



Response by the

Northern Ireland Energy Agency

to the Utility Regulator's Consultation on

'Sustainable Development

The Regulator's Role'

Northern Ireland Energy Agency

The Northern Ireland Energy Agency was formed in 2007 and is part of the Bryson Charitable Group. Our aim is “to secure the support and active engagement of Northern Ireland’s energy users, particularly households, in implementing strategies, programmes and measures to combat climate change.”

The Agency plays a central role in changing attitudes and behaviors and promotes action by householders and not-for-profit organisations on

- Energy efficiency
- Renewable energy
- Low carbon transport
- Water
- Waste

The Agency employs 33 staff across its three offices in Belfast, L’Derry and Enniskillen. The single Agency was formed from a merger of three local energy agencies (Belfast Energy Agency, Foyle Regional Energy Agency & Western Regional Energy Agency & Network) which were set up in the 1990s in partnership with DETI’s predecessor DED with the financial support of the European Commission under its PERU, SAVE and SAVE II programmes.

Executive Summary

Northern Ireland Energy Agency welcomes the opportunity to comment on the Utility Regulator’s consultation on its role in Sustainable Development. The report is a welcome contribution to public policy discussion.

As demonstrated in the Stern Review, there is an economic imperative to act now since the longer society delays, the higher the costs will be. Therefore, it would be prudent to put stricter targets and mechanisms in place now to reduce emissions and aim to achieve stabilisation levels of CO₂.

The fact that the Northern Ireland carbon footprint is above the GB average is as a result of years of public policy. Northern Ireland has no nuclear electricity, had no gas for several decades, has an underdeveloped public transport system and hence over reliance on the private car and finally the failure to take action to curtail the activities of the dirtiest coal fired power station in the UK. NIAUR could remodel Northern Ireland’s carbon footprint as it would be if Kilroot were not there but were replaced by electricity of average CO₂ content and we had a level of gas penetration similar to Scotland’s.

It is important to recognise that while in the business sector energy is a cost and therefore there is a business incentive to manage this cost downwards, in the

domestic sector energy is treated as a consumer good – or an ancillary to a consumer good - and is therefore to be enjoyed for its own sake. While a business will logically seek ways to minimise its input costs in order to improve competitiveness/maximise profits a household's only incentive to manage its energy costs is as they run up against the constraints of income. All businesses in a given sector will tend to pollute equally per unit of production but in the household sectors some will be large polluters and others small polluters for the same level of household satisfaction. This raises the question of whether all should be equally penalised – should not the worst polluters pay more? Apart from issues of ability to pay and social justice it is probably the case that the marginal cost of pollution is higher than the average cost so that the marginal polluter should pay more. Northern Ireland Energy Agency therefore welcomes the suggestion in the consultation that there should be a rising block tariff system which would ensure that households which used large amounts of electricity paid more for their marginal units with the additional revenue used to improve energy efficiency in all households.

The Regulator can help to meet carbon reduction targets by providing further support to energy efficiency (EE) and renewable energy (RE) in Northern Ireland. Existing micro-generation incentives (mainly capital grants) have not had the effect of driving down capital costs, the Regulator could consider a feed-in tariff which has been highly successful in Europe e.g. Germany provides 35p/kWh for 20 years for green electricity. Higher production means that a 3kWp photovoltaic system in Germany now costs just £10,000 compared to around £17,000 in GB.

The Agency believes that ROCs should be replaced for all future renewable generation by feed-in tariffs for three reasons:

(1) for large scale renewables it is desirable to have a single system operating in SEM on a basis agreed between the two administrations

(2) it is desirable that incentives to renewables are efficient i.e. that they provide a predictable market environment and the assurance of a reasonable reward on investment and do not require the investor to take non technical risks on the possible future value of ROCs while at the same time avoid the consumer over – rewarding the cheapest/maturest technology

(3) for all technologies and for micro technologies in particular it is desirable to have the ability to customise REFIT tariffs to each technology and scale of technology so that householders in particular will be able to minimise the financing costs of their renewables by reducing the pay back period to a very short period.

We need to focus efforts to reduce our demand via energy efficiency and to increase the use of indigenous renewables at all scales. All forms of renewable generation need to be encouraged as no single method holds the key. The Northern Ireland Energy Agency believes that as the housing stock is replaced both fuel poverty and carbon emissions should be designed out of the housing stock. We would therefore support the proposal to have very high connection costs for new dwellings which could be rebated if appropriate energy and water standards were met.

A regulated framework for a utility seems to be a basic requirement both to establish public confidence and to provide a sound financial planning context within which to enable business to invest and grow. NIAUR should be given responsibility for providing a regulated framework for alternative sources of heating e.g. wood, ground and air source heat pumps and district/community heating schemes.

While extending the gas roll out would improve Northern Ireland's carbon footprint, it needs to be cost effective and gas must be affordable for the households which will get it. These households moreover require the confidence that gas will be affordable. This might require a way of organising the financing of incremental gas so that the price is stabilised at a prescribed and transparent level and customer's contribution to the infrastructure cost becomes a residual after the cost of gas has been paid. It might require underwriting by the NI Executive to make the necessary financial instrument financeable in the current economic climate.

The proposed review of energy efficiency delivery models should consider the existing methods for delivering energy advice. Is energy advice being well enough resourced to meet the scale of the problem we are faced with in Northern Ireland? Has the existing model of year to year funding of energy advice to a number of players resulted in demand for energy not being reduced and only enabled helped/contributed to keeping pace with demand growth. The Northern Ireland Energy Agency has spent 3 years piloting the Sustainable Energy Network approach and this has left us with a huge amount of learning and information on how we move forward. However the first year of roll-out has seen a dramatic cut back in the numbers we are targeting and essentially the resources available. This stop start approach will maintain the status quo whereby we are unable to 'get in there' with a concerted effort to reduce demand. The Regulator and others need to take a much more pro-active role in energy advice provision.

Consultation Response Pro Forma

Chapter 1

1.1 Respondents to the consultation are asked to comment on whether or not they think any of the proposals in this paper would impact on equality of opportunity or good relations for any of the Section 75 Groups.

With regard to discrimination – as the paper acknowledges – it is lower income families which suffer most. As far as article 75 is concerned this implies a duty to take measures to protect those with dependants and chronic health problems.

Chapter 3

3.1 Respondents are asked to comment on the balance between present and future climate change costs.

As demonstrated in the Stern Review, there is an economic imperative to act now since the longer society delays, the higher the costs will be. Therefore, it would be prudent to put stricter targets and mechanisms in place now to reduce emissions and aim to achieve stabilisation levels of CO₂.

Climate change is a global issue and industrialised nations will also need to assist developing nations, e.g. via technology transfer, if we are to achieve global carbon reduction targets. The present generation can and should reduce emissions and should also expect to bear the related costs, since future generations will be forced to bear the major costs of adapting to climate change caused by our actions.

The challenge for governments is to share the burden of costs equitably across global society, and to protect vulnerable groups within societies.

The Regulator can help to meet carbon reduction targets by providing further support to energy efficiency (EE) and renewable energy (RE) in Northern Ireland e.g. by increasing funds available for EE through the Climate Change Levy, and by introducing REFIT tariffs which are well targeted on each technology at the micro scale..

Since existing micro-generation incentives (mainly capital grants) have not had the effect of driving down capital costs, the Regulator could consider a feed-in tariff which has been highly successful in Europe e.g. Germany provides 35p/kWh for 20 years for green electricity. Higher production means that a 3kWp photovoltaic system in Germany now costs just £10,000 compared to around £17,000 in GB.

With regard to price elasticity of demand - it might be expected that the price elasticity of electricity would be a function of the income of households – i.e. that

poorer households would be more price sensitive and that for all households the elasticity would increase further up the price curve i.e. that the effect on demand of a 10% price increase from a cost per unit of 20p would be greater than the effect of a 10% increase on 10p per kw/h. It may not be possible to test this empirically but if it is correct it does have policy implications.

There is an absence of a recognition that present market structures nullify any incentive for consumers to move to low carbon fuels for electricity. This is because - in so far as the price of electricity is set by the fossil fuel producer whose cost includes an increasing element of the cost of carbon and the renewable producer is a price taker who receives this price - the person purchasing renewable electricity is also paying for carbon even though no carbon is being emitted. This is a fundamental flaw in the market model as well as representing a major injustice. Consumers of renewable electricity should not be paying for carbon they are not causing to be emitted.

One way of dealing with this might be to levy the excess to requirements carbon receipts of renewable producers and either apply them to cost reductions across the system or apply them to expand the production of renewables.

3.2 Respondents are asked to give their views on the relationship between sustainability and security and diversity of supply.

While Northern Ireland has achieved carbon reduction by increasing the availability of natural gas, and the commissioning of CCGT electricity generating plants, gas is a fossil fuel and therefore is not sustainable. Furthermore, gas supplies may not always be secure and Northern Ireland is extremely vulnerable being at the end of the pipe line.

We need to focus efforts to reduce our demand via energy efficiency and to increase the use of indigenous renewables at all scales. All forms of renewable generation need to be encouraged as no single method holds the key.

The Interconnector could provide an opportunity to use pumped storage sites – perhaps in the ROI? (Scotland has potential for pumped storage.)

Biomass unlike wind is not intermittent. Northern Ireland should be more focused on a strategy to convert oil to biomass at a domestic level, as well as Co-firing at the power stations. Biomass CHP e.g. Balcas and biomass district heating e.g. Woodbrook, Eco Village, Lisburn should become much more of the 'norm' in Northern Ireland.

Microgeneration is also an important part of the mix for Northern Ireland and we should be looking to maximise domestic and community renewable installations.

Decentralisation of power generation i.e. a larger number of smaller generating plants serving local areas would be part of a solution to ensuring security and diversity of supply.

The Northern Ireland Energy Agency believes that as the housing stock is replaced both fuel poverty and carbon emissions should be designed out of the housing stock. We would therefore support the proposal to have very high connection costs for new dwellings which could be rebated if appropriate energy and water standards were met.

3.3 Respondents are asked to give their views on the degree to which sustainability issues should drive the Utility Regulator’s first NI water price review.

Sustainability issues must be considered but balanced against the cost to the consumer. Water is essential for life and high cost could jeopardise human health. It is paramount that we have an equitable tariff system – and the protection of vulnerable groups should be at its core. Metering of all properties while expensive would focus the consumer on what they are using and give them an incentive to conserve water. We must also have a campaign in place to educate the consumer on the importance of water conservation and the methods available to them to reduce reliance on potable water for tasks such as watering plants, washing the car etc.

The installation of water butts and the use of other water efficient appliances e.g. washing machines, dishwashers must be brought to the attention of the consumer and sold with other carbon saving messages.

3.5 Respondents are asked to consider whether a monetary value of CO₂ equivalent or shadow price of carbon ought to be included within guidance on use of business cases.

3.6 Respondents are asked to indicate their preference for inclusion of “carbon footprint” monitoring and target setting within the new regulatory contract at the first NIW price review.

3.7 Respondents are asked to consider the benefits of going beyond the “Economic Level of Leakage”, possibly by the inclusion of the carbon shadow price in calculations.

3.8 Respondents are asked to consider the degree to which NIW should be incentivised to increase its uptake of renewable energy and reduce its non-CO₂ gas emissions and mechanisms by which this might be achieved.

NIW should seek to develop its own energy sources from its own resources so that it purchases electricity at cost thereby minimising costs long term and minimising pollution. It should finance this by re-phasing its capital programmes.

Chapter 4

<p>4.1 Respondents are asked to rate the following existing instruments from 1-10 (1 being poor 10 being excellent) for the following characteristics:</p> <p>A Profile (do enough people know about the work)</p> <p>B Ability to protect customers</p> <p>C Ability to influence consumers to be more energy / water efficient or change to a lower carbon fuel</p>			
Measure	Profile	Ability to protect customers	Ability to influence
<p>The NIE SMART Programme</p> <p>Gas Industry Promotion</p> <p>The Energy Efficiency Levy</p> <p>Price Controls</p> <p>Key Pad Metering</p> <p>Energy Efficiency Advice Provision</p> <p>NIW Sustainability Report</p> <p>NIW Environment Management System</p> <p>NIW promotion of water efficiency</p>			
Chapter 5			
5.1 Respondents are asked to comment on the balance of the Utility Regulator’s duty to protect present and future customers.			
5.2 Respondents are asked to comment on the appropriate role of and nature of statutory guidance from Ministers to the Utility Regulator.			
5.3 Respondents are asked to highlight actions that they consider might be appropriate or necessary, but that could not be taken under the Utility Regulator’s existing powers.			

A regulated framework for a utility seems to be a basic requirement both to establish public confidence and to provide a sound financial planning context within which to enable business to invest and grow. NIAUR should be given responsibility for providing a regulated framework for alternative sources of heating – e.g. wood, ground and air source heat pumps and district/community heating schemes.

5.4 Respondents are asked to comment on whether the Utility Regulator should seek to be designated under section 25 (1) of the Northern Ireland (Miscellaneous Provisions) Act 2006.

Chapter 6

6.1 Respondents are asked to comment on the three main roles for the Utility Regulator identified in chapter 6 of this paper as:

- **gathering and publishing evidence,**
- **contributing to wider energy policy,**
- **regulating differently.**

The Utility Regulator has a role to play all of the above.

6.2 Respondents are asked to comment on data, which would be useful but, which is currently unavailable on a regular basis in Northern Ireland.

Data should be available at least at a postcode level on measures funded by the utilities e.g. levy schemes should show the location of scheme recipients. Ideally a database should be used to capture details on all Northern Ireland domestic properties (perhaps a tool such as NI SED managed by EST). This would vastly enhance the data detail and application of findings by all partners – ultimately enhancing ‘Hot-Spot’ targeting of the more vulnerable Utility consumers and maximising the effectiveness of energy efficiency advice/measure up-take.

6.3 Respondents are asked to suggest innovative methods of developing and promoting the gas industry as a means of reducing Northern Ireland’s carbon foot print.

While extending the gas roll out would improve Northern Ireland’s carbon footprint it needs to be cost effective and gas must be affordable for the households which will get it, who moreover require the confidence that it will be affordable. This might require a way of organising the financing of incremental gas so that the customer’s contribution to the infrastructure cost becomes a residual after the cost of gas has been paid. It might require underwriting by the NI Executive to make the necessary financial instrument financeable in the current economic climate.

The Regulators is also aware that “the UK’s indigenous gas supply is diminishing. By 2020 up to 80% of the UK’s gas will be imported” ‘Parliamentary Office of Science and Technology, Oct 2004’, as a result it is not the long term answer for

Northern Ireland.

The development and installation of CHP should be pursued and would see a tangible and measurable reduction in Northern Ireland's carbon foot print.

6.4 Respondents are asked how the solid fuel and oil industries could contribute to social and environmental sustainability? In addition what approach will best achieve this aim?

Oil is the largest home heating fuel in Northern Ireland and yet it remains unregulated. It is an industry rife with unsafe practices, for example filling oil tanks from a lorry with the hose running through the domestic dwelling, DIY installations of boilers, poor levels of servicing etc. etc. These issues all feed into social and environmental sustainability and could be addressed through effective regulation of the industry.

The larger oil and solid fuel suppliers will be subject to the Energy Services Directive and this should start to make an impact as it rolls out.

At present small to medium sized solid fuel and oil domestic suppliers are not under any mandatory governance. Perhaps a local voluntary code that provides a framework for small solid fuel and oil companies to offer energy services; integrated sales of products and technology. Measures such as loft insulation or cavity –wall insulation could be promoted through partnerships within existing schemes for example the Levy.

6.5 Respondents are asked if the regulatory model used to develop the natural gas network could provide lessons for the promotion of efficient and coordinated heat networks? Do respondents believe that better regulation could aid the development of the community heat industry?

NIAUR should be given responsibility for providing a regulated framework for alternative sources of heating – e.g. wood, ground and air source heat pumps and district/community heating schemes.

Chapter 7

7.1 The Utility Regulator considers that the following are important when assessing policy proposals. Respondents are asked to score each of the proposals in chapter 7 of this document from 1-10 on the basis of their potential in relation to the following measures:

- 1 Potential Certainty of Outcome**
- 2 Potential Cost effectiveness**
- 3 Certainty for investors**

4	Potential to provide equity for consumers
5	Potential to encourage innovation
6	Good fit with other NI government departments
7	Good fit with competitive energy markets

The proposals are summarised as follows:

	1	2	3	4	5	6	7
a. Cross utility licence condition requiring licensees to have in place environmental policies.							
b. Cross utility requirement to report annually of sustainability activities and initiatives.							
c. Requirements on licence holders to provide customers with environmental information in relation to fuel mix in a uniform and easy to understand format, on all bills and promotional literature.							
d. Strategic investigation into use of “Smart Meters” as a mechanism for delivering better quality and timely information to customers.							
e. Work with energy licence holders to assess current tariff structures.							
f. Continue to work with partners and stakeholders to ensure renewable generation can be equitably accommodated on the electricity network.							
g. Ensure price control processes take into consideration the effect of climate change on electricity and gas networks.							
h. Carry out a full strategic review of energy efficiency delivery mechanisms							
i. Develop a strategy in relation to gas promotion, which considers the potential benefits of common arrangements for the transmission and distribution of gas on the island							

of Ireland.							
j. Developing sustainability within the NIW price control							
k. Improving our own practices and procedures.							

7.2 Respondents are asked to identify what they consider to be the top three priorities from the above list of proposals and rank them in order of importance.

H. The proposed review of energy efficiency delivery models should consider the existing methods for delivering energy advice. Is energy advice being well enough resourced to meet the scale of the problem we are faced with in Northern Ireland? Has the existing model of year to year funding of energy advice to a number of players resulted in demand for energy not being reduced and only enabled helped/contributed to keeping pace with demand growth. The Northern Ireland Energy Agency has spent 3 years piloting the Sustainable Energy Network approach and this has left us with a huge amount of learning and information on how we move forward. However the first year of roll-out has seen a dramatic cut back in the numbers we are targeting and essentially the resources available. This stop start approach will maintain the status quo whereby we are unable to 'get in there' with a concerted effort to reduce demand. The Regulator and others need to take a much more pro-active role in energy advice provision.

We believe that a clearly focussed not for profit voluntary sector organisation enthusiastically sponsored by Government but not controlled by it and working in close partnership with energy providers and other statutory bodies and agencies is essential if the "bottom up" appetite for carbon is to be challenged successfully by a "bottom up low carbon" alternative (NIEA 2007).

7.3 Respondents are asked to list any further proposals which they think should be considered.

The Agency believes that ROCs should be replaced for all future renewable generation by feed-in tariffs for three reasons: (a) for large scale renewables it is desirable to have a single system operating in SEM on a basis agreed between the two administrations;(b) it is desirable that incentives to renewables are efficient ie that they provide a predictable market environment and the assurance of a reasonable reward on investment and do not require the investor to take non technical risks on the possible future value of ROCs while at the same time avoid the consumer over –rewarding the cheapest/maturest technology; and (c) for all technologies and for micro technologies in particular it is desirable to have the ability to customise REFIT tariffs to each technology and scale of technology so that householders in particular will be able to

minimise the financing costs of their renewables by reducing the pay back period to a very short period.

The Regulator should consider placing a requirement on the utilities (water and energy) to fund independent advice provision for the Northern Ireland consumer. This would ensure that a long term plan could be put in place to reduce demand for energy and water with all the major stakeholders buying-in. In addition, this approach would be a consumer focused step by the Regulator and bring all utilities under a single energy saving brand and message.