of Use tariffs, reviewing recommended performance in National Calculation Methodologies would be more effective in promoting CHP deployment. They also proposed that Government should set out a clear vision for CHP including sub 50kW systems.
- 10.7. Another organisation called for sustained fiscal incentives, suggesting long term, low interest loans, or “zoning” where CHP District Energy Networks are the only permitted energy option or obliging developers to consider connection to District Heating Networks prior to considering individual building heating options, and capital funding to kick-start small networks.

#### Call for Evidence Question: Other issues

**Is there anything which Government can do to help facilitate the market in developing solutions to correct these barriers in future?**

- 10.8. In the view of two trade associations the market is likely to correct barriers provided that CHP is cost effective. The relatively strong small CHP market was cited as evidence of this, with ESCos addressing many of these barriers. In their view addressing the economic barriers, together with providing long term policy and regulatory certainty would allow the market to address non-financial barriers. Another organisation echoed this, suggesting that if Government addressed heat offtake risk this would open up the market and enable ESCos to address the non-financial barriers identified.
- 10.9. One respondent suggested inclusion of a heat metering channel in Smart metering roll-out and requiring electricity network operators to provide a heat metering and billing service.
- 10.10. Another requested that Government set out its vision and long term policies for CHP. They requested that Government also review the National Calculation Methodology, simplify CHPQA for sub 50kW CHP, encourage Distribution Network Operators to provide timely connection and support introduction of electricity tariffs that reflect the true value of CHP generation.
- 10.11. Another respondent suggested that centralised CHP supplying district energy to social housing could be facilitated by an obligation on electricity suppliers to offer social tariffs. They envisaged CHP operators partnering with licensed electricity suppliers to deliver this obligation through small District Heat networks and supply of electricity as well to the Network customers via “white label” tariff arrangements. They proposed that there should be a requirement for this to be conducted on an open-book basis to ensure cost savings were passed on by the licensed supplier to the customers. As well as enabling the energy and

cost savings of CHP, facilitating part L Buildings Regulation compliance and addressing fuel poverty, the respondent felt that this would help future-proof energy supply through the ability to plug-in new energy supply technologies to these networks. They suggested this would enable self-funding procurement, with operating and financial risk transfer to the CHP service provider.

#### **Call for Evidence Question: Other issues**

#### **Is there any evidence of bias against CHP and in favour of simpler technologies in the energy contracting/consultancy supply chain?**

- 10.12. One trade association hoped that professional energy contracting/consultancy services would assess the detailed site processes, energy demand requirements and business drivers before recommending an appropriate course of action – be it CHP or not. Two organisations indicated that they were not aware of any evidence of bias.
- 10.13. Another two organisations felt that Solar PV and Solar Thermal were often favoured in social housing, SAP and SBEM assessments and that more sophisticated energy analysis would often show CHP to be more appropriate.

#### Other Comments in Responses

- 10.14. One trade association commented that any measures introduced should also be accessible to other fuel types e.g. liquefied petroleum gas fired CHP.
- 10.15. Another association noted that there was an over-reliance on complex models of electricity market participation and that these were geared to modelling participation by large utilities and do not reflect the operating environment of manufacturing businesses. One association expressed the view that the conclusions of DECC's modelling of bespoke incentives was not borne out by experience in the market. They cited a current lack of large gas CHP projects in development as contradicting DECC's conclusions. One organisation commented that the industry being exempt from (or compensated for) electricity market regulatory costs, meant that these costs did not act as a driver for industrial businesses to develop CHP to generate their own power (as suggested by DECC's analysis).

#### Messages from Stakeholder Events

- 10.16. Three of the events noted the importance of existing, trusted bodies leading on delivery of measures. Organisations who had recently successfully implemented CHP were noted by three of the events as being the most effective influencers. It was suggested that these should be used as the primary presenters in workshops, best practice fora etc.
- 10.17. Three events noted that any interventions should be part of a consolidated approach on energy efficiency guidance/support, one commented that this was currently very fragmented and confusing.
- 10.18. Two of the events noted that industry (including DNOs) should be involved in any steering group overseeing activity and that they felt there was a lack of clarity from Government on the role of gas CHP in decarbonisation and its prioritisation relative to other technologies.

# 11. Conclusions

## Barriers

- 11.1. There was general agreement that the barriers identified by DECC's qualitative research were correct, but the majority of respondents highlighted additional barriers. There was a strong message that policy uncertainty was a key barrier.
- 11.2. Although outside the scope of this Call for Evidence, for the reasons set out in DECC's publication on the Bespoke Gas CHP Policy project<sup>3</sup>, there were also a number of responses identifying financial issues (poor or uncertain spark spread, low electricity export value, lack of time-banded domestic tariffs etc) as barriers.
- 11.3. Heat offtake risk was also identified in a number of responses as a barrier to CHP deployment.
- 11.4. The stakeholder events also identified third party CHP providers not always acting in the best interests of their customers as a potential barrier.

## Measures to Address Barriers

- 11.5. Awareness raising workshops attracted the greatest consensus in support. Only one organisation commented that the effectiveness of these might be limited as a means of making the completely unfamiliar aware of CHP. It was suggested that delivering this type of content via existing events, and in particular via existing trusted bodies and using successful implementers of CHP as the primary presenters would be the most effective approach.
- 11.6. Funding for Feasibility Studies was the next most supported measure. A requirement for match funding from the applicant was generally felt to be fair, but several responses felt that this would limit take-up. Refunding the applicant's costs if the CHP proceeded to deployment was suggested and/or allowing consultants to submit batch applications. Financial viability and carbon saving were suggested as the most appropriate criteria for assessing competitive applications for funding. A few responses suggested making funding available for internal feasibility studies also, in order to develop and maintain in-house expertise.
- 11.7. Publication of detailed Case Studies was also supported by a similar number of responses. The stakeholder events emphasised the persuasiveness of seeing and hearing about successful implementation of CHP. However, a few responses felt that (high level) Case Studies published by trade associations and suppliers were sufficient and that detailed studies would add little. Commercial confidentiality was felt to be a potential barrier to Case Studies, but anonymisation, exclusion of sensitive data and requiring funded Feasibility Studies to generate Case Studies were suggested as potential ways around this.
- 11.8. There was support from some respondents for a Guidance Service, although a few responses saw no great value in this or felt that organisations would not have enough time to engage with a Service. Some stakeholders felt that such a service would be particularly beneficial for SMEs and that guidance on business cases, finance and procurement would be a particular area of focus.

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<sup>3</sup>

[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/389543/DECC\\_Summary\\_mini\\_publication\\_FINAL.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/389543/DECC_Summary_mini_publication_FINAL.pdf)



11.9. There was less support for the other measures included in the Call for Evidence. Many respondents felt that sufficient Best Practice Guidance already existed and that there were already existing Fora for sharing Best Practice Sharing, although three of the stakeholder events supported establishing such Fora.

#### Evidence on Effectiveness of Measures

11.10. Very little evidence was submitted on likely effectiveness of measures. Several responses indicating that they were not aware of the existence of any such evidence. The following possible sources of evidence for DECC to investigate were suggested.

- i) Carbon Trust – may be a source of evidence of the uptake of Funding for Feasibility Studies and the proportion of these proceeding to deployment. They may also have evidence on the funding required for an effective programme of workshops.
- ii) Engineering Consultancies – may be a source of evidence on the proportion of larger, bespoke CHP projects which proceed from Feasibility Studies to deployment.
- iii) Projected retirement of combustion plant under the Industrial Emissions Directive and ADE packaged CHP sales data for estimating potential uptake of measures.

#### Implementation

11.11. The majority of responses thought Government's role should be largely one of setting direction and supporting the sector in delivering measures to address barriers. This is probably reflected in the above situation regarding specific interventions, where respondents felt some were best delivered, or already adequately delivered by the sector. However, a smaller number of responses emphasised the value of Government intervention in ensuring impartiality.

11.12. From the stakeholder events in particular there was a strong message about implementing any measures as part of broader measures on energy efficiency more generally e.g. to ensure consistency and clarity of messaging and avoid promoting CHP where other energy efficiency measures might be more appropriate.

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