An Taisce
The National Trust for Ireland

Renewable Electricity Support Scheme Consultation

SEPTEMBER 2015

Ireland's current Renewable Energy Support Scheme regime, in conjunction with current national energy policy needs to be comprehensively reviewed to address a fast changing world where the imperative for energy decarbonisation is mounting

1. KEY ISSUES FOR THE SUCCESS OF THIS CONSULTATION

The success of this consultation and the required reform of process, policy, eligibility, technologies supported and strategic planning and tariff regimes as set out in the consultation document will be dependent on how it addresses the imperative of meeting Irelands Carbon Budget.

This requires review of policy and support measures which is science based and costs carbon according to its real impact.

This consultation needs to address as key issues:

1) The changed circumstances internationally and in Ireland since adoption of current policies;
2) The lack of current effective action on efficiency and demand reduction;
3) The inadequacy of current renewable target measures, creating a moving target, in a time of rising energy demand;
4) The need to plan for major new energy demand users including Data Centres;
5) The strategic foundation needed for the much greater levels for decarbonisation required post 2020;
6) The advance in the viability of solar technology;
7) The growing level of local community opposition to terrestrial wind energy projects;
8) The mounting recognition of the unsustainably of imported biomass burning for electric generation as proposed in the Mayo Power plant in Killala or Bord na Mona for co firing with peat;
9) The constraints and limitations of bio energy generally. Biomass as with biofuel is not carbon neutral and different biomass feed sources whether nationally produced or imported, have significantly different carbon emission impacts. DCENR is currently engaged in a stakeholder consultation process on the national Bio energy Action Plan. Bio energy may have a particular role

in rural catchment areas but is not the solution to electricity generation or the scale of heating demand in urban areas;

10) The failure to provide feed in tariffs to incentivise micro generation and community or cooperative energy projects;
11) The status of wave and tidal generation remaining at least for the remaining decade at the level of small scale prototypes, with uncertainty over large scale application and environmental impact on marine life.

Ireland's national 40% wind energy generation target by 2020 is based on regional distribution of turbines, increased interconnection with UK and grid reinforcement. The pylons proposed to enhance interconnectivity and grid distribution are now a source of major conflict in the areas affected.

However even with enhanced interconnection there is a limit by which any national grid can depend on wind and there is no evidence that the viable technology for storage capacity is achievable within any immediate timeframe. This limits the role of wind in the post 2020 period with any additional wind capacity dependent on inter connectivity likely to be largely exported rather than capable of contributing to national emission reductions.

2. OVERARCHING POLICY RECOMMENDATIONS

2.1 INTEGRATING NATIONAL POLICY TO SUPPORT THE CARBON BUDGET

The meeting of Irelands Carbon Budget needs to be an overarching objective of national energy policy. (See attached 1)

In the immediate term is the need to achieve 2020 renewable energy targets to which Ireland has made an EU commitment, and putting in place of the policies, process, policy fiscal regime to achieve the higher targets needed up to 2030.

Energy requires an integrated scientific and policy framework. The DCENR Energy green paper process as currently formulated is based on a misguided approach of three "balanced" pillars of: Sustainability, Competitiveness and Security. Having competing "pillars" means conflict, particularly if short term economic growth considerations are allowed to dominate.

There is one overriding consideration. That is to achieve all-embracing sustainability in meeting the climate science dictated Carbon Budget.

2.2. REDUCING DEMAND AND INCENTIVISING EFFICIENCY

The strategic objective of the 40% target is being undermined by rising demand, and new demand sources. The consultation document states that its achievement will be "challenging"

Section 5.10 of the DCENR consultation document states:

> *"In terms of progress to the 2020 target, in 2014, provisional figures indicate that 22.6% of electricity, 6.7% of heat and 5.2% of transport, were met from renewable sources. To date wind energy has been the largest driver of growth in renewable electricity in Ireland. In 2013, 18.2% of Ireland's electricity demand was met by wind generation."*

Ireland is not advancing the action needed energy demand through efficiency. Chapter 3 of the 2015 Eirgrid Grid 25 Consultation in justifying continued grid expansion including the Meath Monaghan to Northern Ireland 400KV pylons interconnector stated:

> "*Electricity demand in Ireland has closely matched recent economic volatility. Following a 7.1% fall in demand between 2008 and 2012, electricity demand grew once again in 2013 by 1.1%. This was in line with an increase of 3.4% of Ireland's Gross National Product. The demand for electricity is now expected to grow on average by 1.3% per annum from now to 2025."*

This uncritical assumption of increase in primary annual generating demand is not tenable. If Ireland is to reduce emissions to the per capita levels required by developed countries (to meet a minimum 2 Degree global atmospheric temperature warming over pre industrial levels as required by the Copenhagen Accord), demand reduction through efficiency must play a parallel role to the decarbonisation of energy production and use.

The real value of a percentage based renewable target is undermined, if the power demand is allowed to increase resulting in a moving target.

Proceeding with individual energy projects and initiatives including wind energy projects and allowing new major energy uses such as data centres is ill-advised without such a strategy which would identify and address the question of how much energy Ireland will require in future years, the sources of this energy, the ongoing role of efficiency savings priorities, and the appropriate location of new energy consuming developments

The focus must not just lie on the residential or general building use sector. There needs to be specific focus on demand reduction across all areas of energy use particularly for major industrial users including mining, cement, IT, pharmaceuticals and food processing.

2.3 PROMOTE COMMUNITY STAKEHOLDER ENGAGEMENT

The development of grid infrastructure and wind energy schemes is causing increased opposition from rural communities. This needs to be met by proper engagement as required under the Arhaus Convention, and the support of community shareholding and energy co-operative structures. This was a major theme of the Energy Summit 2015 held in Santry earlier this year.

3. SPECIFIC FEED IN TARIFF SCHEMES AND POLICY ACTIONS

3.1 INCENTIVISE INDIVIDUAL COMMUNITY AND LOCAL MICRO GENERATION

Ireland is one of the only countries in Europe that does not pay Microgenerators for excess electricity exported to the Grid. Microgenerators should receive payment for the electricity they generate .This requires reconstitution of the remit of Electric Ireland to accommodate a micro generation FiT

For a community group microgeneration is an easy first step to participating in renewable energy generation and is empowering in providing citizens with the ability to generate their own electricity. Requiring micro generators to give away their excess electricity to the grid for free limits installations to the maximum base load, limits installation generation capacity and optimisation of local networks.

3.2 SUPPORT SOLAR PV DEVELOPMENT

The Renewable Electricity support scheme should introduce a payment for solar electricity at all levels.

The objective to achieve a range of incentives to support use of roofs on domestic, commercial and other buildings, as well as solar farming on land.

The major recent initiative by the French Government in promoting solar PV roof development needs to be examined.

http://www.theguardian.com/world/2015/mar/20/france-decrees-new-rooftops-must-be-covered-in-plants-or-solar-panels

Solar PV is an excellent distributive renewable energy source ideal for local and community placement. Solar PV is also the most viable and may be the only option available to citizens living in urban areas where electricity generation opportunities are restricted by the physical environment. Installing Solar on domestic or business rooftops allows citizens to become producers and thereby become energy aware of their own production and consumption. Whilst not all communities have the resources for a wind development, all communities have rooftops aplenty - communal buildings, community buildings, schools and individuals homes.

While the growing potential of land based solar farms is being recognised, it is important this this does not monopolise solar PV investment capacity, and that individual domestic as well as roof top investment is encouraged, both for new build and retrofitting.

Traditionally across Europe 65% of Solar PV generation is in Rooftop solar placed on Commercial or Industrial businesses as well as Domestic buildings. Each of the later three segments is approximately 20% of the total PV market. PV parks are traditionally only 35% of total solar PV generation. Therefore a FiT for Rooftop is important to adoption and incentivisation of such renewable technology

3.3. SUPPORT COMMUNITY DEVELOPMENT

A FiT for co-operative Community owned renewable development is needed to incentivise renewable investment at local level.

This needs to recognise the additional burdens faced by communities developing individual projects within their locality, and the wider societal benefits that a community energy project delivers including, awareness of energy use, support, local jobs and local income. Templederry, Co. Tipperary the only community owned Wind Farm in Ireland is a pioneering development. With a stable and favourable support payment mechanism in place, other communities could follow in the footsteps of this community to invest in and generate local income and jobs directly from the natural resources in their communities. The impediment created by the current Gate system for grid entry by smaller scale community projects needs to be addressed.

4. BUDGETARY AND FISCAL SUPPORT

The core principle in energy policy and budgeting should be based on the progressive and socially proofed increase in carbon tax, with the income ring fenced to support efficiency and decarbonisation

In Jan 2014 The European Investment Bank published notice of funding opportunity for energy efficiency.

http://www.eib.org/attachments/thematic/renewable_energy_en.pdf

ENCL: Attachment 1

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Limiting climate change requires limiting future greenhouse emissions:

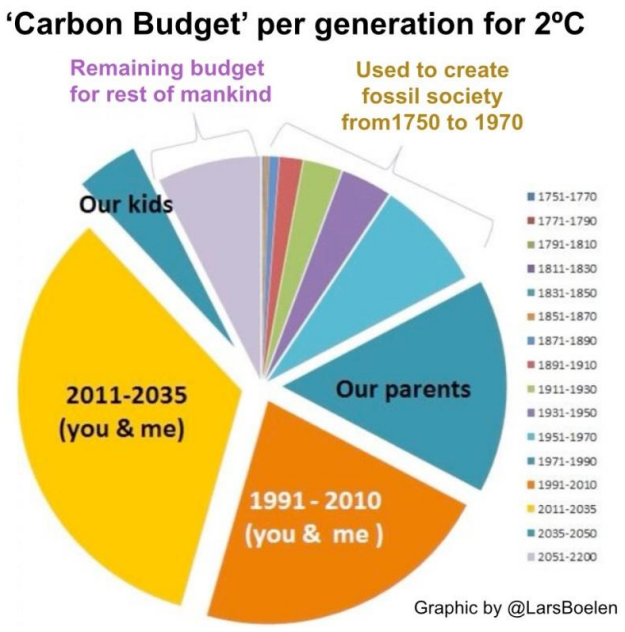
Once our 'safe' carbon budget is gone, it is gone forever

The rapid global warming and resulting climate change now taking place has a simple cause: every addition of carbon dioxide (CO_2) due to human activity traps a corresponding additional amount of solar energy in Earth's atmosphere and ocean. The agreed 2ºC limit to global warming (above pre-industrial temperatures) therefore requires an absolute limit on the nett carbon emissions that can *ever* be emitted globally. This warming due to the accumulation of CO_2, is essentially irreversible on human timescales – once emitted the CO_2 levels remain raised. Therefore, limiting climate change will require substantial and sustained reductions of greenhouse gas emissions from now on. At some point net emissions will need to be zero to stop further warming. This maximum remaining total amount of future CO_2 emissions to limit warming to 2ºC is called the 'global carbon budget'. If this quota is used up more warming above 2ºC will become ever more dangerous.

Even such a small change in the Earth's average surface temperature can have profound changes on the climate, geography, and biosphere that are the basis for all life, and for modern society, including the supply of crops for food. During the last ice age the average global temperature was only about 5ºC colder than today, yet sea level was 120m (400ft) lower and many areas peopled today were deep under ice. In the last 10,000 years, a very stable climate due to very steady natural CO_2 levels, enabled agricultural civilisation to emerge and to thrive. Regaining stability will only now be possible if emissions are cut globally and rapidly.

The problem for modern human civilization, which depends on large scale burning of fossil fuels for energy, thereby releasing CO_2, is that, at current, fast increasing rates of annual emissions, the remaining 2ºC global carbon budget will be entirely exhausted within as little as 15 and at most 30 years. Moreover, there is enough carbon stored in proven reserves of peat, coal, oil and gas to result in extremely dangerous global warming of 6ºC or even more. A low carbon pathway is urgently needed.

Due to greenhouse gases from fossil fuel burning, livestock agriculture and deforestation, about 0.8ºC of warming has so far occurred since industrialisation. Now though, due to rapidly rising CO_2 – and also due to other greenhouse gases, especially methane – oceans and atmosphere are warming very rapidly, accumulating very large amounts of additional solar energy. Continuing the current pathway of ever increasing emissions would mean that a rise of 4ºC is entirely possible by 2100. This is a very dangerous rate of warming, faster than any rise known, even faster than during geological extinction events.



2ºC global carbon budget: *more than a third of emissions have been produced since 1970. The available remaining budget to limit warming to 2ºC is being exhausted rapidly.*

On this dangerous track, it is quite certain that within ninety years every part of the world will be entirely changed and will be continuing to change, with very serious negative consequences for human civilisation and for all ecosystems. The only certain way for humanity to limit dangerous climate risk is to limit emissions within the available carbon budget. Rapid and major changes in consumption patterns and energy production are needed. To do this at least cost means starting very soon and proceeding very quickly. The biggest question for humanity is how to divide the 2ºC carbon budget equably between nations and future generations. There is no doubt though, that the greatest responsibility to act for change, and act fast, lies with wealthy nations and institutions, to chart and lead a safer course for all.

Carbon Budget *summary for the* ***Stop Climate Chaos*** *coalition by An Taisce's climate change committee.*