DEPARTMENT OF ENERGY & CLIMATE CHANGE

Summary report of responses to the consultation on the Microgeneration Strategy

May 2011

SUMMARY REPORT OF RESPONSES TO THE CONSULTATION ON THE MICROGENERATION STRATEGY

22 December 2010 to 16 March 2011

Introduction

The purpose of this consultation on a Microgeneration Strategy was to explore a range of non-financial barriers that could prevent the microgeneration sector from realising its full potential. The consultation document sought views on Government proposals for an expansion of microgeneration, including at a community level. This was based on the issues raised with us during the open consultation stage over the summer and early autumn of 2010, by industry representatives and other groups.

While the document covers England only however, contributions were welcomed from the rest of the United Kingdom and further afield.

Overall comments from stakeholders was that they welcome the publication of the Microgeneration Strategy.

We received around 140 responses to the Microgeneration public consultation. Responses to the consultation were received from a wide variety of primarily organizations and a few individuals. See Appendix A for a full list of respondents.

How the process was managed

The consultation on a Microgeneration Strategy was available as a printed document and electronically on the DECC website.

Stakeholders could either post or e-mail submissions to DECC. They were also provided with the option of submitting their responses online via the DECC website. This was designed to help people read the document and respond to the questions online. The online process was designed to be easy for people to use. Respondents could log onto the website and register their details. Once on the Microgeneration Strategy Consultation page respondents could navigate through each section of the document and respond to the questions. The online consultation system also enabled respondents to edit, print or amend their responses at any time while the Microgeneration Strategy Consultation was open.

At the end of the Microgeneration Strategy Consultation period all responses to each question were read and common themes identified. The responses were then collated and grouped under these theme headings. Given the very detailed nature of some of the responses, however, grouping was deliberately high level and served mainly to highlight specific points responding to the questions asked.

Some of the e-mailed responses contained images, graphs and tables, or were too lenghty to be analysed; other responses did not directly respond to particular questions in the consultation.

Summary of responses by question

Question 1: *The Working Groups made clear MCS should continue to be responsible for certification in the Microgeneration sector. Do you agree?*

Group	Count
Yes	50
Yes but with some reforms	28
No	17

82% of respondents agree with the view that MCS should continue to be responsible for certification in the Microgeneration sector, with 29% suggesting reforms.

Question 2: *Do you agree that MCS governance should be improved and that it should move towards becoming a free-standing company? Please provide evidence to support your views?*

Group	Count
Yes does need to be improved	15
Yes should be improved and move towards a free-standing company	31
Should be improved but not move towards a free-standing company	8
No	2
There is unlikely to be one single option	1
Providing it stays impartial	1
Some reservations about move to company	2

A total of 90% of respondents agree that MCS governance should be improved, with 57% suggesting that MCS moves towards a free-standing company.

Question 3: *How can MCS be put on a more sustainable financial footing without compromising its independence and without the use of public funds?*

Group	Count
Remains as a single recognised standard for microgeneration	6
Become an independent body	1
Increase the 'amount per install' /ensure sufficient funding is raised from MCS accredited installers	27
Prompt payment of 'per installation' fee	1
Marketing campaign	2
Paid membership and fees for accrediting new organisations or registering installations/increase fees	8
FITs/RHI – means there will be high demand	2
Broaden MCS appeal – ensuring qualification are not just for UK market but are valid international qualifications.	1
Customers receiving cash for energy donate a small fraction	1
Funding with a levy on the fossil fuel industry	1
Not relevant for those not wanting MCS	1
Trade bodies and Gemserv should run the scheme	1
Using the existing levy on consumers which funds the MCS	1
Work towards a model similar to the Gas Safe Register	1
Tax carbon emissions	1
Tax unclean energy	1
Annual levy on recipients of FITs	1
MCS become product approval only	1

A variety of suggestions were given for this question with a majority of responses (47%) suggesting that MCS increase the 'amount per install' in order for MCS to gain more of a sustainable financial footing without compromising its independence.

One respondent suggested that MCS *"increasing the 'amount per install' charged by MCS which is currently at £5 to £15, which would make a marginal difference to the overall cost of an installation – but would enable MCS to move towards independence. We also feel it is important that once MCS has been put on a more stable financial footing for the profits to be used to benefit the consumer".*

Question 4: *Do you agree that MCS should be extended to support technology limits over the strict microgeneration limit (<50kWe for electricity and <45kWth for heat)?*

Group	Count
Yes	38
No	29
No for electricity. Heat could be doubled to say <100kWh	1
Only if installation has access to public subsidy i.e FITs/RHI	1
Should be looked at carefully	1
Different standards required for specific technologies	1
Satisfactory testing facilities have been created	1
More detail required	1
Only for larger situations i.e schools, hospitals etc	1
It should align with FIT, RHI and Building Regulations	1

51% of respondents agreed that MCS should be extended to support technology limits over the strict microgeneration limit.

One respondent suggesting that:

> *"MCS should be increased to support the thresholds as defined in the legal definition of microgeneration: 300kWth for heat and 50kw for electricity. This is because a 50kw electricity system is large, whereas a 45kWth heat systems is not that large, and some community projects may require a larger heating systems to be installed".*

With 39% suggestion that it shouldn't.

> *"No. MCS should focus on small scale generation and strive to become a trusted and reliable brand for consumers in this sector"*

Question 5: *What size, in terms of the upper limit for each technology, should MCS cover? Please provide evidence to support your views.*

Group	Count
Remain as currently defined for electricity and heat	19
Be extended for electricity	6
Be extended for heat	4
Relate to installations rather than size	1
Based on scale only	1
Medium sized	2
Be extended for biomass for 300kWs	1
Be extended for wind to 500Kw	2
Depends on market demand	1

Based on cost benefit analysis	1
Depends on what Ofgem say	1
See answer to previous question	3
Further discussions required (between Govt and Industry) before limit is set	1
Tie in with FITs levels for electricity related microgen	4
No limit – the bigger the better	1
Lowered to 15kw	1
Up to 250kWe and 300kWth	1
50MW in the case of solar PV	1
100kW for electric and 90kWth for heat	1
45Kw for biomass boiler	1
50KW is ok; maybe a lower number such as 25kW would be more appropriate	1
Commercial installations work well and covered by contract law. Domestic installations need additional protection and should align with Building Regulations	1
No simple single upper limit could be set – different for each technology	1

A number of suggestions were given for this questions. With 34% of stakeholders that responded to this question suggested that the size remain as currently defined for electricity and heat.

Question 6: *What type of insurance schemes should the industry consider?*

Group	Count
Make assessment of the risks associated	4
Extended warranties	5
Provide appropriate priced products to the market	3
Cater for the different needs of the market – across all sectors.	2
Warranties for up to 5/6 years	4
Optional warranties available	1
Optional warranties beyond 2 years	1
Lifetime guarantees	2
The options causing the smallest barrier to entry	1
Annual health checks	3
Housing insurance	3
Warranties/insurance optional for consumers – buy if you want it.	1
Look at expanding REAL insurance scheme or similar	3
Warranty periods be standardised	1
Market determine insurance scheme depending on consumer choice	2

Insurance schemes are not necessary	1
Performance protection warranty (extended in the event of foreign company collapse)	2
Commitment to technology life expectancy claims/ with regular maintenance checks carried out/cost included in payback calculations	1
Quality of installation issues is a key issue	1
Usual product warranties should apply /standard schemes	2
Something similar to OFTEC, Gas Safety Registration and Electrical qualifications	1
Protection for consumers for equipment that fails	2
Overall insurance mechanism funded by MCS	3

A variety of suggestions were given for this question.

Question 7: *What are the specific concerns about the governance, transparency and flexibility of SAP?*

Group	Count
Takes too much time/not flexible enough/too costly	21
Industry not got enough time to consult	2
More of a design tool than compliance tool	4
Insertion of domestic hot water consumption table	1
Standard methodology required	5
Too focused on shortcomings	2
Other	8
Very complicated and not easily understood	4

47% of respondents agreed that the current process for products to complete testing for SAP takes a long time and can be very difficult.

Question 8: *Do you agree that once RDSAP is aligned with SAP 2009 in 2011 it will be effective in assessing microgeneration technologies? If not, please identify other areas of concern that should be considered as part of future reviews.*

Group	Count
Yes	8
Not sensible to align	10
Needs urgent improvements before aligned	8
Still won't address concerns about accurately modelling heat demand for the purpose of RHI/ won't address the needs	4
Both site dependant energy and embodied energy need to be included to effectively assess technologies	1

32% of stakeholders that responded to this question agreed that it was not sensible to align RDSAP with SAP 2009 in 2011.

With 26% agreeing it should be aligned and a further 26% suggesting that improvements be made before it is aligned.

Question 9*: How do we ensure that sector skills are in-step with sector growth? This will be about improving skills of the existing workforce as well as modified apprentice training – how will this be cascaded to companies and individuals most effectively?*

Group	Count
Need to up skill current workforce	19
Create a new industry	1
Through National Skills Academy	4
Summitskills collect data on training and skills	11
Adequate training courses (cost and time)	7
Stable market created through policy certainty	8
Central body required	1
Online knowledge building programmes for self study	1
Apprentices required to stay with firm for at least a year to justify cost of training	1
Apprentices	1
Link training providers to MCS registered companies and product manufacturers	1
Ensure skills for MCS align with existing Minimum Technical Competencies and NOS	2
MCS scheme membership be clearly defined	1
Qualifications e.g. NVQs associated with each technology	3
Training be offered as a module at higher/further education colleges	3
Individuals be trained in one area only i.e roofer- roofing, plumber/electricians do work inside	1
Trade bodies should provide training (worked in Scotland)	1
Independent none manufacturers related	1

28% of respondents agreed that the current workforce needs to be up-skilled to ensure that sector skills are in-step with sector growth.

With 16% suggesting that Summitskills collect data on training and skills.

Question 10: *What role could manufacturers play in training provision?*

Group	Count
Through purpose built and purpose run training courses	15
Aligning with NSA	2
Align with National Occupation Standards	1
Increase awareness	1
Working with other distribution networks	2
Already play a role	22
Manufacturers to provide (share) more widely information about their products to facilitate training either internally or externally	1
A big role	2
Ensure training is mapped to competence criteria	3
Offer (paid) work experience to people seeking employment	1
Help local authority training and apprenticeships	1
Encourage manufacturers to set up training facilities in UK/best placed to deliver training	5
Independent qualifications that are not linked to supplier/manufacturer	1

47% of stakeholders that responded highlighted that ""Manufacturers already play a key role in the provision of training for installers and engineers, using their own purpose built training centres". 32% suggested that this could be improved through purpose built training courses.

Question 11: *How can the marketing of, and accessibility to, training reach smaller companies and individuals?*

Group	Count
Once a market is created/in place	2
Consumer demand	2
Awareness of technologies	1
Financial incentives	1
Through MCS awareness	4
By reducing barriers inherent in MCS	1
Through communication/websites/press	8
Training be cost effective/flexible	2
Training be compulsory	1
Through training groups	1
Through Summit Skills	2
Through other organisations such as Manufacturers, TAs, Institutions and Scheme providers, Local Authorities	10
Evening classes/college courses	2
Provide more regional centres	1
Provided a funding credit against tax bill	1

Online knowledge building	2

24% of stakeholders that responded suggested that organisations such as Manufacturers, Trade Associations, Local Authorities, Institutions and Scheme providers were better suited to help ensure marketing, accessibility, and training reach smaller companies and individuals. With 20% suggesting that this would be better achieved through channels such as websites and press.

Question 12: *Are there enough people who can be trained – given the increasingly high uptake of solar PV, for example? How can we ensure that training gives sufficient weight to repair and maintenance?*

Group	Count
Yes (existing electricians and plumbers can be easily upskilled)	33
Yes – opportunity to recruit new installers	9
Yes but need to align with EU and US standards	1
No	7
Accredited training courses be obliged to include repair and maintenance	3
Increase engineering teaching at all levels and introduce degree in microgeneration	1
In-house training	1
Believe there are already enough installers	2
MCS accreditation should focus on repair and maintenance	1

The majority of responses to this question agree that there are sufficient people available.. With 55% agreeing that the current workforce of existing electricians and plumbers can be easily up-skilled.

Question 13: *How can we ensure that we capture the training needs of those installing these technologies in the commercial sector?*

Group	Count
Updating the material used	2
Have a module on commercial sized installations.	3
Ensure that installers are well trained	6
Open access to contracts	1
Have a further working group	1
Industry finance training	1
Sector consultation and involvement of manufacturers at an early stage	1
Clear differentiation between the different skills required for domestic and commercial installations	1

By working/liaising with Trade Associations/Training Organisations	2
Create a viable market	1
Consult them through MCS	4

A variety of responses were provided as to how we can ensure we capture the training needs of those installing these technologies in the commercial sector.

Question 14*: How can we ensure that design advice capacity is in place to meet demand projections?*

Group	Count
Independent and consistent	4
Training given to assessors	7
Be part/annex to the existing MCS scheme	6
Competent person's scheme - include design advice	2
Teach installers how technologies work together	4
Audit after installation	1
Recognise as a skill requirement and Create/design a design tool, course and accreditation	10
Industry consider business models – support proposal 2.19 in consultation document	2
Pooled levy on Green Deal providers	1
Working with appropriate body to develop a credible and affordable set of accreditations	1
Should consider making design advice more directly available – need practitioners not advisers who can deliver value for money	1
Forge stronger alliances with manufacturers with strongest R&D capacity	1
With website that illustrates how design advice can be presented in a way that allows self service	1
Already doing it	2
Seek best practice from other countries	1
Formation of a working group/governing body to oversee/to address this issue	2

There were a variety of responses provided to this question with majority of responses suggesting that either a design tool, training to assessors, or annex to existing MCS scheme be considered to help ensure design advice capacity is in place to meet demand projections

Question 15: *What are the interim solutions to ensure householders are given the right advice now?*

Group	Count
Better promotion	3
United Industry campaign	6
Through existing networks	1
A central body provide advice	1
Through Green Deal providers and their partners	1
Standard messages and clear provision of information available	6
Conduct more trials of installations help indicated future training needs	1
REAL Code – be primary means of protection for householders.	2
Advice provision online/websites	8
Good advice (independent) tools (MCS, Ofgem, EST, TAs, LA etc)	5
Advice of householders be part of MCS	6
Retain assessors	1
Spend more time with householders explaining the system	1
Follow up phone call	1
Some monitoring and auditing	3
Through EST (be equipped to provide advice)	4
Through EST/carbon Trust	3
CLG, LGA, LA	2
Certify advice providers with full liability if not registered	1
All regulatory requirements identified and information should come from regulatory bodies not companies engaged for profit	1
Realistic cost/benefit information to include feed in meter and associated infrastructure	1
Through legislation	1

There was a variety of suggestions for this question with a majority of responses highlighting that the way forward to ensure householders are given the right advice would be through websites/online advice.

Question 16: *How should this approach be modified for the commercial sector?*

Group	Count
Dependent upon type of commercial organisation	3
Design advice tools	3
No need to modify for commercial sector	12
Through advice from EST	1
Through trained professional bodies	3
Independent guidance document	1
Internet/websites	2

Using direct mail solutions in collaboration with utility companies and DECC	1
Audit installations	1
Market forces	1

For this question majority of the respondents agreed that no specific modification was required for the commercial sector “due to the professional nature of the commercial sector it is unlikely that the same level of free advice is required. We are finding that larger commercial companies are becoming increasingly engaged about their energy use, and are asking us for ways in which they can cut their energy use and carbon emissions”.

Question 17: *What further steps should be taken to ensure that appropriate training and knowledge-sharing reaches all those working on wider energy, construction and environmental issues?*

Group	Count
Establishing a coherent and consistent approach	3
Clear standards	1
Advice provision and on-line training tools	2
Build on good practice	1
Marketing/shows /conferences	3
Specialist publications	1
Lots of different industries all work together	4
Additional modules on training courses	7
Industries to share information/experience	7
Agree with proposal 2.24 in consultation document	1
See response to previous question	1
Through education i.e college/university / modules	4
Local Authorities role should be stressed	1
Websites	5
Through Govt departments and TAs	1
In-house training	1
Best practice club/hub	2
Trade press, utility companies hosting technology forums	1
Regional based advice services	2
None/current systems are working quite well	4
Through relevant trade bodies	1

There were a number of suggestions given to this question on what further steps should be taken to ensure that appropriate training and knowledge-sharing reaches all those working on wider energy, construction and environmental issues. However, majority of the stakeholders that responded to this question agreed that it was important for lots of different industries to all work together, including installers, manufacturers, architects, builders, mechanical engineers etc. Which could be facilitated through additional modules on training courses or in higher education courses.

Question 18: *What sort of market intelligence should industry and Government be collecting?*

Group	Count
Make best use of existing data	16
Collect evidence/data	8
Collect data/evidence that could contribute to Application guides	1
Number of installations /location of installations	8
Carbon savings achieved	3
Number of jobs created through FITs/RHI	3
FITs and RHI based data	3
Consumer experience survey/data - see where needs to improve	2
Current status of the market in the UK	3
Heat and Electricity combined	1
Product sales data	1
Data collected for risks i.e Legionella	1
Manufacturer data	1
Carry out surveys through LAs on renewable energy needs in their areas	1
Geographical location	2
Technology performance	4

28% of respondents to this questions suggested that Industry and Government should be making best use of existing data.

14% of respondents suggested that there is a need to collect evidence and data.

A further 14% suggested that Industry and Government should collect market intelligence on number of installations/location of installations:

> *"It would be useful for government to collect intelligence on the numbers of installations, locations of installations and carbon saved as a result of the microgeneration installations for all microgeneration technologies in a similar way that Ofgem do for FIT installations".*

and

> *"A short questionnaire could be integrated into the online FIT or RHI application to enable data to be collected in non-labour intensive way. This could facilitate data collection on size, location, type and cost of installations to feed into decisions on support levels and whether or not further action is required to promote uptake. It would also be useful for the industry for installers to collect post installation consumer satisfaction surveys as a requirement. The consumer survey could be a requirement of the second year FIT/RHI income. It would also be important for the information collected via the consumer surveys*

to be made publically available to ensure as many people can learn from past experiences as possible".

Question 19*:* ***How should this market intelligence be collected using existing networks and relationships such as trade bodies, MCS and Certification Bodies?***

Group	Count
Existing networks	8
Additional reporting requirements	2
Industry	1
Ofgem	15
Manufacturers	1
MCS (collect market intelligence from those on the MCS database)	14
See answer to previous question	1
Survey of people with +/- experiences	1
Standard report format to DECC	1
Seminars	1
Websites	1
Existing FIT and RHI admin arrangements	1
Yes and through smart metering	1
Certification bodies then government and independent body	1
Field Trials on running costs	1
Installers collect information and input into MCS data	1

A number of suggestions were given for this question with a close tie between Ofgem (29%) and MCS (27%).

Question 20: ***Do you agree that industry working with Government should update route maps and use them as a tool to support technology development?***

Group	Count
Yes	50
No	8

86% of stakeholders that responded to this question agreed that route maps should be updated. 14% of stakeholders didn't agree that they should be updated for a variety of reasons for example that route maps could stifle innovation.

Question 21*: What could Government and other parties do to ensure that the grid is ready to cope with impacts of an increase in microgeneration technologies, in particular heat pumps?*

Group	Count
Detailed trials of various technologies	4
Detailed trials of various technologies followed by DNO upgrades	1
Greater financial support	8
Invest in grid upgrade	2
Development of smart grids	6
Remote control of heat pumps (switch off during low/peak demand)	1
Market penetration data be shared	3
Decarbonise grid	1
Ensure common ground is established	3
Local authorities could work with DNOs to identify areas of high demand for high pumps	1
Changes in regulation/policy decisions	3
Roll out of smart meters	4
Close co-operation between DNOs and the heat pump industry	1
Provide a heat store when space capacity is available	1
Heat pumps be built with PV or CHP to reduce grid strain	1
Geographical location of where will be an increase	2
Seek advice from National Grid	2
Distribution network operators to select appropriate solution from set of alternative options	1
Costs associated with upgrading the grid be passed down to DNO not householders	1
DNO responsibility	1
DNOs and the microgeneration sector to work through independent organisations	1
Government investment/DNO	2

A number of examples were given from stakeholders that responded to this question as to what Government and other parties could do to ensure that the grid is ready to cope with impacts of an increase in microgeneration technologies, in particular heat pumps. From greater financial support, to roll out of heat meters to ensure that there are accurate measurements taken of the energy generated and used within the household. Some respondents suggested that a continued close co-operation between DNOs and the heat pump industry was required.

Question 22*: How can DNOs and the microgeneration industry work better together so that both sectors understand the relevant technologies, their impacts, and how to manage these impacts in a cost-effective manner?*

Group	Count
Greater support from Industry	7
Greater support from Government	7
Via the Technology Committee within MCS	1
Within the smart meter rollout	5
Better flow of information/communication	5
See response to previous question	1
Adequate representation on working groups/roundtable events	4
DNOs become accessible and willing to operate in commercial sector	4
Develop/change role of DNOs	4
DNOs and the microgeneration sector to work through independent organisations	2
By adopting systems wide approach	1
Already started working on this	1
Utilise trade bodies as a 'middle man' to keep DNOs in touch with industry and vice versa	1

A variety of examples where given to this question with a even spilt between the suggestion of greater support from Government or Industry.

Question 23*: How can heat pumps be rolled out at scale and integrated into a low carbon electricity system – what are the best ways of achieving this?*

Group	Count
Ensure incentives are right / cost effective	5
Consumers are aware/understand the technology	7
Price levels and other financial incentives (VAT reduction)	1
Trust in the technology	1
Appropriate insurance scheme	1
Economies of scale by local networks	1
Building regulations be tightened for off gas grid properties.	3
Industry to ensure that installation standards are maintained through MCS	2
Need to consider/include transitional products	1
Ensure heat pumps are 'network friendly' – soft start technology	3
No direct cost to the householder installing such equipment	1
Announcement of (ambitious and sustainable) RHI	3
Make heat pumps a more attractive option	1
Prevent ASHP roll out	1

Off-gas grid areas, so will reduce grid demand	2
Government put in place better scenarios	1
100% ECA for drilling equipment and Ground source heat pumps (sustainable energy solutions UK)	1
Are heat pumps the best technology	1
Develop via the Energy Network Association	1
Only be considered for very well insulated properties	1
Let technicians decide what's viable	1
Through new build	1
Heat pumps should only be rolled out in conjunction with high levels of insulation	1
Establish ENA Taskforce	1
Allow DNOs to dynamically manage them through smart grids	1
Improve heat storage to reduce load at peak times	1

A number of suggestions were given for the above question.

Question 24: *How can the controls and microgeneration industries work closer together to ensure that a systems approach becomes a reality?*

Group	Count
Result of Government Policy	4
Sector will see considerable growth	1
Through trade bodies	3
Minimum control measures in place for all RHI eligible installations.	2
Use of open interfaces between controls and appliances	3
Installers set the controls	1
Be regulated through MCS	1
Educate users	1
Be educated through independent body such as EST	1
Impartial advice	1
Improve 'controllers' and 'control systems' (as opposed to control)	3
Common Goals and Common Standards plus Smart Meters	2
Make controls accessible to all types of consumers (visually impaired etc)	1
By having a unified tariff	1
Requirement for a fully trained, qualified competent person throughout the process	1
Smart energy management be Green Deal measure	1
Regional advice centres be trained so can advise consumers on system operation	1

Flow of communication and understanding	1
Planning can have an input to steer progress	1
More use of expertise and peer reviewed research	1
Better training for installers to train consumers	2
Through code of practice	1
Introducing the smart grid sooner and providing a communication standard for all manufacturers to work with	1
Other	1

There were a variety of responses given to this question covering Government policy, trade bodies and controlled systems.

Question 25: *How should the industry, other stakeholders and Government tackle the need to raise consumers awareness of how heating systems can work more effectively?*

Group	Count
offering comprehensive guides to how heating systems work – written in plain English	8
Teach the consumer about the product once the new heating systems has been installed	4
Give realistic information on costs and potential savings	3
Through MCS	2
Through EST (impartial organisation)	3
Through Government	1
Through Trade association	1
Increase fossil fuel prices	2
Advice be disseminated as part of the Green Deal home energy efficiency assessment	4
Reliable website and telephone helpline (impartial)	7
Awareness programme to be rolled out alongside smart meters	3
National marketing campaign/ through TV i.e BBC	8
Smart energy management be a Green Deal measure	1
Set up a 'multi measure' industry group – with none biased basis	1
Have community voluntary groups – "Street Champions"	2
Using a network of regional advice centres	1

A number of suggestions were given to this question from offering comprehensive guides to how heating systems work to a national marketing campaign to help raise consumer awareness of how heating systems can work more effectively.

Question 26: ***As a means of future proofing buildings for microgeneration technologies, how can heating solutions that provide for hot water storage be encouraged?***

Group	Count
Part L Building regulations be changed to ensure the inclusion of hot water storage cylinder a requirement for all new build homes	17
Look at demand	1
Through regulation/best practice to produce compatible components/systems	2
Consumers be educated of benefits of hot water cylinders	6
Have a thermal store diagram built into SAP	6
Through the Green Deal	1
Change design	1
Zero carbon Homes and RHI should pull though storage	1
Build new buildings zero energy proof	1
By incentivising it	1
ECA/ tax breaks (for housing companies)	2
Training plumbers/suppliers availability/encourage install of twin coil cylinders/underfloor heating/large low temp radiators as standard when replacing	1
Encourage to maintain traditional heating installation in terms of future-proofing the building	1
Ban oil-fired and combi boilers – remove the non-renewable alternatives	1
Providing space to retro fit in new properties	3

38% of respondents suggested that as a means of future proofing buildings for microgeneration technologies Part L of the Building Regulations be changed to ensure the inclusion of hot water storage cylinder be a requirement for all new build homes.

With 13% suggesting consumers be educated of benefits of hot water cylinders and another 13% suggesting that a thermal store diagram be built into SAP.

> *"There needs to be a better understanding of what happens in a cylinder when hot water is being stored and used and possibly being fed by more than one technology. The problem really is providing adequate space for the storage and designing this feature into the building. Quite often SAP penalises new build where hot water storage is included. Leading to 'combi boiler' installations as an easier route to achieve required emission ratings. This needs careful assessment of the SAP parameters".*

And:

> *"The insertion of a thermal store diagram into SAP would provide a better incentive to provide for hot water storage. It would also be useful to consider how SAP encourages or*

discourages thermal stores. Currently SAP and Code for Sustainable Homes are pulling in different directions, with the Code for Sustainable Homes moving towards zero carbon homes by 2016, and SAP not giving sufficient incentives for renewable technologies. It will also be important to educate the consumer as to the benefits of thermal stores to drive demand, which in turn will drive the development and deployment of thermal stores".

Question 27: *What should the microgeneration industry do to take forward the development of storage technologies?*

Group	Count
It will increase once demand increases	3
Consider it as whole house approach	1
Announcement of RHI and/or development of FITs	2
Suitable R&D programmes/ Build it at early stage of designing a building	9
Microgeneration Industry work with energy companies /battery storage providers etc	9
Consider international options	1
Carry out a risk assessment i.e Legionella effects	2
Proper site assessment by installers	1
Make it attractive within EPC calculation and cost effective installation	1
Focus on insulation first for quick wins	2

To help take forward the development of storage technologies majority of responses to this question suggested that either suitable R&D programmes be considered or that the microgeneration industry work with energy companies.

Question 28: *What more should the industry be doing to promote Flue Gas Recovery Systems to increase take up?*

Group	Count
Data required to show it is worthwhile /requirement to ensure it is efficient	2
Be funded through CERT to kick start it	1
Educate users/suppliers	2
Increase fossil fuel prices	1
Building regulations	1

We think it meets Green Deal rules	1
Expand scope of MCS	1
Get them specified using CERT as a cost to end user enhancer	1
This technology only relevant to old boilers, promotion of this technology should decrease rather than increase	2
Conduct field trials – similar to EST Heat Pump Trials	1
Bring in emissions law	1
Energy companies can promote this as part of boiler replacement programmes	1
Viewed within context of 'whole house approach' package	1
Provide information on benefits and install flue gas recovery as common practice	1
This technology should be standardised by regulation once it has been proved that there is sufficient benefit outweigh the additional manufacturing and installation costs	1
Be included along with heat storage systems and deployed in a similar way	1
Promote (Green Deal) with Energy Ratings/SAP	2
Use stirling Engines to generate electricity	1

There were a variety of suggestions given on what more the industry should be doing to promote Flue Gas Recovery Systems to increase take-up. However, the majority of stakeholders that responded to the consultation did not comment on this question.

Question 29: *How can you help Government disseminate the results from best practice and exemplar projects?*

Group	Count
Through development of case studies	25
Encourage further trials	2
Government hold quarterly workshops with industry to help analyse the data collected – via Industry Contact Group	2
Working with Agencies, industry etc to market/promote	4
Through zero carbon homes	1
Already doing this	11
Through EST (impartial organisation)	2
Collation of information	2
Online /websites	7
Councils and Housing Communities	1
Trials be independently designed and should include a wide representation from industry to feed into trials	1
Results independently verified, and disseminated by the government	1
National centres for all renewable technologies	1

Use MCS certification bodies	2
Helping the Gov. manage information is beyond the scope of this Consultation	1
Through the manufacturers	1
Through Building control membership network that incorporates all Local authorities in England and Wales	1

A number of suggestions were provided for this question as to how stakeholders can help Government disseminate the results from best practice and exemplar projects with 38% suggesting that this be provided through development of case studies.

17% of respondents had mentioned that they are already gathering information, and regularly disseminate best practice and exemplars to its members and would be happy to share this information with DECC.

Question 30: *Do you agree that MCS is the best route for providing a directory of installation companies? If not what alternative do you suggest?*

Group	Count
Yes	58
No	12
Directory run by independents – EST	1

82% of stakeholders that responded to this question agree that "MCS is the best route for providing a directory of installation companies. Given that MCS is already established as providing a directory of installation companies it would make sense to retain continuity".

17% however, did not agree as they feel that there are already Competent Person Schemes providing data to a central website which could be extended to include the microgeneration technologies.

Question 31: *Do you agree that installation companies removed from the MCS scheme for malpractice should be clearly reflected in the directory of installation companies? Please provide evidence to support your answer?*

Group	Count
Yes	53
No	2
Just removed not reflected in directory	2
Align to equivalent industries	1

91% of respondents strongly agree that installation companies removed from the MCS scheme for malpractice should be clearly reflected in the directory of installation companies. As this will

"ensure that consumers are aware of 'cowboy' installers and consumer safety is a priority. It will also ensure good installation companies are clearly identifiable and rewarded as such".

Question 32: *What is the best way of making sure that microgeneration and Green Deal advice provision work together?*

Group	Count
Whole house approach/Green Deal household energy assessment	26
Include microgeneration within the Green Deal finance mechanism	3
Need to align messages which are provided to consumers	1
Green Deal advisors	2
Need for a clear definition of what technologies are able to receive funding under the Green Deal and which are not.	2
More in depth advice required	2
Regulation by a governing body, such as MCS	1
Publish all data	1
Government invest in free to use assessment tool via Community Energy Online website.	1
EPCs be updated to cover microgeneration technologies	2
Through common branding	1
Impartial advice training to be a NOS for Green Deal Advisor	1
Align with separate funding	1
Ensuring that can be accessed simultaneously from one source	1
Government departments involved act in unison	1
Cross departmental co-allition and think tank sharing	1
Ensure supply chains are consulted	2
Keep it simple	2
Online system using existing infrastructure	1
Energy companies be more involved	1

A variety of suggestion were given by stakeholders as to the best way of making sure that microgeneration and Green Deal advice provision work together. With 49% of stakeholders that responded to this question agreeing that a 'whole house approach' would be the best way forward:

> *"It is important to ensure that a whole house survey is undertaken at the point that Green Deal Finance is being discussed, which advocates energy efficiency first, followed by Microgeneration. Microgeneration seems to be the best sale route as it makes the Green Deal package more appealing to consumer".*

Question 33: *What role should MCS installation companies play in providing objective advice on which technology to install?*

Group	Count
Independent – with alignment to certain technologies/manufacturers	10
Truly independent – no alignment to technologies or manufacturers.	4
Creat a Code of Conduct	2
Create a rating scheme for products	2
MCS be a 'one stop shop' and their databases clear as who and what is certified	13
Publicise online tools such as EST	1
Improve advertising of MCS	2
Installation companies must be involved	1
Only fit technologies in suitable homes	1
State if selling own services or are independent	1
Input via bodies and regulatory groups	2
Would require a "professionalization" and regulation of the advice they provide	1
Able to advise in their own areas only – cannot rely on them	4
None - MCS installation companies not best placed to provide impartial advice	6

Two areas that came out top compared to the number of suggestions that were given as to what role MCS installation companies should play in providing objective advice on which technology to install were "MCS be a one stop shop" (27%) and "independent – with alignment to certain technologies/manufacturers" (20%)

Question 34: *Do you agree trade bodies should collate information on the advice their respective members are providing? If not, what alternative do you suggest?*

Group	Count
Yes	33
No	14
MCS collate information not TAs	5
Ofgem	1
Accreditated advisors have a link to DECC	1

61% of stakeholders that responded to this question agreed that trade bodies should collate information on the advice their respective members are providing.

Question 35*: Do you agree that such information sheets would be valuable? Please provide evidence to support your view.*

Group	Count
Yes	45
No	8
Findings from EST's heat pump trial	1

83% of respondents agree that information sheet would be valuable.

Question 36*: Who do you think is best placed to write and disseminate them? Please provide evidence to support your view.*

Group	Count
Manufacturer write/disseminate them	14
Installer disseminate	5
Independent advice providers/organisations	4
Green Deal assessors/advisors disseminate	1
MCS	5
EST	6
Ofgem	1
Place on MCS website	1
Manufacturing companies best placed to write sheets/ installers, MCS, EST and trade bodies best placed to disseminate	1
Public sector organisations	1
National Energy Action	1
SHIFT (which works with Housing Associations)	1
DECC	4
Via Trade Associations	5
Local Authorities	1
Certification Bodies	1
The accredited agencies	1
All of them	2
Industry	1
Industry sector working group together with manufacturers	1

A number of suggestions were provided to this question with 25% suggesting that Manufacturers would be better placed to write information sheets with a mixed response as to who would disseminate, which varied from manufacturers to installers to Green Deal assessors etc.

Question 37: *What aspects of the Green Deal Framework will need to closely align with the microgeneration framework set out in this consultation document?*

Group	Count
Difficult to suggest yet /details of Green Deal uncertain	5
Green Deal marketing	2
Insurance schemes be considered	1
All of it	2
Green Deal household energy assessment (discuss all solutions)	5
Improvement in energy efficiency	3
Whole house approach	9
Amongst energy policy current and future.	1
Green Deal financing and FITs and RHI	4
Green Deal 'golden rule'	1
Micro heat and power	1
Energy hierarchy	1
Approved technologies and installers will need to be consistent across the two frameworks	1
Make use of existing MCS	2
Skills and training	1
One stop shop for impartial advice	2
Design advice	1
Advice on products	2
Council and community systems and flats seem ideal for larger CHP installations	1
Geographical areas with overlap	1

Once again a variety of suggestions were given for this question with the highest number (16%) of stakeholders suggesting a 'whole house approach'.

Question 38: *Can you illustrate with examples the potential opportunity that the 'community energy' sector presents?*

Group	Count
Number of respondents that agree community sector presents potential opportunity	17

17 stakeholders that responded to this question agree that the 'community energy' sector presents potential opportunities. Below are a couple of quotes from stakeholders.

> *"If a community is able to be involved with a scheme, the scheme is more likely to have longevity and enthusiasm within the community".*
>
> and:

"We firmly believe in the power of communities to engage individuals with their energy use and to spread the message of energy saving and microgeneration".

another respondent mentioned that:

"With some incentives, local authorities and Housing Associations could see community energy as a potential opportunity. This would also apply to remote or village communities. The main incentive would be the liability to make some money to fund other activities or projects from selling energy back to the grid".

Some stakeholders mentioned that they have:

" Been involved in the early stages of commercial projects but have highlighted that often the process can be lengthy and time consuming".

However one respondent mentioned that:

"Community sized projects are very expensive and need to be of a certain scale to be cost effective".

Question 39*:* ***What do you feel are the non-financial barriers to developing community energy?***

Group	Count
Limited UK design and installation resources	1
Planning complexity/constraints	17
Delivery infrastructure	1
System reliability and on-going maintenance	3
Shortage of skills	2
Lack of consumer awareness /knowledge	13
Cultural barriers	5
Lack of finance	9
Bureaucracy	3
No central Government policy	1
Time and access to specialist knowledge	4
Lack of expertise / project management	3
Public procurement rules	1
Ownership issues	1
Resourcing local authorities to help deliver	1
Landlord tenant obligations	2
Grid upgrade (for retrofit community energy developments)– which is very costly and time consuming.	4

A number of non financial issues were mentioned as barriers to developing community energy with the most common barrier being identified as planning (24%) followed by lack of consumer awareness/knowledge (18%).

APPENDIX A

List of organisations and individuals that responded to the consultation of the Microgeneration Strategy from 22 December 2010 to 16 March 2011.

Action with Communities in Rural England (ACRE)	Aeltari Development Ltd	Alan Robinson
AlertMe.com Ltd	Ampair	APAW
Ascertive Group Limited	Banks Group	BEAMA
Bill Andrews	Bluenergy Microhydro Installations	BRE
Brighton Pavilion	British Drilling Association	British Flue and Chimney Manufacturers Association (BFCMA)
British Gas	British Hydropower Association (BHA)	British Hydropower Council
British Small Wind Association	Calor Gas Ltd	Caroline Lucas – MP
CE Electric UK	Ceramic Fuel Cells Limited	Ceres Power
Changeworks	Chris Massey	Clodock Mill and Herefordshire Hydro Group
CO2Sense	Combined Heat and Power Association (CHPA)	Consumer Focus
Construction Products Association	CPREssex	CWP Ltd
David Stockdale	Derek Monckton	Each For All Ltd

Eaga	EarthEnergy Ltd	Easy MCS Ltd
EC Energy Solutions Group Ltd	Ecotricity Group Limited	Econergy Ltd
Ecowave Systems Ltd.	EDF Energy	The Electrical Contractors' Association (ECA)
Electricity North West	EMC-Engineering	Empower Community
Energy Networks Association	English Heritage	Environmental Protection UK
E.ON UK	Equinox Energy	ESTA (Energy Services and Technology Association)
Essex County Council	Forest Heat Energy Ltd.	Gareth Paxton
Gemserv Ltd	Good Energy	Green Energy Net Ltd
Greenheat Systems limited	Ground Source Heat Pump Association	Hampshire County Council
Hasker Architects	Heating and Hotwater Industry Council (HHIC)	Hertha Taverner –wood
HETAS	HEVAC	HSE
HVCA	ICE Renewables Ltd	ICOM Energy Association
Inspirit Energy	John Higgs	Kingspan Renewables
LABC	Liverpool City Council	Local Government Association
Longhurst Housing Group	Mark Group	melin inc

Micro Hydro Association	Micropower Council	Mitsubishi Electric
Morshe Kinn	Narec	The National Federation of Roofing Contractors
NEA	NIBE Energy Systems Ltd	Nu-Heat UK Ltd
oddy builders limited	OFTEC	Parabel AG
Paul Spare	Penwith Housing Association	Peter Hirst (MP)
The Power Exchange	P.P Services GB Ltd	Paul Stewart
The University of Reading	Redcar & Cleveland Borough Council	Renewable Energy Association
Renewable	Renewables UK	River Energy Networks
R & M Services	Roger Holden	RWE
Sevenoaks Systems Limited	Scottish Government	Scottish Microrenewables Working Group
Sdf	Shecco	Smart Eco Power Systems
Solarsense UK Ltd	Solar Twin Ltd	South Somerset Hydropower Group
SP Energy Networks	SSE	Stour and Vale Hydro
Summit Skills	Sustainable Energy Partnership	Sustainable Energy solutions UK
TCPA Town and County Association	Tom Jones	Transition Town High Wycombe

UKBCSE	UKLPG	Urban Forum
Utilisoft Ltd	Valid League	WCH systems
Wessex Installations Ltd	Which?	Windtricity
Wolseley UK	Wycombe Environment Centre	Zenex Energy
1st Sunergy		

Department of Energy & Climate Change
3 Whitehall Place
London SW1A 2AW
www.decc.gov.uk

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