

DERRY CITY AND STRABANE DISTRICT COUNCIL

LOCAL DEVELOPMENT PLAN (LDP) 2032



POLICY REVIEW 18

Planning Policy Statement 18 – Renewable Energy

May 2017

This Document is one in a series, which builds up to form the ‘evidence base’ that informs the preparation of the Local Development Plan (LDP).

Therefore, the afore-mentioned evidence base will be continually updated, to additionally include the latest information, input from public engagement, statutory consultees, stakeholder groups, Sustainability Appraisal and from other Departments within the Council, including Community Planning.

The Evidence Base is published as a ‘supporting document’ in accordance with Article 10(a) and 15(a) of the Planning (LDP) Regulations (NI) 2015



Renewable Energy

Purpose: To consider existing planning policies relating to PPS 18 – Renewable Energy and to consider alternative policies; which will inform the forthcoming Preferred Options Paper (POP), as part of the preparation of the Local Development Plan (LDP).

Content: The paper will provide information on:

- (i) The Context of Renewable Energy within Derry City and Strabane District and existing plan policies;
- (ii) Derry City and Strabane District Council (DCSDC) objectives for Renewable Energy and the linkages between DCSDC objectives, Regional Planning Policy and Strategic Planning Policy objectives;
- (iii) Consider existing policies and consider preferred/alternative policy options within the Local Development Plan (LDP).

Recommendation: The findings shall be used to inform the Preferred Options Paper (POP) and strategic policies in the Local Development Plan (LDP).

1.0 Introduction to Paper

- 1.1 The purpose of this paper is to consider current planning policies associated with Renewable Energy and to determine whether or not they are compatible with the Council's objectives and whether they need to be amended to take account of local circumstances through the new Local Development Plan (LDP).
- 1.2 This paper provides an assessment of how existing planning policies take account of the Regional Development Strategy (RDS), Strategic Planning Policy Statement (SPPS), Sustainability Appraisal themes and DCSDC objectives through the proposed LDP objectives.
- 1.3 Renewable energy comes from energy sources that are continuously replenished by nature. The main sources of renewable energy are wind, the sun (solar), moving water (Hydropower), heat extracted from the air, ground and water (geothermal energy), and biomass (wood, biodegradable waste and energy crops).
- 1.4 The use of renewable energy reduces our dependency on imported fossil fuels and brings diversity and security of supply to our energy infrastructure. It also helps Northern Ireland achieve its targets for reducing carbon emissions and will reduce environmental damage such as that caused by acid rain.

Legislative Context

- 1.5 Article 5 of the Planning Act (Northern Ireland) 2011 states that the creation of planning policy as part of the Plan Strategy must be done with the objective of furthering sustainable development and in doing so, must take account of policies and guidance issued by OFMDFM, DOE and DRD such as the Regional Development Strategy (RDS) 2035 and Strategic Planning Policy Statement (SPPS).
- 1.6 Section 25 of the Northern Ireland (Miscellaneous Provisions) Act 2006 requires all NI Departments and District Councils in exercising their functions, to act in a way they consider to be best calculated to contribute to the achievement of sustainable development.
- 1.7 The new duty of **Community Planning** introduced in April 2015 requires the Council to lead the process of creating a long term vision for the social, environmental and economic well-being of the area and its citizens. The Local Government Bill introduces a statutory link between the resultant Community Plan and the Council's Local Development Plan (LDP), in that the LDP must take account of the Community Plan in its preparation. Therefore it provides the key context at the local Council level for the preparation of the LDP.

- 1.8 It is intended that the LDP will be the spatial reflection of the Strategic Growth Plan – our Community Plan and that the two should work in tandem towards the same vision for the District and its communities and set the long term social, economic and environmental objectives for an area. In practice, it is expected that the Community Plan will set higher level objectives to provide adequate and appropriate housing for its people – which the LDP will then help to deliver, spatially.

European Legislation

- 1.9 The EU Renewable Energy Directive (Directive 2009/28/EC) set mandatory targets for increasing the level of renewable energy consumption and a reduction in greenhouse gas emissions in all EU Member States. The overall EU target for renewable energy use is 20% by 2020.
- 1.10 In 2008 the Climate Change Act set out the requirement for gas emission reductions of at least 80% by 2050, and CO² emission reductions of at least 26% by 2020.

National Obligations

- 1.11 The Strategic Energy Framework (SEF) (DETI 2010) goes further than the EU Directive by stating that Northern Ireland will seek to achieve a challenging new target of 40% of electricity consumption from renewable sources by 2020. The Republic of Ireland (ROI) also has a 2020 target for 40% of total electricity consumption to be met from renewable sources.
- 1.12 Whilst the Programme for Government (PfG) 2011-2015 sought to achieve the targets set by the EU directive by requiring 20% of electricity consumption to be from renewable sources and 4% from renewable heat, its aim was to do so by 2015 rather than 2020.
- 1.13 These renewable targets were not transcribed into the Draft Programme for Government Framework 2016-2021. The new approach within the Draft PfG moves away from targets and rather sets 14 strategic outcomes that the Executive wants to achieve, supported by 42 indicators. Strategic Outcome 2 of the Draft PfG reflects the importance the Executive attach to being a society who live and work sustainably – protecting the environment.

2.0 Planning Policy Statement (PPS) Review Parameters

- 2.1 In preparing the new LDP, the Council will have regard to several existing plans and documents that set out the main legal and policy context and considerations of what the LDP is required to do and can include, in relation to renewable energy in the District.
- 2.2 **The Regional Development Strategy 2035 (RDS, launched 2012).** The RDS is the spatial strategy of the NI Executive, expected to deliver the spatial aspects of the Programme for Government. It emphasises the significant role that Derry has to play as the principal city of an expanding North West region and the importance of Strabane town as Derry's clustered Main Hub. In preparing the Local Development Plan, the Council must 'take account' of the RDS.
- 2.3 **The Strategic Planning Policy Statement for Northern Ireland (SPPS).** The aim of the SPPS aims to facilitate the siting of renewable energy generating facilities in appropriate locations within the built and natural environment in order to achieve Northern Ireland's renewable energy targets and to realise the benefits of renewable energy without compromising other environmental assets of acknowledged importance.
- 2.4 The SPPS sets out regional strategic objectives and regional strategic policy for renewable energy which must be taken into account in the preparation of the PS and LPP. A council must consider wider environmental, economic and social benefits of renewable energy and tailor its PS objectives and policy approach to reflect local circumstances and balance this against the need to protect and conserve areas of environmental and landscape value e.g. Area of Outstanding Natural Beauty.
- 2.5 The process of SA should help to ensure that a council's approach towards renewable energy is the most sustainable in light of the reasonable alternatives considered. This should help to justify the policy approach set out in the PS which will set the framework for the more detailed assessment of proposals for renewable energy.
- 2.6 **Draft Strategic Growth Plan – our Community Plan.** The Draft Community Plan states that to realise the full benefits of a regional status, the region needs to maximise its strengths for communication, transport, tourism, economic productivity, knowledge, education and innovation.

- 2.7 The Community Plan also embraces the goal of circular economy, which includes reducing carbon emissions through energy efficiency and renewable energy. Both the Community Plan and the Environmental Wellbeing Delivery Plan recognises renewable energy as a key driver for our economy.
- 2.8 **Derry City & Strabane District Council Corporate Plan and Performance Improvement Plan 2016/17.** One of the objectives of the Corporate Plan and Performance Improvement Plan is grow our business and facilitate cultural development, another objective is to live in a low carbon sustainably designed and connected region. The plan recognises that Renewable Energy is part of that.

3.0 Existing Policy

- 3.1 Whilst there is no strategy within the existing Derry Area Plan 2011 for renewable energy, reference is made to the overarching strategies of the RDS and its function to provide a spatial framework for transport, air and water quality, energy and waste strategies, and for infrastructure providers and public service promoters which would encompass renewable energy.
- 3.2 Again the Strabane Area Plan 2001 does not have a specific policy on renewable energy however nature and countryside conservation does apply and particular attention is given to the protection of this areas visual amenity and landscape character which would apply in the consideration of renewable energy applications.
- 3.3 The district's community plan – the Strategic Growth Plan is to be published in May in spring 2017, with higher level strategic policies, as well as incorporating exiting strategies/proposals for the District.
- 3.4 The new style of LDP provides a unique opportunity for the Council to genuinely shape the district for local communities and will enable them to adopt a joined up approach, incorporating linkages to other functions such as regeneration, local economic development and community planning. The Local Government Act introduces a statutory link between the Community Plan (CP) and the LDP, in that the preparation of the LDP must 'take account of' the CP – which provides the higher-level strategic aspirations for economic development in the district. It is intended that the LDP will be the spatial reflection of the CP and that the two should work in tandem towards the same vision for the Council area and our communities and set the long term social, economic and environmental objectives for our District.
- 3.5 **The One Plan** (llex 2012) sets out a number of Transformational Themes, including Theme 5: Sustainable and Connected City Region – Investing in ourselves and our future; creating a reliable sense of self-worth and pride in all our young people, using resources effectively and wisely, applying social justice, living and thinking locally, paying the appropriate price for the way we want to live, and being better connected not just with the rest of the world but also internally within the City and Region.

- 3.6 **Planning Policy Statement, PPS 18 ‘Renewable Energy’;** PPS 18 sets out the Department’s planning policies for development that generates energy from renewable resources. In addition the PPS encourages the integration of renewable energy technology and greater application of the principals of Passive Solar Design in the design, siting and layout of new development.
- 3.7 The primary aim of this PPS is to encourage and facilitate the provision of renewable energy and heat generating facilities in appropriate locations within the built and natural environment.
- 3.8 The main objectives of PPS18 are: to ensure that the environmental, landscape, visual and amenity impacts associated with or arising from renewable energy development are adequately addressed; to ensure adequate protection of the Region’s built and natural, and cultural heritage features; and to facilitate the integration of renewable energy technology into the design, siting and layout of new development and promote greater application of the principals of Passive Solar Design. There are 2 policies contained within PPS18:
1. RE 1 Renewable Energy Development
 2. RE 2 Integrated Renewable Energy and Passive Solar Design
- 3.9 Policy RE1 states that development that generates energy from renewable resources will be permitted provided the proposal, and any associated buildings and infrastructure, will not result in an unacceptable adverse impact on: (a) public safety, human health, or residential amenity; (b) visual amenity and landscape character; (c) biodiversity, nature conservation or built heritage interests; (d) local natural resources, such as air quality or water quality; and (e) public access to the countryside.
- 3.10 RE1 also requires applicants to consider siting of proposals as well as mitigation measures to ensure no environmental damage is caused as a result of the proposal.
- 3.11 The premise of the policy is retained within the SPPS, which states that development that generates energy from renewable sources will be permitted subject to the same 5 point test as above.
- 3.12 The SPPS however seeks a cautious approach for renewable energy development proposals within designated landscapes which are of significant value, such as Areas of Outstanding Natural Beauty (AONB).
- 3.13 In relation to wider environmental, economic and social benefits of renewable energy proposals policy RE1 states that **significant** weight will be given to these elements in determining whether planning permission should be granted.

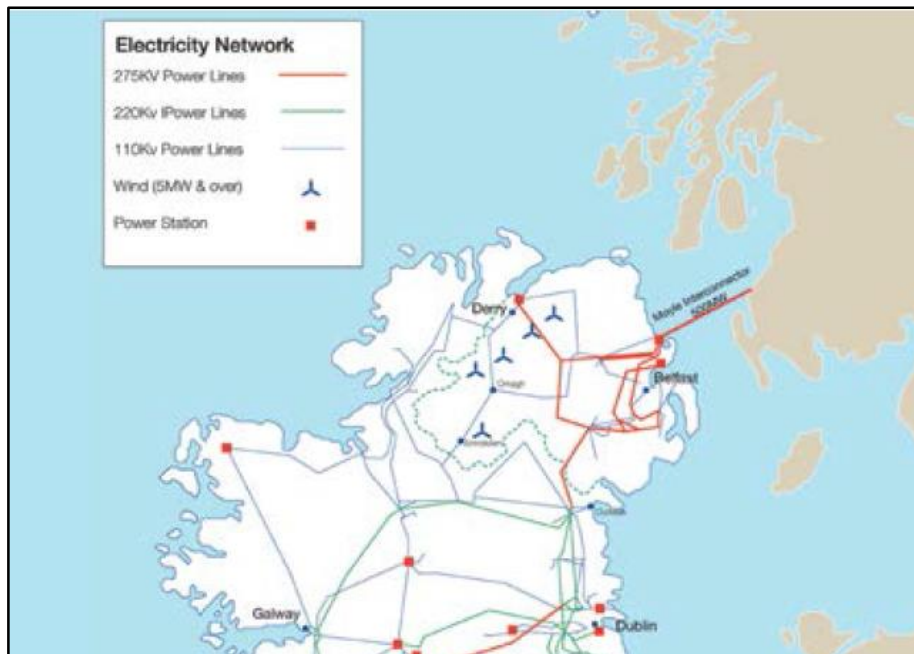
- 3.14 Within the SPPS **significant** weight has been removed as a material consideration in relation to wider environmental, economic and social benefits. Paragraph 6.225 of the SPPS seeks rather that **appropriate** weight be given in consideration of these issues.
- 3.15 Policy RE1 sets down specific requirements in relation to Wind Energy Development. It states that applications for wind development are required to demonstrate all of the following:
- (i) that the development will not have an unacceptable impact on visual amenity or landscape character through: the number, scale, size and siting of turbines;
 - (ii) that the development has taken into consideration the cumulative impact of existing wind turbines, those which have permissions and those that are currently the subject of valid but undetermined applications;
 - (iii) that the development will not create a significant risk of landslide or bog burst;
 - (iv) that no part of the development will give rise to unacceptable electromagnetic interference to communications installations; radar or air traffic control systems; emergency services communications; or other telecommunication systems;
 - (v) that no part of the development will have an unacceptable impact on roads, rail or aviation safety;
 - (vi) that the development will not cause significant harm to the safety or amenity of any sensitive receptors¹ (including future occupants of committed developments) arising from noise; shadow flicker; ice throw; and reflected light; and
 - (vii) that above-ground redundant plant (including turbines), buildings and associated infrastructure shall be removed and the site restored to an agreed standard appropriate to its location.
- 3.16 The broad thrust of these requirements have been included within paragraphs 6.228 – 6.234 of the SPPS, acknowledging that each application will be considered on a case by case basis and in its local context.
- 3.17 In paragraph 6.222 of the SPPS amplification has been provided in relation to what constitutes a wind farm i.e. development comprising more than 2 turbines. This definition was not included within PPS18 and aids with consideration of renewable proposals on landscapes. This is an important addition to Renewable Energy policy given the proliferation of wind development within our district and the fact that some landscapes may be able to accommodate wind farm development more easily than others.
- 3.18 In relation to active peat the SPPS provides further amplification by requiring that any renewable energy development on active peat will not be permitted unless there are imperative reasons of overriding public interest as defined under The Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995 as amended.

- 3.19 Policy RE1 also advises applicants that any wind development on active peatland will not be permitted unless there are imperative reasons of overriding public interest; and that for wind farm development a separation distance of 10 times rotor diameter to occupied property, with a minimum distance not less than 500m, will generally apply. This is carried over into the SPPS.
- 3.20 The second policy within PPS 18 - Policy RE 2 states that planning permission will be granted for a development proposal which integrates renewable energy technology including micro-generation, and Passive Solar Design (PSD) in its layout, siting and design, where it meets the provisions of Policy RE1 and provided the technology is appropriate to the location in terms of any visual or amenity impact it may have. The following types of new development provide the greatest opportunity for maximising the benefits that can be derived from integrated renewable technology and/or PSD: large-scale urban development (generally defined for the purposes of this policy as a site of 1ha or greater or a building of 5,000m² or greater); public sector development; and development in the countryside including individual dwellings.
- 3.21 The premise of this policy is retained within the SPPS, however it does not prescribe the types of development for maximising the benefits derived as contained within RE2.
- 3.22 **Supplementary Planning Guidance (SPG) ‘Wind Energy Development in Northern Ireland’s Landscapes’** identifies landscape characteristics that may be sensitive to wind turbine development and provides guidance on the landscape and visual analysis process. The SPG is taken into account in assessing wind turbine proposals. The SPPS reiterates that this document should be taken into account in assessing all wind turbine proposals.
- 3.23 It is therefore considered that the broad thrust and policy principles established by PPS18 & the SPG in relation to energy generally reflect what is set out in the SPPS. It is further considered by planning officers that the broad thrust and policy principles are acceptable in terms of operational planning policy and work effectively.
- 3.24 There is potential scope to liaise with appropriate consultees to develop a policy direction for Marine energy opportunities within our district.
- 3.25 It is recommended that the policy principles for energy are taken forward in the development of new policy for our Local Development Plan.

4.0 District Context

Locations of Significant Electricity Generation in Northern Ireland

- 4.1 Map1 below illustrates the Transmission System Network for Northern Ireland showing the 3 main power stations located at Ballylumford (Islandmagee, Antrim), Kilroot (Carrickfergus) and Coolkeeragh (L'Derry) which supply electricity to a wholesale market known as the Single Electricity Market (SEM). Mutual energy Limited also supplies electricity to the pool via the Moyle interconnector, the North-South Interconnector between Tandragee and Louth and There are also two 110kV standby North-South interconnectors: (i) Strabane, Co Tyrone to Letterkenny, Co Donegal; and (ii) Enniskillen, Co Fermanagh to Corraclassy, Co Cavan.



Map 1 The Electricity Network- Framework for Co-operation: Spatial Strategies of Northern Ireland & The Republic of Ireland.

4.2 Renewable Energy Consumption in Northern Ireland

Northern Ireland Statistics and Research Agency (NISRA) published on behalf of the Department for the Economy its bi-annual energy publication for the year ending March 2016. The purpose of the publication was to aid reporting on performance against the 2011-15 Programme for Government targets. Its key points include:

- For the 12 month period April 2015-March 2016, 25.4% of total electricity consumption in Northern Ireland was generated from renewable sources located within Northern Ireland. An increase of 6.4% from the previous year.
- 90.2% of this electricity generated was from wind.

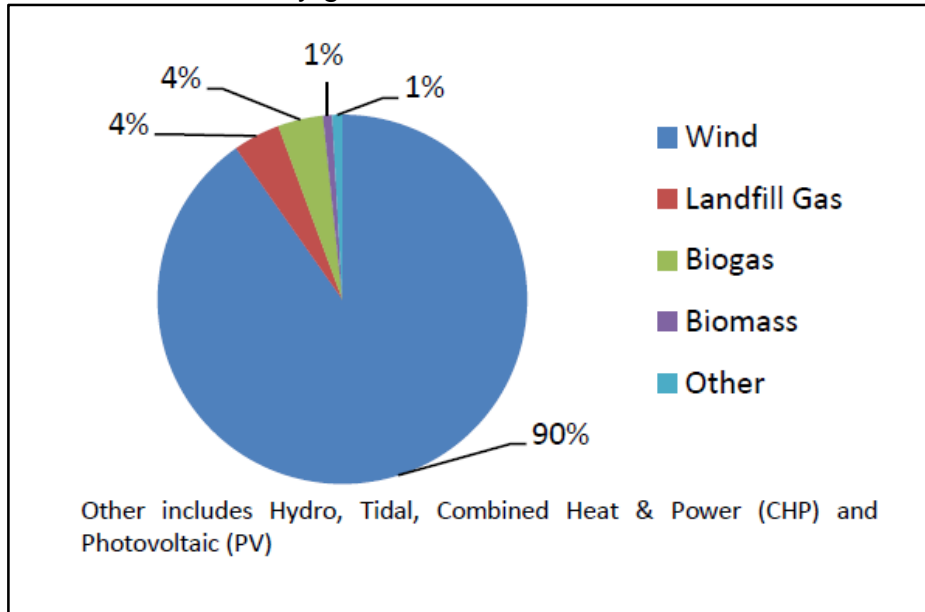


Figure 1: Renewable electricity generation by type of generation (April 2015 to March 2016) (NISRA Electricity Consumption and Renewable Generation in Northern Ireland: Year Ending March 2016.).

4.3 Rolling 12 Month Average

Chart 1 overleaf shows the trend in the percentage of electricity consumption in Northern Ireland from renewable sources. In the 12 month period ending June 2009, some 8.1% of total electricity consumption in Northern Ireland was generated from renewable sources. This proportion has grown considerably with over a quarter (25.4%) of total electricity consumption in Northern Ireland being generated from renewable sources for the 12 month period ending December 2015. This represents a threefold increase in average renewable generation volumes in comparison to the 12 month period ending June 2009. As the chart shows, the PfG target of 20% was exceeded during 2015 and reached a peak of 25.4% for the 12 month period ending December 2015.

4.4 Annual Proportion

Chart 1 below also shows the proportion of total electricity consumption from renewable sources for each calendar year end. After a slight drop in the renewable proportion between 2009 (9.7%) and 2010 (8.4%), electricity generation from renewable sources in Northern Ireland as a percentage of electricity consumption in Northern Ireland has risen steadily to 25.4% in 2015. In particular, there were large rises of around 4 percentage points between 2010 and 2011 (from 8.4% to 12.5%) and between 2012 and 2013 (from 13.6% to 17.3%) and a rise of over 6 percentage points between 2014 and 2015 (19.0% to 25.4%).

Such large rises are usually attributable to new renewable generation facilities coming on line and/or increased wind levels during the year.

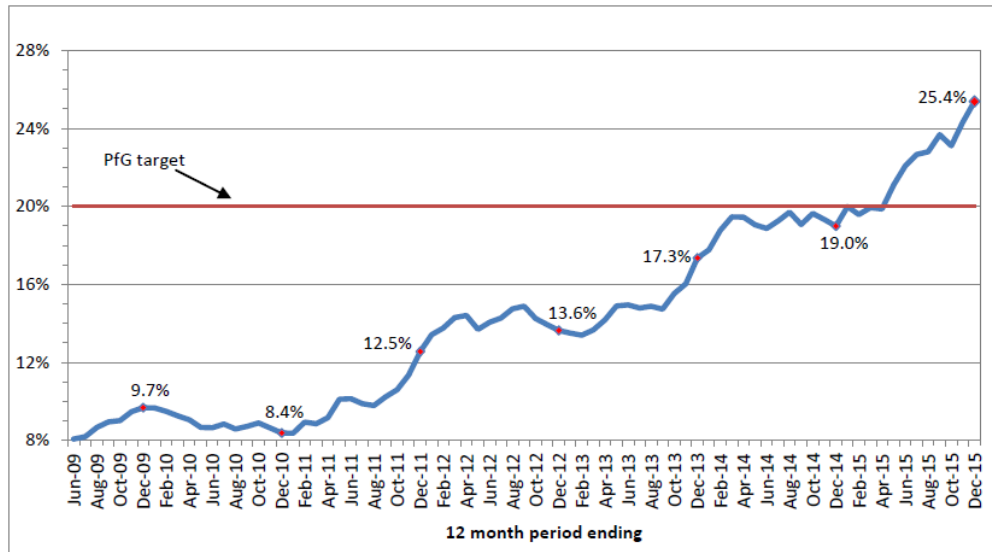


Chart 1: Rolling 12 month Average % Electricity Consumption from Renewable Sources

4.5 Monthly Proportion

The proportion of electricity consumption derived from renewable sources varies markedly from month to month, as shown below in chart 2. For example, in December 2015, generation from renewable sources located in Northern Ireland accounted for almost two fifths (38.2%) of all electricity consumed in Northern Ireland in that month. However, this compares to around 8% in July 2013 and September 2014. Such variation is due to large fluctuations in renewable electricity generation each month, caused mainly by changing weather conditions. Given the reliance on wind generation in Northern Ireland, weather plays an important role in the volume of renewable electricity generation. In general, renewable generation volumes are lower in the summer months (when it is less windy) and higher in winter when wind levels are increased. Such changes in renewable generation correlate directly with the large monthly variation in the proportion of electricity consumption from renewable sources, as shown in Chart 2. The rolling 12 month average helps to take account of such monthly variations to provide a better measure of the underlying trend (as shown earlier in Chart 1).

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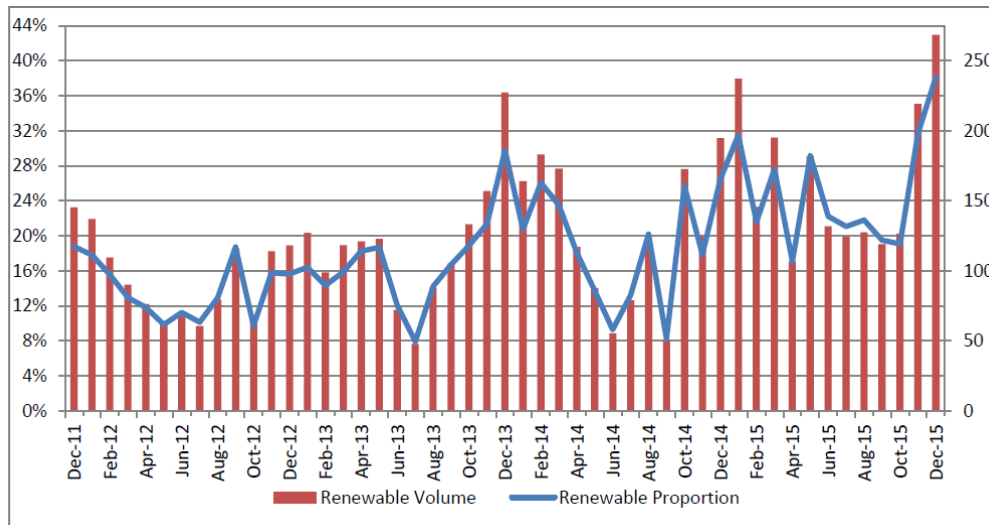


Chart 2: Percentage of Electricity Consumption from Renewable Sources and Renewable Generation Volume (GWh) by month, December 2011 – December 2015 (Source DETI)

4.6 Table 1 below shows that renewable generation and capacity is not shared equally among District Council Areas. Indeed almost two thirds (64%) of generation is accounted for by only four council areas: Strabane (24%), Fermanagh (19%), Omagh (11%) and Limavady (10%). This is perhaps unsurprising given that the majority of the large onshore wind turbines would be located in these council areas.

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District Council	Number of sites	Capacity (MW)	Generation (MWh)
Antrim	25	9.7	19,907
Ards	5	0.4	530
Armagh	14	3.8	10,616
Ballymena	27	23.0	53,859
Ballymoney	20	48.2	115,813
Banbridge	14	1.5	2,411
Belfast	7	6.0	15,457
Carrickfergus	4	0.5	1,110
Castlereagh	5	0.4	462
Coleraine	15	3.9	15,732
Cookstown	15	2.0	2,780
Craigavon	7	0.9	5,314
Derry	13	36.4	107,119
Down	18	3.4	6,368
Dungannon	23	39.9	82,572
Fermanagh	26	126.1	319,891
Larne	16	1.7	3,539
Limavady	11	106.1	166,630
Lisburn	15	3.4	11,478
Magherafelt	21	3.2	8,142
Moyle	5	0.7	454
Newry & Mourne	13	3.9	19,458
Newtownabbey	10	20.8	62,365
North Down	5	1.6	4,954
Omagh	29	111.1	193,943
Strabane	44	169.8	401,165
Unallocated	12,294	67.5	54,807
Total	12,701	796.0	1,686,875
Unallocated (%)	97%	8%	3%

Table 1 Sub-regional renewable electricity data at end 2014 – ‘old’ 26 district council areas. (Source Department of Energy and Climate Change)

- 4.7 In 2015/16, the number of renewable energy applications received fell by 38.6% when compared to the previous year and were down by three fifths when compared to 2011/12. More than 7 out of every 10 renewable energy applications received in 2015/16 were for single wind turbines. Although single wind turbines continue to dominate renewable energy applications, over the last year applications have decreased by a very sizeable 41.8%.

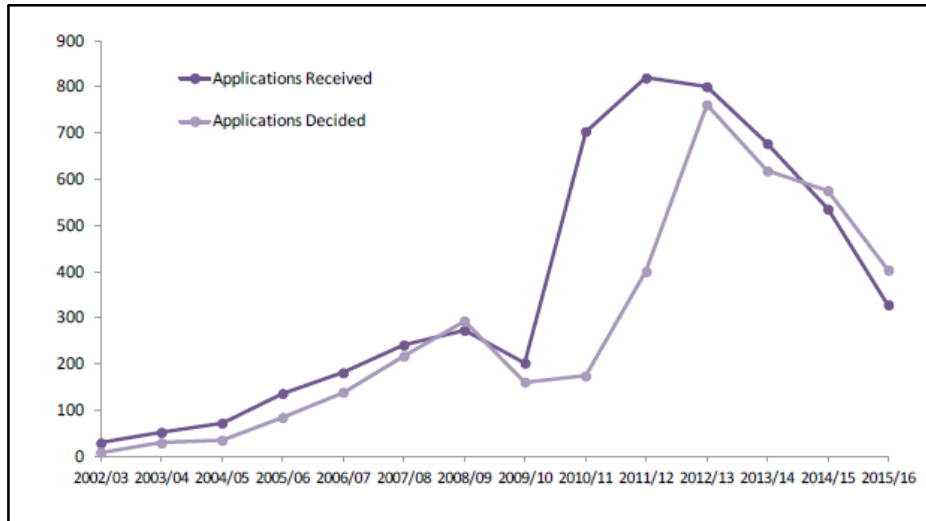


Chart 3 Renewable energy applications annually from 2002/03- 2015/16 (Northern Ireland Planning Statistics 2015/16 Annual Statistical Bulletin April 2015-March 2016) (publication 30th June 2016).

- 4.8 A recent consultation paper was issued by the Department of Enterprise Trade and Investment (DETI) on the Closure of the Northern Ireland Renewable Obligation to new onshore wind in 2016. The impact of the closure of the Renewables Obligation Certification (ROC) payments is likely to have a negative impact on the Renewable Energy sector in Northern Ireland and will bring about an overall reduction in the number of planning applications for Wind Energy Development.

5.0 Types of Renewable Energy Development in the District

5.1 The most significant electricity generation in the District include:

1. Coolkeeragh Powerstation, Derry, CCGT 9 closed-cycle gas turbine, generating 460 MW of electricity.(DETI 2016)
2. Slieve Kirk wind farm in Derry, generating 27.6 MW of electricity.
3. A small hydroelectric power generator (790KW) is located at Sion Mills in the former Herdmans' Mill complex. It is driven by a millrace off the River Mourne and its generator supplies electricity to the national grid.

5.2 Wind Energy

Electricity generated by onshore wind farms is the most established, large scale source of renewable energy in NI. Of all renewable electricity generated within Northern Ireland over the 12 month period January 2014 to December 2014, 92% was generated from wind. Additional figures supplied by Northern Ireland Electricity (NIE) indicate that when all committed renewable energy generating facilities are connected to the grid, 66.6% of renewable energy generation will be provided by wind energy with the remaining 33.4% being supplied by solar energy (20.7%), Hydropower (2.2%) and Anaerobic Digestion/Biogas (10.5%).

5.3 The majority of energy derived from wind in Northern Ireland comes from large scale generation as opposed to small scale or micro generation. Large scale generation consists of wind farms whilst small scale or micro-generation consist of a range of renewable technologies including single turbines or even micro turbines.

5.4 Wind Energy in the District

At present in the Derry City and Strabane District, there are 18 wind farms which have received planning permission with a further 6 proposals under consideration and 1 under appeal. See Tables 2, 3 and 4 below.

Table 2 Existing and Extant Planning Approval for Wind Farm Development

Approved Applications				
Nos	Planning Reference	Name	No. of Turbines	Capacity (MW)
4	J/1994/0220/F	Bessy Bell	10	5
6	J/1993/0286/F	Owenreagh	10	5
14	J/2004/1015/F	Owenreagh II	6	5.1
18	J/2004/0295/f	Bin Mountain	6	9

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29	J/2005/0133/F	Crighshane	14	28
36	J/2005/0358/F	ChurchHill	8	16
8	B/2000/0118/F	Altahullion	20	26
25	A/2004/1243/F	Curryfree	6	15
22	A/2004/1130/F	Slievekirk	12	27.6
34	J/2005/0211/F	Carrickatane	9	27
28	J/2005/0104/F	Tievenamenta	15	45
56	J/2006/0883/F	Seegronan	16	14
99	A/2009/0868/F	Monnaboy	4	10
79	J/2008/0088/F	Slieveglass	3	6.9
33	A/2005/0223/F	Eglis	6	15
115	A/2011/0202/F	Slieve Kirk (ext)	5	15
86	J/2008/0240/F	Meenakeeran	4	12
145	A/2014/0630/F	Ballyhanedin	8	24

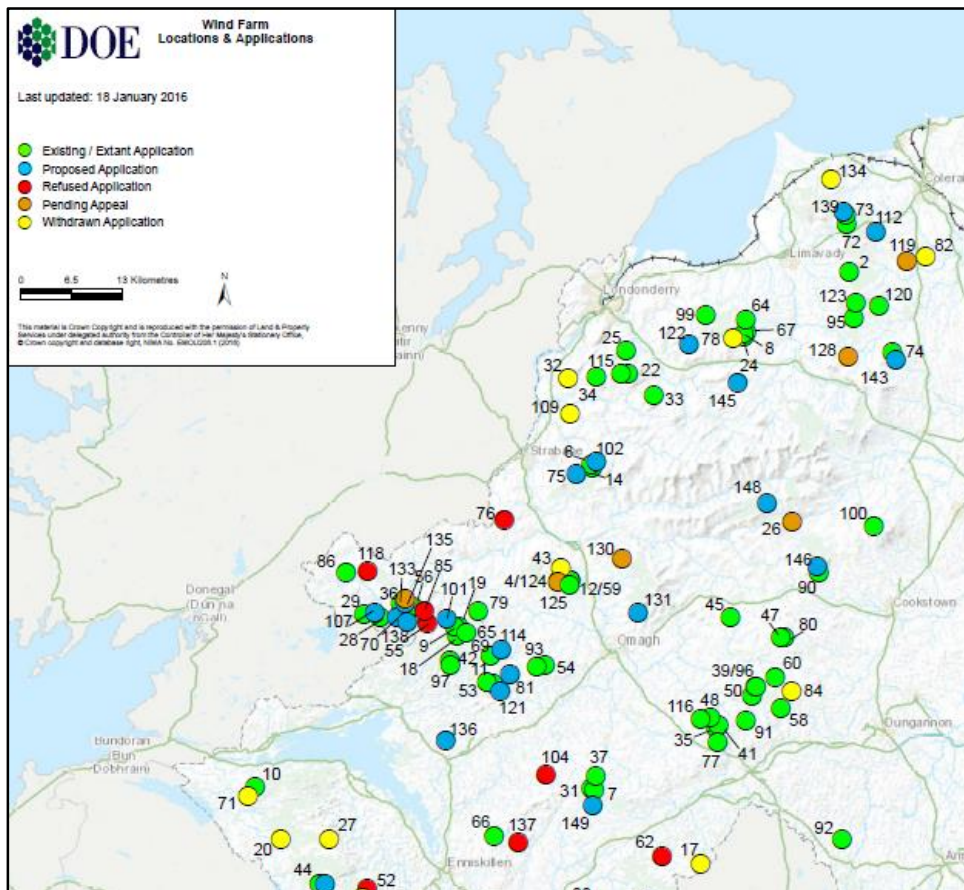
Local Development Plan Team Derry City and Strabane District Council May 2017.

Table 3 Current applications for wind farm development

Current Applications				
Nos	Reference	Name	No. of Turbines	Capacity (MW)
70	J/2007/0667/F	Gronan	4	9.2
102	J/2010/0481/F	Craignagapple	9	20.7
107	J/2011/0082/F	Crighshane Ext	5	11.5
122	A/2012/0401/F	Barr Cregg	7	17.5
133	J/2013/0183/F	Church Hill Ext.	1	2.3
138	J/2013/0287/F	Meenamullan	5	12.5
145	A/2014/0630/F	Ballyhanendin	8	24

Local Development Plan Team Derry City and Strabane District Council May 2017.

5.5 Map 2 below represents the above information in a spatial context. Coupled with the fact that Northern Ireland is already surpassing the PFG target of 20% and with Strabane generating the highest amount of renewable energy 401.165 (MWh) in Northern Ireland. It could be argued that this is a rather oversubscribed form of renewable energy development within the District.



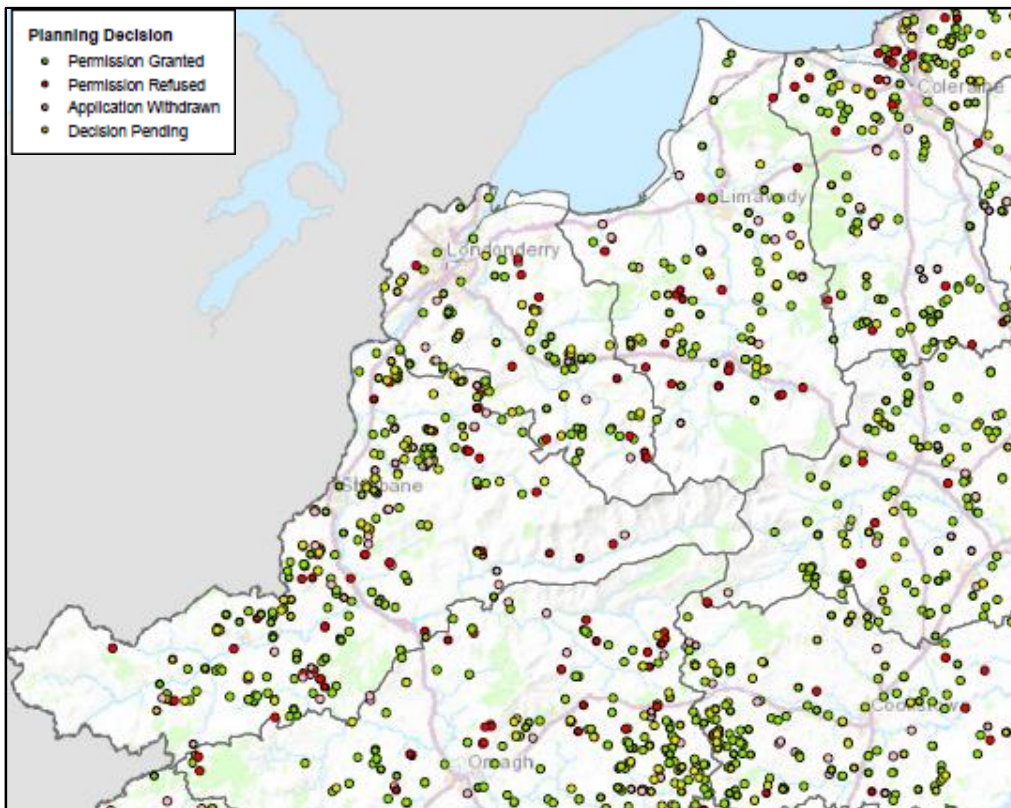
Map 2 Wind Farm map (Source DFI 2016)

5.6 Applications for Single Wind turbines in the District

In 2014/15 in the Strabane district, 22 applications were received of which 12 were decided with 5 approvals. In the Derry District, 14 applications were received of which 10 were decided with 5 approvals. While in 2013-2014, in the Strabane District, 29 applications were received of which 35 applications were decided with 28 approvals. In the Derry District, 12 applications were received of which 17 applications were decided - with 17 approvals.

5.7 Since 2002/2003 in the Strabane District, 280 applications for single wind turbines were received, 182 applications were decided with 145 approvals (80% approval

rate. In the Derry District, 102 applications for single wind turbines were received, of which 66 applications were decided with 55 approvals (83% approval rate).



Map 3 Planning Applications for Single Wind Turbines April 2002- 2015 (DFI renewable statistics)

5.8 Biomass

Biomass fuels, including wood and energy crops, can be utilised to provide energy either by combustion or fermentation/digestion technologies. There are currently three main categories of biomass plant:

- Plant designed primarily for the production of electricity
- Combined heat and power plant (CHP)
- Plant designed for the production of heat.

5.9 Emissions and waste products from biomass energy production include airborne emissions, emissions to watercourses and ash. Anaerobic digestion (AD) is a process which bacteria break down organic material in the absence of oxygen to produce a methane rich biogas. This can be combusted to generate electricity. Thermal processes can also be used to extract energy from waste. These processes use a high temperature to release the chemical energy in the fuel.

Planning issues from these renewable energy developments that require consideration include:

- Visual intrusion – the plant is an industrial feature with a chimney;
- Noise from plant and traffic operations;
- Any effects on health, local ecology or conservation from the plant and air/water borne emissions;
- Traffic to and from the site in order to transport biomass fuel and subsequent by-products;
- Odour.

5.10 Biomass Energy in the District

154 applications for biomass/AD have been approved in NI from 2002/03 to 2015.

Notable approvals in our District include:

- A/2007/1115/F- In January 2011 permission was granted for a proposed in-vessel compost facility to process kitchen & organic waste & a bio drying plant for municipal and bio degradable waste at Maydown Road and Electra Road, Derry.
- A/2009/0211/F permission was granted in September 2011 for a gasification facility for the treatment of refuse derived fuel (RDF) produced within the established Enviropac, Electra Road Derry.
- A/2010/0030/F- the granting of planning permission in July 2010 for a 15MW dedicated biomass (virgin wood fuelled) combined heat and power plant in Lisahally.
- A/2011/0416/F- Permission was granted in August 2012 for a proposed anaerobic digestion plant and silos to receive animal slurry and energy crops to generate electricity and heat with biogas fuelled combined heat and power generator (CHP Unit), Carnmoney Road Eglinton.

5.11 A notable development within the District is the Tyrone Energy Biomass Power Station in Artigarvan near Strabane, County Tyrone. The station is Northern Ireland's first large scale 'wood to energy' plant, it began full commercial operations in 2012 and will use 25,000 tonnes of wood a year as its biomass fuel. Taking wood from a variety of sustainable sources in the UK, the plant is capable of generating around 2.1 MW of electricity.

5.12 Heat

Ground source heat pumps operate by circulating water (or another fluid) through pipes buried in the ground. The water temperature in the pipes is lower than the surrounding ground and so it warms it up slightly. This low grade heat is transferred to a heat pump, which raises the temperature to around 50°C. Water source heat pumps operate in a similar way, with the pipes being submerged in water. Air source heat pumps extract heat in the air and use a fan to draw air over

coils that extract energy. Air-source heat pumps can be located in the roof space or on the side of a building. They are similar in appearance to air conditioning boxes. To date, existing operational policy has not raised any significant issues with these types of renewable energy developments subject to careful planning consideration including archaeological implications.

5.13 **Solar**

Active solar photovoltaic (PV) technologies generates electricity from daylight. The most common form of device is a solar panel or module typically 0.5 to 1sqm in size, dark in colour and having low reflective properties. Although roof mounted is most common, modules can be mounted on sides of buildings, or on free standing support structures on the ground. A number of modules are usually connected together in an array to produce the required output, which can vary from a few square metres to several hundred square metres. There is also an innovative approach of 'co-location' whereby solar farms and wind farm co-exists. This is regarded to be a more sustainable form of development, whereby the solar farm utilises the infrastructure established to facilitate the wind fame i.e grid connection and road access.

5.14 **Planning Consideration for small scale Heat and Solar PV**

Small scale PV and ground and air heat pumps are is particularly well suited to small scale domestic installation as they are clean and silent operators.

5.15 In most cases involving dwelling houses, provided the building is not listed or in a conservation area and the installation complies with the relevant constraints, various micro generation technologies will be "permitted development" and a planning application will not be required. The permitted development rights for small-scale renewable energy development are set out in Schedule 1 Part 2 Classes A to G of The Planning (General Permitted Development) Order (Northern Ireland) 2015 for the Installation of Domestic Micro generation Equipment. However, Permitted development rights to clad the walls or alter the existing roofline of a dwelling do not necessarily apply in Areas of Outstanding Natural Beauty, Conservation Areas or Areas of Special Scientific Interest. When considering applications in these areas the potential impact on the character or appearance of the area should be considered.

5.16 **Solar PV in our District**

Planning application A/2014/0594/F- granted permission for the Installation of photovoltaic panels on 13 ground mounted solar arrays to provide 50KW of green energy as farm diversification on Brockagh Road, Eglinton.

5.17 3 Planning applications for ground mounted solar farms are currently under consideration within the district: LA11/2016/0048/F is for a ground mounted solar farm and associated infrastructure adjacent to the existing Monnaboy wind farm,

Derry. This is a 15.9ha site, with the capacity to generate 4.9 megawatts of power; LA11/2017/0086/F is for a ground mounted solar farm and associated infrastructure adjacent to the existing Curryfree windfarm. This is a 5.6ha site, with the capacity to generate 3 megawatts of power; and LA11/2017/0089/F is for a ground mounted solar farm and associated infrastructure adjacent to the existing Carrickatane windfarm. This is a 13.94ha site, with the capacity to generate 4.1 megawatts of power.

5.18 **Small Hydropower**

Small hydro schemes generate power up to 1MW. There is the potential for sites in Northern Ireland in the range of 100KW to 500KW and the possibility for a few sites up to 1MW, which could economically be connected to the grid.

5.19 Harnessing water power involves water flowing from a higher to a lower level which is use to drive a turbine which produces mechanical energy. The energy produced in directly proportional to the volume of water and the vertical distance it falls.

5.20 The majority of schemes are likely to be 'run of river', where water is taken from a river from behind a low weir, with no facility for water storage, and returned to the same watercourse after passing through the turbine,

5.21 **Planning Considerations with Hydro power**

The development of hydro-electric power generation schemes should be achieved in a manner which is compatible with many other uses to which a river is put.

5.22 The effect of water abstraction on the riverine ecology can be a concern, particularly in areas that are valued or designated for their ecological resource.

Important factors to consider with hydro power development include:

- Siting and Landscape- integrating schemes into the landscape as far as possible.
- Design Considerations- their waterside location will, in many cases, place them in areas valued for their visual and natural amenity. Design schemes should be harmony with their surroundings, perhaps incorporating vernacular building materials and styles will be encouraged.
- Hydrological Considerations- during operation of a small hydro scheme, water is abstracted over a short stretch of the river. The scheme does not pollute or consume water and usually returns the supply to the channel from which it was abstracted. Water that has passed through a turbine is

often improved by aeration and is free of debris. NIEA will be consulted regarding the water extraction regime.

- Ecological Considerations- the effect of water abstraction on the riverine ecology can be a concern, particularly in areas that are valued or designated for their ecological resource.
- Fisheries Interests- fish can be killed or injured by Hydropower schemes. This risk can be minimised by careful design and adjustment of the seasonal operating schedule of the plant. Some types of turbine oxygenate the water and may thereby benefit the fish population.
- Noise- the noise emitted from a turbine should be well contained within the turbine house and should not be heard from more than a few meters away.
- Construction Disturbance-in general construction impact will be no different to that of other developments. However during construction there is the potential for the water to become clouded with silt or mud.
- Operational Disturbance- once in operation, small hydro schemes require little maintenance.
- Recreation and Public Access- small hydropower scheme will have a negligible impact on public access, though fisheries interests or other users of the river might be affected.

5.23 **Hydro Power in our District**

A hydroelectric power generator (790KW) is located at Sion Mills in the former Herdmans' Mill complex. It is driven by a millrace off the River Mourne and its generator supplies electricity to the national grid.

5.24 Appendix 2 details the planning history of Hydro-electric energy developments within the District.

5.25 **Northern Ireland Housing Executive Incentives for Micro Generation**

The Northern Housing Executive is designated as Northern Ireland's only Housing Conservation Authority (HECA). In its 2015 Progress Report. The Housing Executive has secured funding from both the EU and local NI partners to deliver renewable projects for installing a range of renewable energy sources across their housing stock. The Housing Executive has successfully obtained funding to install;

- solar water heating panels in 2,032 homes.
- solar photovoltaic (PV) panels in 32 homes.
- solar air heating and ventilation systems in 55 homes.
- biomass wood pellet boilers in 53 homes.
- ground source heat pump in 1 home.
- micro wind turbine in 1 home.
- a field trial of micro-CHP systems in 10 homes.
- a field trial using bio-fuel which is a mix of kerosene oil and vegetable oil but produces 21% less carbon emissions than kerosene.

5.26 **Solar Photovoltaic Project**

In July 2015, the Housing Executive appointed Saliis Ltd to privately finance the installation of solar photovoltaic (PV) panels in 1,000 of its homes based on the “rent a roof” model. ‘Rent a roof’ schemes involve the private company paying an annual rental to the landlord in exchange for being permitted to install PV panels on the roof of Housing Executive dwellings.

6.0 Conclusions

What should the LDP deliver?

6.1 Northern Ireland has met its PFG target of 20% renewable energy consumption by 2015. However, we must still strive to meet the target of 40% set out by the Strategic Energy Framework by 2020. Wind energy provides the greatest contribution toward renewable energy consumption but as a knock-on effect of the announcement of closure of the ROC scheme, wind farm and single turbine planning applications have significantly declined in numbers. Council must consider the strategy it wants to take regarding promoting wind energy development, or whether it should be allowed to decline with a new focus on other sources of renewable energy generation. Council should consider the following options for the LDP:

1. Adopt policies which are in keeping with the current planning policy contained within the SPPS and PPS18 and its guidance documents.
2. Adopt policies, which are more restrictive within sensitive landscapes such as CPA's and AONB's.
3. Adopt policies which require mitigation of the damage caused to the landscape by the infrastructure to build and maintain the wind farm/turbines e.g. roads, removal of hedgerows, accompanying electricity lines, poles etc
4. Adopt policies to restrict on-shore wind development (a later paper will consider Coastal Development in accordance with the Marine Plan – of which wave and wind turbines will be an important potential).
5. Adopt proactive policies taking account of future technology development eg solar farms, hydro or biomass and their related infrastructure.

Recommendation

6.2 The paper has highlighted the capacity for renewable energy generation within our District, as well as the current issues facing the development of renewable energy for example impact on the landscape, residential amenity, loss of financial incentives.

6.3 The SPPS sets out that the LDP must support a diverse range of renewable energy development in its policies and proposals. Renewable energy technology is constantly evolving and therefore, Council must consider the strategy it wants to take regarding the promotion of other forms of renewable energy, both large-scale and micro generation. Policy formulation within the LDP must strike a balance between encouraging the development of a range of renewable energies while protecting the environment and residential amenity from inappropriate development. Policies in the LDP must therefore be flexible and responsive to developing technology and government incentives.

7.0 Councillor Workshop – Renewable Energy

7.1 In considering and assessing the policy approach to be taken in the DCSDC district in relation to PPS18 it was important to get the views of the elected members. A paper was prepared by planning officials and presented to members to aid with discussion at a workshop on ‘Renewable Energy’ which was held on 24th October 2016.

7.2 At the workshop members and planning officials discussed the existing renewable energy policy (PPS18) and the need, if any to tailor this policy to meet the requirements of the local setting. Through these discussions members did not highlight any specific issues in relation to PPS18 or the acceptability of the policies contained within it, they did however raise general concerns regarding:

- Wind turbines (single turbines & wind farms) and their proliferation within the district
- Wind turbines and impacts on peat which is a carbon store
- Solar panels emerging as new technology over wind
- Hydro and impacts on designated sites (river foyle & tributaries)
- District heating should be explored in the district
- Biomass should be explored in the district

7.3 There was a general consensus amongst members that the existing policies contained within PPS18 are appropriate.

8.0 Development Management Meeting

- 8.1 Development Management (DM) are responsible for the interpretation and application of the policy provisions of PPS 18 and their input is integral to determining what aspects of this policy needs to be re-examined. A meeting was held with the Development Management section of the Planning Department in relation to the Policy Review on the 13th March 2017 regarding a number of specific topic areas, including PPS 18 Renewable Energy.
- 8.2 Development Management colleagues indicated that historically the majority of renewables applications they receive are in relation to single wind turbines, wind farms, anaerobic digesters and hydro-electric generating equipment. As a result of the cessation of The Northern Ireland Renewables Obligation (NIRO) however they have noticed a decline in the numbers of applications for the production of wind energy and an increase in solar PVC proposals.
- 8.3 NIRO was the main support mechanism for encouraging increased renewable electricity generation in Northern Ireland. Closure to large scale wind was introduced in the Renewables Obligation Closure Order (Northern Ireland) 2016. The Closure Order was approved by the NI Assembly on 15 March 2016. Closure to small scale wind was introduced 29th June 2016.

9.0 Options for Policy Approach

- 9.1 There are a number of approaches that could be taken through to the Plan Strategy in relation to Renewable Energy. It is considered by planning officers that the broad thrust and policy principles are acceptable in terms of operational planning policy and work effectively.

RE 1 - Renewable Energy Development

- 9.2 **Approach 1:** Retention of existing policy RE1.

- 9.3 **Approach 2:** Retention policy RE1 with modifications in line with SPPS

Approach 3: Retain policy RE1 with modifications in line with SPPS and the addition of spatial restrictions for wind development within certain areas and hydro proposals in/on the Faughan.

- 9.4 **Preferred Approach – Approach 2** - There is general conformity with RE1 with the SPPS. It was considered that this policy is currently working well. It is therefore considered the thrust of this policy should be retained.

RE 2 - Integrated Renewable Energy and Passive Solar Design

- 9.5 The above policy relate specifically to integrating renewable energy into the layout, siting and design of new development.

- 9.6 **Approach 1:** Retention of existing policy RE2.

Approach 2: Retain policy RE2 with modifications in line with SPPS

Preferred Approach – Approach 2 - It is suggested that this policy should be retained in line with the requirements of RE1 and the SPPS as it encourages sustainable design for new developments.

10.0 Conclusion

- 10.1 The LDP will need to look at how we can facilitate and develop renewable energy development in our District. But we must also ensure that its location and scale will not impact on our built and natural environmental assets. We need to strike a balance between promoting renewable energy development as a means of meeting the requirements of the EU Renewable Energy Directive and the PfG through the development of renewable energy infrastructure for the District against the need to protect and enhance the built and natural environment of the District in a sustainable manner and to ensure we provide a thriving, prosperous and sustainable City and District.
- 10.2 In light of the review of the policies contained with PPS 18, as well as discussions held with Members and the Development Management team, it is considered that the majority of the policy should be retained, albeit with some amendments.

Recommendations

- 10.4 It is recommended that these policy approaches are considered and are subject to public consultation at the POP stage. Based on the feedback received, in due course, appropriate draft policies can be developed which will be subject to Sustainability Appraisal, incorporating Strategic Environmental Assessment at the Plan Strategy stage.

Appendix 1

Planning Applications for Hydro-electric development in the District

Application Ref	Address	Description	Status
J/2007/0072/F	190m south east of 26 Letterbratt Road, Plumbridge	Hydro electric turbine.	Granted
J/2010/0276/F	Between 550m north-east and 70m south-east of 5 Knock Road, Douglas Bridge, Strabane	Construction of weir and water intake structure, underground pipe line and underground hydro electric powerhouse.	Deemed Refusal
J/2011/0190/F	Between 550m NE and 70m SE of 5 Knock Road Douglas Bridge Strabane	Construction of weir and water intake structure, underground pipeline and underground hydro electric powerhouse.	Granted
J/2011/0193/F	100m due North of 11 Grove Road Castlederg	Micro-Hydroelectric renewable energy system 20kw on the border burn stream. To supply electricity for use on site with any excess exported to the grid.	Granted
A/2011/0219/F	lands adjacent to 41 Lower Ballyartan Road Lettermuck Claudy Londonderry	Proposed installation of an Archimedes screw hydro-electric turbine including fish pass, modifications to existing intake, alterations to existing mill race and construction of a new turbine house.	Under consideration
A/2011/0242/F	To rear of 73 Glenshane Road Drumahoe.	To reinstate a hydroelectric, renewable energy system on the Faughan river using an existing weir, restored mill race and installation of a fish friendly archimedes	Application withdrawn

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		screw turbine. Capacity 109 KW.	
A/2011/0246/F	Lands at Ardmore mill complex Bleach Green, Green Road Ardmore	Proposed redevelopment of hydro-electric scheme to include replacement weir and intake structure, mill race and penstock, new turbine house and water outfall structure.	Refused
A/2011/0516/F	Turbine house 50m north west of 10 Altinure Road Park Claudy. Intake structure 330m south south east of Turbine House.	To develop a microhydro electricity generating renewable energy system (5kw) on the adjoining stream on the outskirts of Park, Claudy. Electricity generated will be exported to the grid.	Under Consideration
A/2012/0005/F	Turbine house is 120m ssw of 59 Barnes Road Claudy and intake structure is 650m sse of 59 Barnes Road Claudy	To develop a microhydro electricity generating renewable energy system (20kw) on a tributary stream joining Sluggada Burn. Electricity generated to be exported to the grid.	Application withdrawn
J/2012/0087/F	Turbine House 150m NW Of 44 Lettercran Road Castledearg. Intake Structure 800m Due South Of 41 Lettercarn Road Castledearg	To develop a microhydro electricity renewable energy system (16kW) on a mountain stream flowing into the Fairywater River. Electricity generated to be exported to the grid.	Granted
J/2012/0403/F	305m south west of 21 Warren Road Dunamanagh Co Tyrone	Hydro electric scheme. Construct an intake and turbine house. Connect the intake to the turbine house via a buried pipeline. Develop the site to produce hydroelectric power to supply the grid.	Granted

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A/2012/0553/F	Lands Adjacent To 41 Lower Ballyartan Road Lettermuck Claudy Londonderry BT47 3SY	Proposed installation of a fish pass to existing weir. Application associated with current planning application - A/2011/0219/F - Proposed Archimedes screw hydro electric turbine.	Under Consideration
J/2013/0322/F	Turbine house 100m SWW of 36 Station Road Ballymagorry Co Tyrone - Intake structure 260m NEE of 36 Station Road Ballymagorry Co Tyrone	To develop a microhydro electricity generating renewable energy system (124kw) on the Glenmornan River on the outskirts of Ballymagorry. Electricity generated to be exported to the grid.	Under Consideration
LA11/2015/0592/F	Development with Baronscourt Estate and Turbine House locates 198m sw Baronscourt Mansion House. Intake 1 located 2000m east of Baronscourt Mansion House. Intake 2 located 1600m east of Baronscourt Manison House. Intake 3 located 1200 m south east of Baronscourt Mansion House. Intake 4 located 1350m south east of Baronscourt Mansion House.	Proposed construction and installation of 45kW Hydro Electric turbine including, 4 intakes, associated penstock, Turbine House and return point to Lough Fanny.	Deemed Refused