

Explanatory Memorandum to The Town and Country Planning (General Permitted Development) (Amendment) (Wales) Order 2009

This Explanatory Memorandum has been prepared by the Department for Environment, Sustainability and Housing and is laid before the National Assembly for Wales in accordance with Standing Order 24.1.

(a) Description

1. This instrument adds a new Part 40 to Schedule 2 to the Town and Country Planning (General Permitted Development) Order 1995 ("GPDO"). It grants planning permission for the installation of specified types of micro-generation equipment on or within the curtilage of a dwelling house or flats where this would not have a proven impact beyond the host property. It will lift unnecessary planning controls, which could discourage the take-up of micro-generation technologies.

(b) Matters of special interest to the Subordinate Legislation Committee

2. None

(c) Legislative Background

3. The power to make the amending order in relation to permitted development is provided by sections 59,60, 61, 74 and 333(7) of the Town and Country Planning Act 1990 ('the Act').
4. Section 59 of the 'Act' requires the Secretary of State to make a development order. A development order can grant planning permission for the development specified in the Order. The Town and Country Planning (General Permitted Development) Order 1995 (GPDO) as amended specifies various types of development that are automatically permitted (Section 58 of the 'Act') without the need to make a planning application and obtain an express consent.
5. The making of amendments to the GPDO is a function of the Welsh Ministers under powers conferred by sections 59, 60, 61, 74 and 333(7) of the Town and Country Planning Act 1990 c.8; to which there are amendments not relevant to this Order. The functions of the Secretary of State under sections 59, 71, 74, 78 and 33(7) were, so far as exercisable in relation to Wales, transferred to the National Assembly for Wales by article 2 of and Schedule 1 to the National Assembly for Wales (Transfer of Functions) Order 1999, S.I. 1999/672: see the entry in Schedule 1 for the Town and Country Planning Act 1990 (c.8) as substituted by Article 4 of, and Schedule 3 to, the National Assembly for Wales (Transfer of Functions) Order 2000 (S.I. 2000/253). The functions were transferred to the Welsh Ministers by paragraph 30 of Schedule 11 to the Government of Wales Act 2006 (c.32), the functions being relevant Assembly functions as defined in paragraph 30(2).
6. Negative Resolution: Section 333 of the 'Act' provides that the standard procedure for statutory instruments under the Act is a negative resolution procedure. There are some exceptions but they do not apply in this instance.

(d) Purpose and intended effect of the legislation

7. Micro-generation is the small-scale production of heat and/or electricity from low carbon sources. Some micro-generation technologies produce energy using renewable resources such as solar, wind or biomass (e.g. wood) and some, like combined heat and power (CHP), may use fossil fuels but are much more efficient than conventional systems.
8. The current uptake of domestic micro-generation is estimated to be very low. In recent times¹, the average number of planning applications received per authority, has been around: 0-3 per year for wind technologies; 2-4 per year for PV and solar thermal panels; and negligible records of other forms of micro-generation such as heat pumps and hydro. Micro-generation offers a practical response to climate change, national energy security and energy poverty. The Assembly Government's policies support the encouragement of micro-generation as a realistic alternative or supplementary energy generation source for the householder, the community and for small businesses.
9. However, the regime governing the need for planning permission for micro-generation equipment can act as a barrier to the wider take-up. Although there are already significant permitted development rights for householders these were not developed with applicability to micro-generation in mind. As there is no express provision for micro-generation it can be unclear as to whether something is permitted development or not. As a result, individual local authorities interpret the regulations differently. In addition the process of seeking planning permission can be complex, costly, time consuming and uncertain.
10. The Assembly Government's objective is to promote the take-up of domestic micro-generation by classifying categories of micro-generation equipment as permitted development under the GPDO. Equipment falling into the category of permitted development may be installed without first requiring a planning application. While the Government wants to encourage the widest possible take-up of micro-generation, it is also concerned to ensure that the right levels of control are retained to protect the reasonable interests of neighbours, the environment and the wider community.
11. By granting planning permission for generally minor and uncontentious types of development, permitted development rights reduce cost and delay to those wanting to carry out permitted work and avoid planning authorities having to consider a large number of applications to which they would routinely grant approval.
12. The intended effects of the proposals include:
 - the reduction in cost to the householder of obtaining planning consent (the perceived barrier to take-up);
 - potential energy savings to householders (and commensurate reduction in

¹ Figures taken from the wider GPDO and micro-generation study commissioned by the Welsh Assembly Government and Department for Communities and Local Government to look at proposals for amendments to the guidance; this included a survey of 22 local authorities and national park authorities. It should be noted that there is a possibility that some households have installed micro-generation technologies such as solar panels without planning permission and therefore not recorded in this survey.

demand from traditional non-renewable sources);

- wider direct and indirect effects including a reduction on the burden to local planning authorities;
- stimulation of the market demand for renewable technologies, increased investment within the industry and efficiency improvements in micro-generation technology;
- increased uptake of renewable sources of power relative to non-renewable sources leading to knock on effects on carbon savings;
- contributing towards national (and local) targets for renewable energy;
- increased energy security.

13. More generally, these proposals represent a deregulatory initiative and are in line with the government's objective of reducing the regulatory burden on households and industry and to improve the overall efficiency of the planning system.

(e) Implementation

14. These regulations were made on 9th August 2009 and are intended to come into force on 1st September 2009.

15. There are no legal or other implications for the Assembly Government should the dates not be met.

16. England has introduced GPDO amendments relating to some of the micro-generation technologies (solar panels, ground/water source heat pumps and flues for bio-mass/combined heat and power boilers). The changes did not cover domestic scale wind turbines or air source heat pumps, which needed further consideration.

(f) Consultation

17. Consultation was undertaken on the proposed revisions to the GPDO in August 2007 for 14 weeks. Details can be found in the following Regulatory Impact Assessment.

(g) Regulatory Impact Assessment

18. This is a Regulatory Impact Assessment of the likely impacts of proposals to amend the Town and Country Planning (General Permitted Development) Order 1995 (the GPDO) to give permitted development rights to categories of micro-generation equipment.

• Options

19. Three options were considered:

- (1) Do nothing
- (2) Permit all micro-generation technology
- (3) Permit micro-generation technology where the impact is acceptable

20. The option testing process does not take into account external events that might affect the take up of micro-generation technologies (such as an increase in the relative price of non-renewable fuels) or different methods of intervention to address the overall objectives set out in UK Government policy (such as financial incentives for households, although we note that grants to help install technologies are already available).
21. (1) Do nothing
Under the present regulations all domestic wind turbines require express planning consent while, in the absence of clear statutory provision for them, Local Planning Authorities have been free to decide for themselves whether or not to require an application for other technologies. The 'do nothing' option assumes that this situation remains, but that unless indicated otherwise, planning authorities insist upon a planning applications for all categories of equipment covered by these proposals.
22. (2) Permit all micro-generation technology
Option 2 would provide 'full exemption' for all technologies defined as 'micro-generation' in Section 82 of the Energy Act 2004 – that is all electricity generating equipment with a capacity of less than 50 kilowatts and all heat production technologies with a capacity of less than 45 kilowatts thermal would be treated as permitted.
23. (3) Permit micro-generation technology where the impact is acceptable
The GPDO would generally permit domestic households to install micro-generation without applying for planning permission subject to limits in respect of size, positioning, noise etc to control impacts on neighbours and the wider community. To reflect different levels of impact, tighter controls would exist in conservation areas and World Heritage Sites.

• **Benefits**

24. There are four main categories of quantified benefit, which will be examined in turn:
- (i) Savings from reduced cost of planning applications
 - (ii) Fuel cost savings
 - (iii) Reduced carbon emissions
 - (iv) Energy security
25. (i) Savings from reduced cost of planning applications
Making a planning application incurs the following costs:
- Direct cost: the planning fee
 - Indirect costs: transaction costs such as professional fees, production of scaled drawings etc.
26. If the requirement to seek planning permission were removed these costs would no longer be incurred. The saving per application would be as follows:
- Planning fee is £159
 - Transaction cost is £725²

² Based on the PwC Administrative Burdens Measurement Project. The transaction cost of a minor application was calculated as £1450. It was assumed that a householder consent would cost half of this, or £725.

This produces a saving of approximately £880 per installation.

27. Average estimated savings for individual householders can be used to compute aggregate savings to households. The Energy Savings Trust (EST) has published detailed forecasts for England and Wales of the overall up-take of the new technologies. For the categories of development for which consent is now required EST's estimates are as follows:

Year	Wind	Solar Hot Water	PV	Hydro	GS heat pumps	Total Installed Units
2009	1,025	51,071	2,402	334	2,250	57,082
2015	48,599	51,071	30,751	519	100,838	231,778

28. These forecasts of the cumulative totals for each technology may now be considered rather low. They are based on the assumption that there would be no support or interventions to promote micro-generation whereas intervention has already commenced. Also the forecasts take no account of the publicity that has surrounded some significant announcements with regard to climate change and on energy policy or of the high profile mass marketing by major domestic retailers of the new technologies. There is strong anecdotal evidence that increased public awareness is leading to more rapid take-up than EST had initially anticipated.
29. EST's forecasts do not distinguish between installations on existing buildings for which an application is required, and those on new buildings which it may be assumed will be included as part of the planning application that grants consent for the development as a whole. On an annual basis new property represents only about 1% of the housing stock on average. However given increasing low-carbon requirements for new buildings their contribution to the up-take of micro-generation technologies could be disproportionate. Given the unpredictability of future growth in take-up on the one hand and uncertainty over the discount for installations on new dwellings on the other the EST figures have not been adjusted.
30. Table 2 provides estimated forecasts of the growth in the number of installed units of micro-generation equipment in Wales based on the overall proportion of UK households located in Wales (c5%):

Year	Wind	Solar Hot Water	PV	Hydro	GS heat pumps	Total Installed Units
2009	51	2554	120	17	113	2855
2015	2430	2554	1538	26	5042	11590

31. However many micro-generation installations are already allowed as permitted development. The following table, based on research by Entec, shows the share of applications for each technology that do not require planning permission.
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Table 3: Share of applications allowed as permitted development.				
Wind	Solar Hot Water	PV	Hydro	GS heat pumps
0%	90%	50%	0%	100%

32. The take-up forecasts in table 2 can then be adjusted once more to produce the number of installations requiring planning permission.

Table 4: Number of micro-generation installations requiring planning permission						
Year	Wind	Solar Hot Water	PV	Hydro	GS heat pumps	Total Installed Units
2009	51	2299	60	17	0	2427
2015	2430	2299	769	26	0	5524

33. By applying the saving per installation of £880 to the number of cases that would otherwise have required planning permission in table 4, cumulative savings for option 2 can be calculated as follows:

Table 5: Cumulative aggregate Savings to 2015 against 'Do nothing' Option (£m)						
	Wind	Solar Hot Water	PV	Hydro	GS heat pumps	Total saving against 'Do Nothing' Option
Option 2	2.1	2	.7	0	0	4.8
Option 3	<2	<2	<.6	0	0	<4.6

34. On this basis Option 2 produces savings of £4.8m up to 2015. Because we do not know the number of applications in conservation areas it is difficult to estimate the savings under Option 3. Some installations of micro-generation technologies that occur within conservation areas will still require planning permission as will wind turbines and other proposals above the various thresholds. Therefore less householders would make savings under Option 3 and the aggregate savings from reduced planning applications will be lower under Option 3.

35. Savings from introducing similar changes in respect of some of the technologies (solar panels, heat pumps, micro combined heat and power and biomass) in England have been estimated to average between £1.4 and £2.4m per annum. This assessment will underestimate the savings from reduced planning applications as it does not take into account the increase in micro-generation units that occur from other reasons apart from permitted development reform. There are many reasons to expect an increase in micro-generation take-up, including increasing awareness of climate change, increasing fuel prices and the Assembly Government's micro-generation strategy. Planning applications in Wales generally average about 5.5-6% of the numbers in England. This would suggest that even without significant increases in take-up the average annual savings to householders from a limited range of the technologies involved of between £77-£144k or £0.6m -£1.1m over the period to 2015.

NB These estimates should be treated with caution they give no more than a broad indication of the possible order of savings.

36. (ii) Fuel cost savings

If households get some or all of their energy requirements from micro-generation technologies then their fuel bills would be reduced. However these savings are only relevant for those households that install micro-generation technologies as a consequence of removing the requirement to obtain planning permission. Fuel savings will depend on the future price of energy and have to be considered in relation to the cost of installing the relevant technology. Since option 2 produces the highest savings it is likely to boost take-up the most. Therefore the savings from reduced fuel bills are likely to be highest.

37. (iii) Carbon savings

Micro-generation provides a more environmentally sustainable form of energy production than non-renewable sources. A greater use of this technology would lead to lower emissions of carbon dioxide. However just as with reduced fuel bills, these savings are only relevant for those households that install micro-generation technologies as a consequence of removing the requirement to obtain planning permission. Additionally it is necessary to account for the embodied energy arising from the manufacture and installation of the technology.

38. Since option 2 produces the highest savings it is likely to boost take-up the most. Therefore carbon savings are likely to be highest subject allowing for embodied energy costs. Clearly if enhanced take-up results in UK suppliers being unable to fulfil market demand resulting in increased imports the embodied energy costs associated with transport will be higher.

39. (iv) Energy security

Micro-generation can contribute positively towards renewable energy targets, increasing the overall stock of UK energy supply and adding to long term energy security. Option 2 represents least constraints to development resulting in higher uptake and therefore the greatest effect.

40. Benefits to the Micro-generation Industry and Secondary Benefits

The increase in demand for micro-generation units will benefit firms that produce and install micro-generation units. This has the potential to boost investment in micro-generation leading to efficiency improvements. This could further benefit consumers and the environment as prices fall, output increases and embodied energy costs decrease. Any price falls will depend on the capacity of the industry and the structure of the market.

• **Costs**

41. It is more difficult to place a monetary value on the costs of removing the requirement to seek planning permission for the installation of micro-generation technologies. This is because many of the costs concern non-marketed goods such as: landscape, noise pollution and the environment. Because these goods are not bought and sold in conventional markets it is very difficult to put a money value on them.

42. Costs to conventional energy providers
If more households get some or all of their energy requirements from micro-generation technologies there will be a reduced demand for energy from other sources. This imposes costs on more conventional energy providers in terms of lost business. However as a proportion of the total conventional energy market these reductions in demand will be small.
43. Landscape and amenity
Specific planning permission provides an effective control on the location and by implication visual impact and amenity of the development domestic of micro-generation. Removal of planning control may result in some micro-generation being developed at inappropriate locations, such as conservation areas and World Heritage Sites (option 2).
44. Option 3 protects frontages in conservation areas and World Heritage Sites so helps to mitigate this potential impact. There will be some limited impacts on the landscape. Solar will almost always be installed on a roof and given that it will not be permitted to project more than 200mm from the plane of the roof there will be little change to the roof's shape. Whether there is an adverse impact in terms of the contrast between solar paneling and the more traditional roofing material is a matter of personal opinion. As the main units associated with biomass and combined heat and power are likely to be located in the property any impact will be down to the flue part of the system. Given that many properties already have flues, TV aerials or satellite dishes any additional impact will be minimal. Heat pumps are not likely to be visible at all externally once installed.
45. Biodiversity
The Assembly Government must have regard to duties under Section 62 of the Environment Act 1995, Section 85 Countryside and Rights of Way Act 2000, Conservation (natural Habitats etc) Regulations 1994. The consultation exercise explicitly sought evidence as to whether domestic scale micro-generation technologies have an impact on protected species. There were very limited and conflicting responses. The Countryside Council for Wales recommends that the proposals proceed but that a 10-year monitoring programme is established with a commitment to review the proposals in the light of the results. This will be a cost of implementing the changes.
46. Increased need for enforcement and regulation
The need to obtain planning permission provides an effective way for local planning authorities to control development taking account of the views of neighbours and the community. Option 2, removal of all planning control for householder micro-generation would result in some installations being made with little consideration for the impact on neighbours and the wider community in terms e.g. of noise and visual nuisance. This may lead to complaints from neighbours or surrounding occupiers as well as enforcement (improvement) notices served by environmental health departments of local authorities. These effects would result in an increase in costs to the local authority dealing with the enquiry/procedures and may off set some potential monetary cost savings associated with options 2 & 3.

47. Option 3, sensitive increases in permitted development rights could still lead to enquiries/complaints from neighbours or surrounding occupiers as to whether something is acceptable. However, given that the permitted development rights have been drawn up with a view to minimising the impact on others and that what is permitted is subject to a clear and simple set of rules councils should be able to meet the enforcement requirements through their existing enforcement teams.

48. Summary of costs and benefits

Table 8 below summarises the results of the cost-benefit analysis.

Table 8: Summary costs and benefits		
Option	Benefits	Costs
Option 1 Do Nothing	<ul style="list-style-type: none"> • No change. 	<ul style="list-style-type: none"> • No change.
Option 2 Permit all micro-generation	<ul style="list-style-type: none"> • £4.8m householder saving to 2015 from not having to obtain planning permission • Reduced fuel bills • Reduced carbon emissions • Increased energy security. 	<ul style="list-style-type: none"> • Possible visual amenity costs, particularly in conservation areas. • Possible noise pollution costs • Costs to conventional energy providers.
Option 3 Permit all micro-generation except in conservation areas.	<ul style="list-style-type: none"> • Less than £4.8m householder saving to 2015 from not having to obtain planning permission • Reduced fuel bills. • Reduced carbon emissions • Increased energy security. 	<ul style="list-style-type: none"> • Possible visual amenity costs • Possible noise pollution costs. • Costs to conventional energy providers.

49. As required by the Race Relations (Amendment) Act 2000 we have also examined whether any of the options would affect any groups or communities (e.g. black and ethnic minority [BME] groups) differentially. We have concluded that they would not. It is not considered that any of the options has a disability or gender equality impact or an impact on human rights.

50. Small firms impact test

The Micropower Council, which represents the industry and which is still characterised by smaller firms, were closely involved in steering the research output that informed the preferred option. While they are keen for action to be taken to facilitate the take-up of micro-generation, they are also keen to ensure that suitable restraints are put in place so as to prevent development that could impact adversely on others and therefore undermine the acceptable use of these technologies.

51. There are clearly a number of different types of small firms that may be affected (in terms of demand for goods and services) as a result of an increase in uptake of micro-generation technologies at domestic locations. In Option 1, the do nothing approach, there are a number of small firms that may be involved such as surveyors/consultants or architects/drafting firms who may provide advice about or drawings for planning applications. In Option 2 and, to a lesser extent, Option 3 there may be a reduction in demand for these small firms however householder

applications for micro-generation installation currently make up less than 1% of all householder applications and the overall impact on these industries should therefore be small.

52. Equally with increased permitted development rights there will be a potential increase in demand for micro-generation units – having a knock-on effect on the supply chain, such as manufacturers, suppliers (including firms such as biofuel feedstock producers) and installers. Amendments have been made to the original proposals that would increase the opportunity of some manufacturers to have their 'current specification' equipment installed without the need for planning permission. For example marginal increases have been made in solar panel thickness. This may increase take-up and/or avoid householders selecting certain models that meet the permitted thresholds. It could increase the efficiency of installations with benefits for householders and climate change but at the same time might reduce work for consultants and the income of conventional energy providers.
53. The Federation of Small Businesses has indicated that it has 10,000 members in Wales with 30% working from home whose businesses could benefit indirectly from increased permitted development for micro-generation. The Federation has identified security of supply as a priority for small businesses and stresses the importance of locally produced energy in this regard. Whilst supporting greater take-up it accepts the need to avoid negative impacts on small businesses in the tourism sector. The Small Business Service were consulted as part of this process and acknowledge our approach and findings.
54. The sectors most likely to be affected by the proposals are:
 - Households wishing to purchase microgeneration technologies through reduced planning costs.
 - Microgeneration equipment manufacturers, installers and retailers as a result of greater demand as barriers to take-up are removed.
55. There may also be secondary effects to:
 - Planning services/staff at local authorities (e.g. need to obtain training to better understand implications of proposals);
 - Local authority department(s) that deal with enforcement relating to nuisance (e.g. if greater number of complaints are received from neighbouring households);
 - Non-renewable energy suppliers – power generation, oil/gas companies as well as other indirect supply chain effects (e.g. experience reduced demand as barriers to uptake are removed); and
 - Neighbours and surrounding occupiers. (eg potential impact from noise and/or vibration or loss of visual amenity).

• **Competition assessment**

56. The possible competition impacts of the options within this review have been assessed. The approach adopted is as set out by the UK Government's Cabinet

Office³, referring in turn to more detailed Guidelines for competition assessment set out by the Office of Fair Trading⁴.

57. The assessment has been undertaken through applying the ‘competition filter’ set out in the OFT’s Guidelines and a more detailed investigation into key specific issues where any competition effects may be likely to arise. However, it has not been practicable to undertake a full, detailed competition assessment across all affected markets. Therefore, the likely competition impacts have been assessed in mainly qualitative terms based on an understanding of the affected markets, the current market structure and nature of competition and the likely positive and negative impacts of the possible policy measures. The analysis has been driven by the availability and detail of the data and information. Given that the illustrative measures considered in this report are not finalised and that any measure that is taken forward would be subject to a full RIA, the competition assessment should be considered preliminary.
58. Consideration has been given both to effects upon competition in the UK (relating to potential reductions in market distortions) and to effects upon UK competitiveness. For the latter, the analysis relates to the potential for economies of scale in production for UK firms as compared to those in other EU firms and also in non-EU firms. In both cases, the results of improvements in the economies of scale in production may result in more activity (and knock-on job creation) in the UK. In the subsequent sections, consideration is given in turn to competition issues and the question of potential impacts on competitiveness.
59. Competition effects
An assessment of the potential competition effects of the options has been undertaken. The main conclusions that can be drawn at this stage:
- Household electricity and gas are supplied mainly by large energy supply companies. The options discussed in this RIA section are likely to have relatively negligible effects on their operations. If uptake of domestic micro-generation were to rapidly increase, however, this may potentially result in increasing activity in this sector from such companies (indeed, a number of major energy supply companies are already active in the micro-generation industry). Furthermore, increased uptake of micro-generation may provide price competition with the more conventional fossil fuels.
 - Fewer restrictions to planning regulation are likely to make micro-generation products more competitive. This in turn may allow these companies to benefit from economies of scale in their production techniques with greater mechanisation and worker productivity. The result may be a reduction in costs to micro-generation products which in turn may stimulate further demand. This will be especially relevant for micro-generation technologies under 12.5kW (or those that are ‘small’ and ready for the domestic market). Option 2, and to a lesser extent 3, is likely to be more beneficial to smaller companies, whereas option 1 is likely to preserve the current market structure.

³ http://www.cabinetoffice.gov.uk/regulation/ria/ria_guidance/index.asp.

⁴ <http://www.offt.gov.uk/NR/rdonlyres/A7138977-6FE2-45DE-BE32-3AB6E767664A/0/oft355.pdf>

- Under option 3 manufacturers may concentrate on those technologies below the energy thresholds to exploit the developing market. Larger micro-generation technologies may therefore come at a premium and may become less competitive.
 - It is possible that more short term research and development and efforts will be focused on smaller scale micro-generation technologies rather than creating efficient and affordable large scale micro-generation technologies. This may hinder the achievement of renewable energy targets (again this will not occur under option 2), depending on the level of uptake of smaller scale micro-generation technologies.
 - Fewer planning restrictions may reduce barriers to market entry for new businesses. Smaller micro-generation manufacturers may face a more favourable environment compared to the current situation. However existing firms who are already more efficient in their production methods may be able to create barriers to entry through competitive pricing (thereby reducing the profitability of entry).
60. In relation to effects on competitiveness with countries outside the UK, the following conclusions have been drawn:
- UK based companies are likely to benefit from fewer restrictions. All other factors being equal, increased demand may help these companies reduce their production costs through economies of scale. A reduction in their price might make them more competitive in the international market, with potential knock on effects of increasing demand and further reductions in price. This may also mean more available funds for innovation and R&D.

• Consultation

61. Within Government
In preparing the proposals for consultation we consulted widely within the Assembly Government and with colleagues in England.
62. Public consultation
A full consultation exercise took place between the 9th August and 14th November 2007. A wide range of stakeholders including local authorities, micro-generation trade associations, national bodies, environmental groups, etc were sent a consultation package (including a draft SI and partial RIA) explaining the proposals and seeking responses to a questionnaire. The consultation was reported in the technical press and the material was available on line.
63. A total of 51 responses to the consultation proposals were received from the following groups:-
Local planning authorities - 16 or 31% (including 3 National Parks)
Members of the public - 5
National/Regional Organisations -30 or 59% (8 or 16% being environmental groups, 5 or 10% being specific Energy Organisations)
Energy Businesses - 3
The 'issues' summary below indicates the balance of opinion held by the 42 respondents who replied to some, or all, of the questions included with the

consultation document. It also reviews the range of other observations submitted with questionnaires or made in letter only form by some 9 respondents.

64. The response was generally positive, with unanimous support for the principle of increasing permitted development rights for micro-generation because of the perceived importance of climate change. Much of the comment related to points of detail as to how the measures proposed would be implemented.

65. Key Issues

In summary the key issues were:-

- Noise and vibration - The most significant concerns were how the potential impacts of noise and vibration associated with wind turbines and air-source heat pumps should be dealt with in the permitted development regime. The approach proposed in the consultation paper was viewed as inadequate and unworkable by a significant majority of respondents.
- Sensitive Areas - The consultation proposals identified Conservation Areas (to include World Heritage Sites) as sensitive but 55% of responses maintained that there should be similar protection for National Parks and Areas of Outstanding Natural Beauty (AONBs).
- Protected Species - The consultation question seeking instances of any impact of micro wind turbines and the installation of solar panels on bat or other species protected by Directives revealed only very limited evidence. One respondent suggested no impact at a monitored installation and the Bat Conservation Society's own questionnaire survey identifying only four minor incidents. The Countryside Council for Wales advised that a monitoring programme and review approach be adopted.
- Prior notification - Arrangements whereby permitted development does not apply until the planning authority has first been given a limited opportunity to consider if the proposal raises serious planning issues was mooted for use in sensitive areas in several responses and also to deal with other impacts such as on protected species.
- Solar panel Coverage - Less than half (42%) of those responding supported the proposed 100% roof and wall coverage.
- Stand Alone Solar - the consultation proposals would prevent stand alone panels being erected in standard width gardens due to the height/topple distance thresholds used. Responses suggested that the maximum height allowed be reduced (to 2m) and the topple distance dropped. Provision for panels on flat roofs was identified as a further opportunity.
- Clarity of Terms - there were a series of concerns about the appropriateness of various terms used in the draft Order.

66. Amendments made as a result of the consultation.

In the light of responses we have acknowledged that a number of changes should be made in order to:-

- A 200mm projection from the existing structure for solar panels on roofs & walls.
- Solar panels to be allowed on the principal elevation roof (but not walls) in conservation areas and World Heritage Sites.
- Sensitive areas to not include National Parks or AONBs.

- Free-standing solar panels of a maximum height of 4m above ground level and surface area of 9m² beyond 5m from the boundary (see B1 (b) of England SI 2008 No. 675). In addition, free-standing solar panels will be permitted at any distance from the boundary provided that the height does not exceed 2m and the panels are no closer to a highway than the existing house.
- The installation, alteration or replacement of ground and water source heat pumps within the boundary of a house.
- The installation of a flue forming part of a biomass heating system or combined heat and power system on a house, subject to the flue not exceed the highest part of the roof by 1m or more, or where the flue would be installed on a wall or roof forming the principal elevation and would be visible from a highway in conservation areas and World Heritage Sites.
- A guidance note is produced with officer training.
- No amendments to permitted development are made with regard to free standing solar panels within the curtilage of listed buildings, or solar panels on walls or roofs of buildings within the curtilage of listed buildings [see A1(d) of England SI 2008 No. 675], or where the panel would be visible from a highway in conservation areas and World Heritage Sites.

67. In addition it is intended to:-

- Cover by guidance the impact of installing micro-generation equipment on SSSIs, protected species, geology, archaeology, trees etc.
- Produce a public guidance note and arrange local authority officer training.

68. Main issues arising where no change has been made

All issues raised by the consultation have been carefully considered but not all proposals for change have been accepted, not least because there were often opposing views. The key issues raised by significant numbers where we have not made changes are:-

- Sensitive areas have not been extended to include National Parks, AONBs, etc. because of the climate change imperative, the potential benefits of micro-generation in rural off-grid areas and the small, domestic scale of installations that should not be significant in the wider landscape.
- Solar panel coverage has not been limited to a proportion of the roof/wall area. Potentially 100% coverage can result in a better appearance than partial coverage and avoids more complex rules.
- Adopting an additional 'prior approval' regime. These systems are not well understood by the public, would create difficulties for all involved and would not provide the certainty required to encourage the up-take of micro-generation technology.
- Radar. If necessary Defence Estates and the civil aviation authorities be reconsulted as to whether prior notification or guidance would best resolve radar issues and that regulations be drafted accordingly.

• **Post Implementation Review**

69. No formal monitoring of the effect of the Order is proposed.

• Summary

70. Micro-generation is the small-scale production of heat and/or electricity from low carbon sources. Some micro-generation technologies produce energy using renewable resources such as solar, wind or biomass (e.g. wood) and some, like combined heat and power (CHP), may use fossil fuels but are much more efficient than conventional systems. The current uptake of domestic micro-generation is estimated to be very low.
71. Micro-generation offers a practical response to climate change, national energy security and energy poverty. The Assembly Government's policies support the encouragement of micro-generation as a realistic alternative or supplementary energy generation source for the householder, the community and for small businesses.
72. The regime governing the need for planning permission for micro-generation equipment can act as a barrier to the wider take-up. The Town and Country Planning (General Permitted Development) Order (GPDO) 1995 grants rights (known as permitted development rights) to carry out specified forms of development without the need to make an application for planning permission. Although there are already significant permitted development rights for householders there is no express provision for micro-generation. Inclusion of appropriate categories of micro-generation technologies within the GPDO can directly eliminate the cost of applying for planning permission, which is estimated to be £880 per installation (taking into account both the planning fee and transaction cost).
73. The proposal is to amend the GPDO to allow micro-generation technology where the impact is acceptable. Include a summary of changes. This proposal could have significant benefits if the demand and uptake for micro-generation technologies lead to reductions in price through economies of scale and in improvements to the effectiveness of these technologies. It will encourage companies to research and develop more energy effective equipment and mass production will drive prices to levels that are more affordable for more householders which will in turn stimulate further demand.
74. More generally, the proposal is a deregulatory initiative which is in line with the objective of reducing the regulatory burden on households and industry and to improve the overall efficiency of the planning system.