Sustainable Democratic Energy for Ireland and Europe

A case for renewables and participation

By Dan Boyle

GREEN EUROPEAN FOUNDATION

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Introduction

Little more than thirty years ago a standard text book on geography, which second level students in Ireland used, opened with the sentence "Ireland has few natural resources". By natural resources the book's author had meant fossil fuels. By this narrow definition Ireland has had few natural resources. Peat existed and has been cut for generations, perhaps too enthusiastically as now there are habitat consequences. Small coalfields were quickly spent. A medium sized gas field was discovered off the south west coast and has provided 25 years of some comfort. So if natural resources are fossil fuel deposits there could be no arguing that Ireland had few such resources.

Many European countries also have issues with energy dependency and security. Some such as the United Kingdom and Norway have had the benefit of significant oil and gas fields, but these too will soon be expended. In the case of the UK current reserves are 5.5 billion barrels currently being extracted at a rate of 2.5 million barrels a day (source BBC). Gas production in Norway reached a record high in 2012 and will plateau for a number of years, before starting a slow decline in 2020 (source Rune Likvern – The Oil Drum). Ireland, while sharing an experience common throughout Europe, has had one of the highest ratios of dependence on imported fossil fuels both as a primary source of energy and as a means of generating electricity.

In these times the debate on worldwide fossil fuel reserves is about when the reserves become depleted not if. Because of this debate we have become slightly better informed as to what our natural resources really are. Tapping into abundant energy sources derived from the sun, from wind and from water is the challenge of this age. Of these resources, with wind and water in particular, Ireland is as strong as many other countries and stronger than most.

However fulfilling this potential means harnessing available and developing technology and marrying this technology in creating an infrastructure that can create energy sustainably, while delivering the energy created to where it can be consumed.

Developing such an infrastructure means confronting many issues of environmental concern from issues of landscape, to threats to habitat, to fears of electromagnetic radiation, to public safety fears of high voltage electricity. The reasons for saying no and seeking to delay are manifold.

Time is needed with every project to ensure that those who need to be informed, are informed and that every decision arrived at has the involvement and agreement of those affected by such decisions. But neither should time be misused so that windows of opportunity begin to be missed.

This report is an attempt to examine how greater public awareness of the issue of energy security can be got across, how the potential of renewable energy can be reached, and how the relevant infrastructure can be developed speedily through informed public consent.

While the issues within this report are relevant throughout the European Union, it is hoped that, by using the example of Ireland and by contrasting experiences there with examples found elsewhere in Europe, progress can be made in this area.

The lessons of environmental campaigns that have questioned and opposed damage and potential damage caused by the infrastructure developed for energy created through fossil fuels, are now being used by some in relation to infrastructure for renewable energy. How decisions can be made quickly and in the most integrated and involved way is the challenge that needs to be met.

1. Energy Use in the European Union and in Ireland – renewable goals and participatory practices

The case for renewables

In 2012 the Sustaintable Energy Authority of Ireland produced a report – Energy Security in Ireland: A Statistical Overview. This report includes some of the most up to date statistics on renewable energy production in Ireland, contrasting this with trends existing within the European Union.

The Authority has as its remit the promotion of innovative technologies as well as encouraging the greater development and uptake of low carbon energy sources. Within its organisation it has a specialist statistical unit (the Energy Policy Statistical Support Unit – EPSSU). This unit's role is to collect, process and publish energy statistics to support policy analysis and development in line with national needs and international obligations; conduct statistical and economic analyses of energy services sectors and sustainable energy options; and to contribute to the development and promulgation of appropriate sustainability indicators.

The report highlighted that Ireland's import dependency for energy in 2008 was 89% and 88% in 2009. This has been well above the European Union average of 55% in 2008. In 1994 Ireland's import dependency had been 67% but it increased to 89% by 2001 and has remained at around 90% for the last decade. The reason for this marked increase was partly large scale economic growth during the period but was just as likely caused by the ongoing depletion of the only active natural gas field off the south west coast of the country.

Ireland has sought to mirror and, where possible, exceed targets agreed by the European Union. With its evolution from the European Coal and Steel Community and with the Euratom treaty as one of its foundation documents, it has taken a considerable time to ween the European Union from its attachment to traditional means of energy production. Because of this it wasn't until 2005 that a mandatory and comprehensive European energy policy was approved. The Treaty of Lisbon (2007) now legally includes solidarity in matters of supply and changes to the energy policy within the EU. Before the adoption of this Treaty, European Union energy legislation has been based on the EU authority in the areas of the common market and the environment. However, in practice many policy competencies in relation to energy remain at national member state level, and progress in policy at European level requires voluntary co-operation by member states.

The largely national competencies in energy policy has led to a variety of different national energy approaches within the European Union. France has chosen a near total reliance on nuclear energy to produce electricity whereas Germany has chosen to phase out all and not renew any of its nuclear plants.

The European Union currently imports 82% of its oil and 57% of its gas, making it the world's leading importer of these fuels. Even those EU countries that choose to have a greater nuclear mix in their energy make up, do little to achieve greater energy security as only 3% of the uranium used in European nuclear reactors is mined in Europe. Russia, Canada, Australia, Niger and Kazakhstan were the five largest suppliers of nuclear materials to the EU, supplying more than 75% of the total needs in 2009.

It's also fair to note that some renewable technologies, such as solar, require access to materials that themselves are not renewable.

These inconsistencies apart, the first common energy policy in 2005 has seen the European Union become more committed towards a more renewable path in energy production. The most recent statement of this intent is the publication in December 2011 of its Energy Roadmap 2050. Through this the European Union is committed to reducing greenhouse gas emissions to 80-95% below 1990 levels by 2050 in the context of necessary reductions by developed countries as a group. As a policy statement the Energy Roadmap seeks to meet the challenges posed by delivering this decarbonisation objective while at the same time ensuring security of energy supply. The statement is also honest in acknowledging the difficulty in addressing public concern in providing infrastructure regardless of the energy source.

"The current trend, in which nearly every energy technology is disputed and its use or deployment delayed, raises serious problems for investors and puts energy system changes at risk. Energy cannot be supplied without technology and infrastructure. In addition, cleaner energy has a cost. New pricing mechanisms and incentives might be needed but measures should be taken to ensure pricing schemes remain transparent and understandable to final consumers. Citizens need to be informed and engaged in the decision-making process, while technological choices need to take account of the local environment."

Some EU countries have adopted these principles more enthusiastically than others. Denmark, Germany and Spain have committed huge investments towards shifting their energy mix, with a considerable economic upside. Regional governments in some countries are seeking to replicate this enthusiasm. Scotland has recently announced the most ambitious target yet of 100% renewables by 2020.

Ireland has been making huge strides towards meeting the EU's 20% renewables target by 2020. From a very low base Ireland has trebled its production of electricity from renewables in the last five years alone. Last year its target of 40% renewable energy generation was achieved 103 days early.

The introduction of the Green Party into the Irish government in 2007 brought about the impetus for much of this change. Through force of persuasion then Energy Minister Eamon Ryan convinced all electricity generating companies to commit to a greater use of renewables. He initiated the process to produce two electricity interconnectors, one across the Irish Sea to the UK market and the second a north/south interconnector which would assist better management of the new pan-island electricity market which was established in 2009. While the east/west interconnector which entered into operation late last year will allow for the importation of electricity into Ireland, the long term intention is to export electricity produced in Ireland through renewable means, as part of a still to be developed, or indeed to be quantified, European Super Grid.

The low take up of renewables in Ireland up until recently, would have happened a lot earlier had there been appropriate political will. Ironically the first major electricity generation scheme in the early days of the Irish State was a hydro-electric scheme on the country's longest river, the River Shannon (opened June 1929). At the time it was the largest engineering project taking place in Europe. In an early example of pan European co-operation the plant was constructed and largely operated by engineers from the German company Siemens. Hydro was the only renewable method in

Ireland for several decades but few additional plants were brought into being. Most of the new plants were coal, oil, peat and in later years gas fired plants.

In the 1970s political discussion leaned towards the possibility of constructing a nuclear powered electricity generating plant. A site was identified at Carnsore Point in the south east corner of the country. A campaign of public opposition followed that convinced the then government not to further that proposal. Ironically, the same site was to become the location of a wind farm thirty years later.

The preoccupation at the time with the possibility of a nuclear future for Ireland caused the government to lose sight of the opportunities that were being created in the field of wind powered generation. More enlightened countries, such as Denmark and later Germany, began developing wind farms that became a larger and larger part of their electricity generation.

The early adoption of wind generation by these countries also allowed them to develop technology and become world leaders in the selling of this technology. It wouldn't be until the 21st century that Ireland would begin to make use of its natural advantages in wind. It has been playing catch up since.

Wind is now the main component of renewable electricity generation in Ireland. Despite having some potential solar has yet to make an impact here. Where a potentially huge capacity exists is in the areas of tidal and wave power. These are technologies that are still in a developmental phase, but despite this Ireland is establishing a lead that could be prove useful in the future.

The bias towards wind power is also accompanied by an ongoing debate about whether wind farms should be onshore or offshore. Currently most wind farms are onshore. One of the first offshore wind farms was introduced in shallow waters in the Irish sea. While a number of larger facilities have spent several years going through the planning system, none of them are at development phase due to the absence of an offshore refit payment scheme.

The generation of electricity is a large part of Ireland's energy usage but the country has to live with other factors that affect its dependence on energy imports. Situated on an island, away from the continental land mass on the western edge of Europe, obviously contributes to additional transport costs to and from as well as within the country.

The population distribution that sees 40% of people living in the greater Dublin area, with an underpopulated western seaboard with a large number of one off housing units, had led to a public transport system that is less developed than in other European countries.

The greater role that agriculture plays in the Irish economy is another factor that makes Ireland and its energy usage different. Some of these factors can be changed but many need to be recognised for the realities they are.

Ireland's energy needs must co-incide with Europe's energy needs. Irish dependence on imported energy sources is greater but the direction is the same. Because the need is greater so are the opportunities for Ireland. However, it is a window of opportunity that will only be available for a short number of years. Policy decisions need to be taken now with appropriate resources being provided. The goal should be to make Ireland a net energy exporter, and a large provider of the European Union's future energy needs.

The case for participation

To realise this potential a considerable amount of infrastructure needs to be put in place and quickly. Any such infrastructure will be of a largely permanent nature. Public consultation and buy in has to be an important part of the process of creating this infrastructure.

It may not have been until 2005 that a first common European Union approach to energy was formulated but much attention has been given since to the issue. Other European agencies have sought to encourage this interest further. Among these the Heinrich-Böll-Stiftung in October 2012 organised a workshop in Berlin entitled "Energy transition meets participation".

In preparation for this report former Minister for the Environment in Ireland, John Gormley, attended this workshop on behalf of Green Foundation Ireland. He outlined the challenge that faces Green politics in encouraging infrastructure that is needed to bring about positive green change.

Increasingly, Green parties throughout Europe and globally are confronted by the reality of protests against what is often described as 'green' infrastructure, be it public transport projects, wind turbines and associated grid expansion, flood protection measures , etc. Very often, these citizens' initiatives contain conscientious individuals, many of whom are Green party sympathisers or supporters. How then should Green parties deal with such protests and what valuable lessons can be learned from those Green parties that have the greatest experience in this regard?

He further pointed out that this workshop was taking place as news was coming from Germany of the referendum result in Baden Wurttemberg regarding the controversial Stuttgart 21 proposal. *The citizens in the region had decided - in a referendum initiated by the newly elected Green Minister President - by almost 60 per cent of those who voted, to continue with the public transport proposal. Not only was this an example of grass roots democracy, it also provided a type of blueprint on how a politically sensitive issue can be skilfully dealt with.*

Stuttgart 21 showed that decisions that are democratically arrived at, using the current models and institutions, are still frequently not accepted and questioned by citizens. It also showed that there is often a silent majority that accepts the legitimacy of the current decision making process. Nevertheless, a vocal minority often calls into question many aspects of planning procedures and law. There are many reasons for this alienation and distrust: a general distrust of state institutions and authority, contradictory information from experts and consultants, a perceived threat to health and the environment, quality of life and even peoples' livelihood.

As Greens we know only too well that CO_2 emission reductions cannot be achieved without the expansion of the European electricity Grid. So far this has proved to be enormously difficult. Greens find themselves fighting on a number of fronts. Not only are the nuclear industry and traditional electricity providers not enthusiastic about such proposals, local communities very often raise objections to new infrastructure.

As Greens committed to both direct and representative democracy how do we ensure the highest levels of participation, transparency and the highest standards of environmental practice in our planning process, while at the same time ensuring a much quicker turnaround time? We know that endless delays not only cost money but also undermine confidence in a project.

The challenge is to ensure that fast track planning of critical infrastructure goes hand in hand with the Green Party commitment to values like participation, transparency and full accountability.

A central question asked at this workshop was how to define what is meant by 'participation'. Does it mean receiving the information or actually partaking in the decision-making process itself?

That people want to and should participate in any process is a democratic ideal that too often does not fit in with the actual experience of the citizen. Very often it's only when the decision is made or when a project is just about to get off the ground that protests are organised. Politically, therefore, it's absolutely vital that necessary information be made available and participatory structures put in place. Available information also needs to be comprehensible.

The challenge is to get this done quickly and efficiently. Some argue that if greater inclusivity is achieved, even further delays in crucial infrastructure could occur. This is a legitimate concern for many in the green movement given the urgency now of making the shift to renewable energy. The counter argument is, however, that by including community and environmental groups from the very start you can ensure a much quicker outcome. It was felt too that many of the delays were not caused by objections per se but were caused by more mundane factors such as the inability or unwillingness of the authorities to provide the necessary documentation. Others have warned that even with green infrastructure planning decisions may be made which are determined simply by tax benefits or economic factors.

John Gormley believes that the Heinrich Boell Stiftung event did make a good start in pointing the way forward but also left some unanswered questions which, hopefully, will stimulate further debate.

(For John Gormley's full text see: http://gef.eu/home/dossiers/energy/view/energy-transition-meets-participation/)

This momentum was added to by the holding in November 2011 of a European Grid Conference entitled Beyond Public Opposition. Held at the European Parliament in Brussels, hosted by Green MEP Rebecca Harms and organised with the co-operation with Renewables-Grid-Initiative (RGI) and Smart Energy for Europe Platform (SEFEP), the conference was an important gathering of many of those involved in the renewable industry. The attendance and making of a keynote speech by the EU Commissioner for Energy, Günther H. Oettinger, stressed the importance of the event.

Conference organisers defined the agenda as follows: *'Thousands of kilometres of new lines need to be built today and in coming decades. However, public opposition is growing. To secure public support, new alliances across society are needed. It is necessary to bring more transparency to the grid business, to further develop participatory consultations and a toolbox for benefit sharing and compensation. Timely expansion of the grid will only be possible by including concerned citizens in the decision making process, and by addressing their legitimate concerns. How will the new legislation on permitting address these issues and stimulate understanding and support for grid expansion?'*

The theme of the conference was identifying and adding to the three building blocks for public acceptance – Transparency, Participation and Benefit Sharing. With the attendance of Commissioner Oettinger the conference was used as an opportunity to sign and launch a charter by renewable energy providers

stressing the importance of targets being reached in coming years.

Much work has been done on the subject of benefit sharing, especially in relation to wind farms. A number of useful papers/reports have been published on the subject. As part of its series on German Energy Transition the **Heinrich Boell Stiftung published** 'Revitalising Rural Communities through the Renewable Energy Co-operative' **by Amanda Bilek. In the United Kingdom the Joseph Rowntree Foundation published** 'Wind Energy and Justice for Disadvantaged Communities' **by Richard Cowell.**

What these and other publications have in common is an outline of the need for, and the desirability of, achieving direct and immediate economic impact for local communities, where possible through shared ownership.

2. Planning and Infrastructure – Case Studies and Legal Overview for Ireland

Forty years after the foundation of the Irish State, the first major piece of legislation codifying the making of planning decisions and public involvement in the making of those decisions – The Planning Act (1963) would be the mainstay of such legislation for the next forty years.

The Act allowed for planning decisions to be made at local government level, with overall responsibility resting with the Chief Executive (Manager) of each local council. Even with legislation in place, it has seemed for many years to have been only marginally observed. Many of the difficulties were practical. Resources weren't provided and often deliberate decisions were made not to employ specialist planners. Even when employed their recommendations were often ignored.

This legislation also detailed the process to be followed in allowing public consultation of each new planning application. This was largely to be through newspaper advertisement. At first this was widely abused as developers not wishing to engage with the public would place advertisements in newspapers distributed in areas far removed (often 500km) from the area proposed to be developed.The law was subsequently revised to insist that such advertisements be placed in nationally distributed newspapers. This still was not ideal as some newspaper titles are more popular than others. A further revision of the legislation required that a site notice be placed at the location for which planning permission was being sought. The placing of these notices has not always been where they would be seen by the maximum number of people. In any case it is now moot in a time where people get their information from the internet rather than from printed sources.

Things could be done differently, as a short look across the border reveals. In Scotland, which has systems largely similar to Ireland's on the public notification of planning applications, there is a significant initiative which is worthy of wider use. There it is required that a developer inform all adjoining landowners of their plans by way of registered post. Through this it can be ensured that those most directly affected by a planning development are made aware.

There is no reason that this cannot be a cornerstone of planning/permitting legislation in all European Union member states. Depending on the size of a development a requirement to notify the public of proposed developments

(p. 12) by post could be made according to predefined distances of 1km, 5km, or 10km.

Another Scottish initiative is the putting into place by its regional government of a web portal http://www.tellmescotland.gov.uk/ that allows interested people to investigate any newly made planning applications in any part of the country.

Meanwhile in Ireland, further complications were caused by a belief that developments initiated by the State, national government, local government or State agencies did not require planning permission. This belief, having been challenged and proven wrong by the Irish courts, led to demands for an independent planning appeals process.

The *Local Government (Planning and Development) Act 1976* established **An Bord Pleanála** (Irish for The Planning Board) as an independent, statutory, quasi-judicial body that decides on appeals from planning decisions made by local authorities in Ireland.

The Board has had a chequered history. It can be argued that many of its decisions are inconsistent, which, combined with the appointment of the Board by the government, are factors that undermine public confidence in its existence and operation. Nevertheless, the Board has seen its responsibilities extended. For large scale environmental projects local councils can refer directly to the Board. A further piece of legislation, the *Planning and Development (Strategic Infrastructure) Act 2006*, gave the Board the responsibility for planning decisions for projects believed to be of national strategic importance. Energy infrastructure is included in such projects.

The following flow charts from Bord Pleanala illustrate how public consultation in relation to strategic infrastructure is meant to work. http://www.pleanala.ie/sid/flowchart.htm

In 1992, due to an ongoing perception that environmental issues were not being given sufficient weight in the Irish planning system, and the country acquiring a negative reaction within the European Union as not being seen to apply correctly many EU environmental directives, the Irish government passed the Environmental Protection Agency Act. Modeled on the United States EPA, this new agency was meant to be working in parallel with Bord Pleanala on major planning applications.

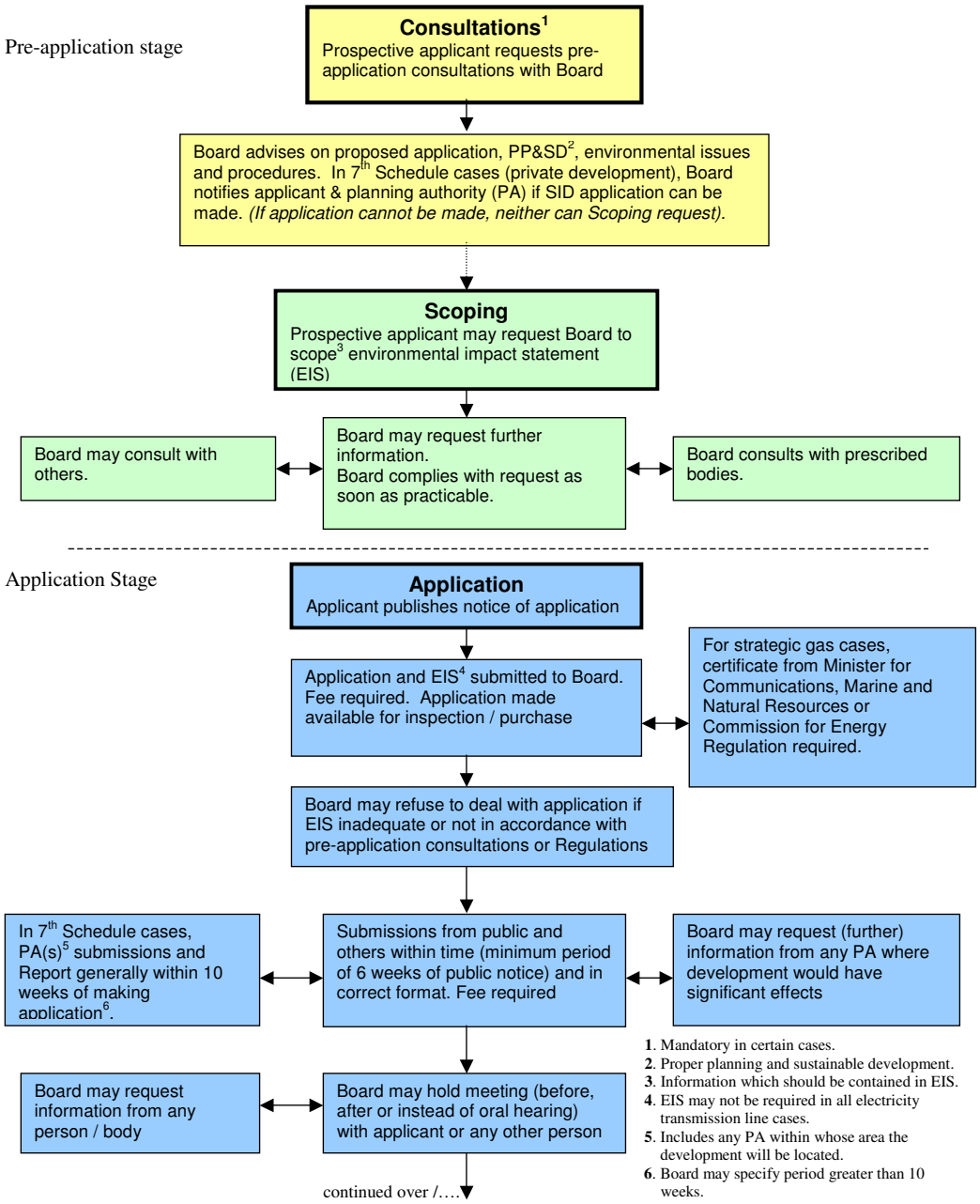
The role of the EPA in relation to granting Integrated Pollution Licenses and examining environmental impact assessments, are meant to be vital components of the permission needed for any major project. However, since its inception twenty years ago, the Environmental Protection Agency still has no developed protocol with Bord Pleanala regarding the sequencing of applications. Both being State Agencies, too often government policy is given priority, often greater priority than established good planning practice.

Case Study 1: Rossport

The incoherence of the Irish planning procedure manifested itself to the greatest extent yet with the ongoing controversy at Rossport, County Mayo, on how natural gas discovered off the west coast of Ireland could, or indeed should, be brought ashore. In 1996 a significant gas field was discovered, the Corrib Field, by a small exploration company Enterprise Oil which started the process of building an onshore refinery for the gas that would be piped ashore from the field which was located 83km off the North West coast of Mayo. The company and thus the Corrib field was bought out by the Royal Dutch Shell company in April 2002.

Strategic Infrastructure Development (SID)
Flowchart

(This flowchart gives a general indication of the stages involved in SID cases. However, procedures can vary depending on the particular type of SID involved)



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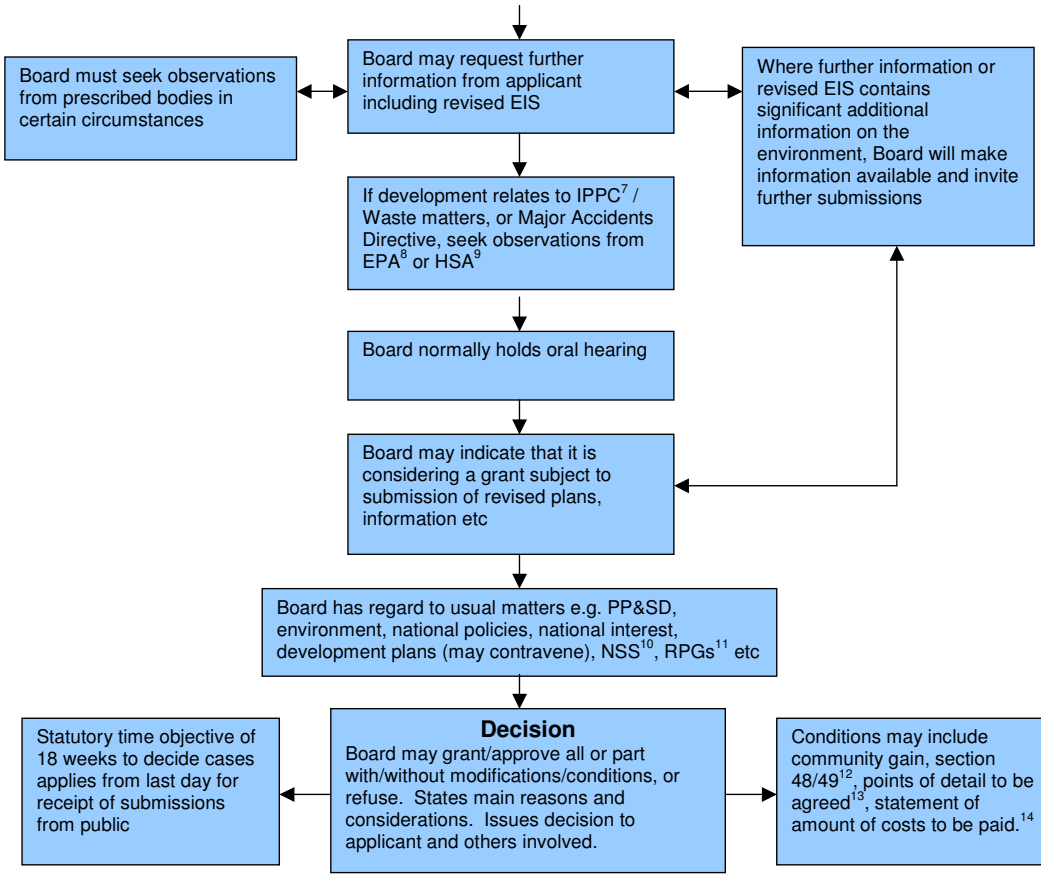


Post-decision stage

Board may amend decision to correct clerical error or to clarify what it intended to convey. May invite submissions from relevant persons. Change may not result in material alteration to development as permitted /approved.

Developer may request alteration to development

Board considers whether alteration would be material or have significant effects on the environment. If not, makes decision.

If alteration is material, Board directs that information is made available to specified persons, class of persons or public, and seeks observations. Makes decision on request.

If alteration would have significant effects on the environment, general EIA provisions will apply including new EIS, public notice, fresh submissions from public etc.

7. Integrated pollution prevention and control.
8. Environmental Protection Agency.
9. Health and Safety Authority.
10. National Spatial Strategy.
11. Regional Planning Guidelines
12. Section 48/49 financial contribution conditions.
13. Only applies to 7th Schedule cases.
14. Must issue with 7th Schedule decision. In other cases, where it applies, it may issue at a later date.

X:\government\abp\webpages\sid\flowchart.doc

The reasons for controversy at Rossport include:

- residents did not feel they had been consulted about the course of the proposed pipeline route;
- the proximity of the proposed pipeline to local residences caused concern;
- the high pressure and the untreated nature of the gas in the pipeline;
- the location of the onshore processing facility and its potential effect on local water supplies;
- concerns about the marine ecology;
- the belief of many that gas processing should take place offshore.

In November 2000, planning permission was submitted for an onshore terminal at Bellanaboy to Mayo County Councll. In January, 2001 the County Council sought more information after the concerns of local residents were raised.

A new planning application was submitted; Mayo County Council once again sought further information. By now a considerable amount of national attention was becoming attached to the proposal, and many from outside the local area were also making their objections also known. This worried the government which was anxious to encourage the project. The Minister for the Marine and Natural Resources, Frank Fahey, hosted a public meeting on the offshore licensing aspects of the Corrib gas field. As a promoter of the project this intervention couldn't be seen as impartial. It would not have been a sincere attempt to inform or to address concerns, but instead would have been an attempt to sell the project.

Eventually planning permission was granted by Mayo County Council for the onshore terminal. This immediately and inevitably was appealed to Bord Pleanala by local residents and environmental groups. The Minister for Marine and Natural Resources fuelled further public disquiet by stating that the objections were impeding progress.

Planning permission for the proposed refinery was refused by Senior Planning Inspector, of Bord Pleanala. His report stated: *"From a strategic planning perspective, this is the wrong site; from the perspective of Government policy which seeks to foster balanced regional development, this is the wrong site; from the perspective of minimising environmental impact, this is the wrong site; and consequently, from the perspective of sustainable development, this is the wrong site"* (Inspectors Report of Corribgas Pipeline, An Bord Pleanala (2009) Inspector Martin Nolan).

In December 2003, a new planning application was made for the same site, together with a peat storage site some 11 km away. This too was subject to an appeal to Bord Pleanála who granted permission in October 2004 attaching 42 conditions. In making this decision Bord Pleanala decided to ignore many of its own inspector's recommendations. This was despite a huge landslide that had swept away the whole surface area of a mountain close to the intended pipeline route. Planning permission for an important piece of infrastructure was not required for the onshore pipeline under the Gas Act 1976.

A series of court cases and several violent, on-site clashes followed. This resulted in the imprisonment of a number of local campaigners on contempt of court charges. These became known as the Rossport Five. There have been persistent allegations of police over-reaction. After the general election in 2007, the Green Party became part of government. Its two appointed Ministers would have key roles in decisions that would need to be made. Party leader John Gormley as Minister for the Environment would have to decide if the route of the proposed gas line could travel through a Special Area of Conservation (SAC). Eamon Ryan as the new Minister for Energy had an even higher expectation made of him.

Opponents and objectors believed that Green Party participation in government should lead to the abandoning of the project.

It should also be noted that in the General Election of 2007, in the Mayo constituency where the controversy was live, the issue did not figure prominently in terms of who was elected there and why. This was despite the very obvious flaws that were apparent in the planning process. There was an attempt to highlight an alternative approach when a report was produced by the former General Secretary of the Irish Congress of Trade Unions, Peter Cassels. This Advantica report tried to address many of the technical concerns surrounding the project and was subsequently used as a template by the incoming government.

The new Minister for Energy made it a priority to address the concerns surrounding the level of pressure that would exist in the gas pipeline. In November 2009, Bord Pleanála came to act on these concerns and ordered Shell to redesign the pipeline and move its route away from homes because it posed an "unacceptable risk".

Nearly ten years after the initial proposal and planning application, public unhappiness at the level and quality of consultation remained high. Nor was there any commencement of construction work.

The Minister for Energy and his cabinet colleague The Minister for Community, Eamon O'Cuiv, established a North West Development Forum for all participants to discuss the issues involved. One group - The Shell to Sea campaign - has never participated in the forum, thus undermining its effectiveness, although the group did continue to meet with government representatives. There remains ongoing difficulties in trying to define and work through differing community responses to these issues.

With the collapse of the Fianna Fáil/Green government in 2011, the ministerial responsibilities for the former Green ministers were allocated to other Fianna Fáil cabinet ministers on an interim basis. Eamon Ryan's responsibilities as Minister for Energy and Natural Resources were taken over temporarily by Pat Carey, who promptly gave permission under the Gas Act for the pipeline to commence, a decision that was re-affirmed by the new Minister, Pat Rabbitte, when he assumed office a short number of weeks afterwards. These actions have further added to the local cynicism that exists.

Case Study 2: Fracking – A Controversy Waiting.

Another decision made after the government had fallen, and maybe even more controversial, was to grant initial licenses to examine the feasibility for shale gas exploration. On the island of Ireland the race to shale gas as a supposed solution to import dependence on energy, could see the next potential planning controversy in Ireland. This will see a contrast in approach by two European Union countries where shale gas deposits are thought to be in close proximity to each other – In the Republic of Ireland in County Leitrim and in Northern Ireland in County Fermanagh.

In both jurisdictions EU environmental directives must be heeded. Licencing in Northern Ireland is the responsibility of the Northern Ireland Assembly but many wider aspects of policy will be and are being determined by its mother parliament, the UK government at Westminister.

An indication was given by the United Kingdom's Chancellor of the Exchequer in October 2012 that he was prepared to offer tax incentives to those who wish to engage in shale gas exploration. This is a decision which seems to indicate that policy has already been decided.

In the Republic of Ireland a more circumspect approach is being taken, perhaps not wishing to repeat many of the mistakes that were made in relation to Rossport. Here in response to a letter received from an anti-fracking campaigner the Minister for State at the Department of Energy and Natural Resources, Fergus O'Dowd TD, in August 2012, outlines current Irish government position on the issue.

Dear Mr Williams

I refer to your recent correspondence regarding hydraulic fracturing ("fracking"). Your correspondence has been passed on to me for direct reply as I now have responsibility in this area.

I am aware that there has been a good deal of public interest recently on the topic of onshore gas exploration. While there has been considerable focus on the possibility of the technology of hydraulic fracturing being used, the authorisations that have been granted by my Department do not permit exploration drilling of any kind at this point in time and do not provide for fracking. .... Exploration drilling, including drilling that involves hydraulic fracking is not permitted under these licensing options. Before the companies concerned can apply for an exploration licence and proceed to an exploration drilling phase, they must first complete the licensing option work programme agreed with my Department.

These work programmes are primarily based on desktop studies of existing data and should be completed by February 2013. When the work programmes have been completed, each company will then have to decide if it wishes to proceed to the next stage and apply for an exploration licence. ...

While it is too early for a formal public consultation at this point as too many factors have as yet to be decided, including whether or not drilling will actually be proposed, I am aware that public bodies that would have roles were there to be an application for exploration or production that involved hydraulic fracturing, are seeking more information on the issues involved. As you are aware, Minister Rabbitte requested that the EPA conduct research and advise on the environmental implications of hydraulic fracturing as a means of extracting natural gas from underground reserves.

In May, 2012, the EPA published its preliminary research which was conducted in the form of a small desk based study by the University of Aberdeen. The study provides an introduction to the environmental aspects of fracking including a review of regulatory approaches used in other countries and areas for further investigation and research such as Geological Principles of Relevance in Fracking and Shale Gas Extraction, Potential Environmental Impacts and Establishing Best Environmental Practice.

The study is helpful in that it is a peer reviewed report that sets out basic background information in relation to the technology and to the associated issues and concerns. While the study is a preliminary piece of work it will inform the development of the terms of reference for a much more detailed piece of research to be commissioned by the EPA later this year. The terms of reference for this more extensive research will be drawn up by a steering group including representatives from the EPA, my Department and other relevant bodies. The outcome of the further research to be commissioned by the EPA will assist in a robust scientific based assessment of any future application proposing the use of this technology. Until there has been time to consider the second stage of the EPA research, the use of hydraulic fracturing in exploration drilling will not be authorised.

I trust this clarifies the position.Yours sincerely Fergus O'Dowd, T.D. Minister of State.

Much of this correspondence seems to indicate that a touch kicking exercise is taking place. The statement that it is 'too early for a formal public consultation' does not inspire confidence. The involvement of the Environmental Protection Agency in preparing the public on the issue of fracking also seems curious. The letter refers to a desk top study the Agency had commissioned from the University of Aberdeen. This commission in itself is not without controversy. The university, it is felt, sited in the centre of Scotland's oil industry, cannot be uninformed by its practices.

Case Study 3: Cork Lower Harbour Energy Group

Even when goodwill exists on the part of a project's developer, and it is accepted that no project should proceed without large scale public acceptance, the Irish planning system can often wear everyone involved in a process down. This has been the case with the **Cork Lower Harbour Energy Group.**

Their project for six large turbines on four sites dotted throughout Cork Harbour first began life in 2006. Cork Harbour is acknowledged as being one of the best natural harbours in the world. An area of scenic beauty and environmental importance, it is also the home of several pharmaceutical plants due to Irish industrial policy.

After several decades of uneasy co-habitation with the local environment, these plants now operate to the highest international standards and co-exist well with the harbour's ecosystem.

The importance of the local environment is something that these companies not only fully recognise, but also believe can be a resource that can be used beneficially. In 2006 the De Puy plant, a subsidiary of the Johnson and Johnson Corporation, entered into discussions with Cork County Council about the possibility of wind turbines on their site to help meet the plant's own energy needs.

This evolved into a wider project when an official from the Industrial Development Authority suggested that other plants in the area may similarly benefit from a shared approach to energy generation. Despite their being natural competitors the energy managers of several of these companies came together to form the Cork Lower Harbour Industry Group.

The scoping exercise which examined the feasibility of proceeding or not with the larger project saw the energy group interact with some interesting organisations. Being on a flight path meant clearance had to be given from the aviation authority. The State broadcaster RTE also had to be consulted with, as analogue signals were still being used. The declaration of Cork Harbour by the Minister for the Environment as a Special Area of Conservation (SAC) meant ongoing discussions with the National Parks and Wildlife Service on issues relating to habitat. This phase of discussions has provided invaluable information about bird life and patterns.

The undertaking of the scoping process meant that it wasn't until 2009 that a public consultation process would begin. The energy group engaged a public relations firm to prepare and present information for the public. A data base of community groups, sports clubs and individual residents was prepared.

A series of public open days were organised. Two meetings were held in Ringaskiddy and Cobh, and additional meetings were organised in the towns of Crosshaven and Passage West. The open days were six hours long where any member of the public could come along and ask questions of concern to them relating to the project. Each open day was preceded with

a closed private meeting between the energy group and elected public representatives as it was thought politically wise that local politicians be informed and consulted with before the general public.

This consultation process was followed by the making of the formal planning application to Cork County Council. This led to permission with conditions being given in May 2011. However a number of objectors have appealed the decision to Bord Pleanala. Given the population base of Cork Harbour the number of objectors has been relatively small. Only two individuals have objected to the construction of all six turbines. Four other individuals have expressed their reservations in relation to individual turbines.

Bord Pleanala asked the project's promoters to provide it with additional information in September 2011. In November 2011 the Board said that lack of resources meant that it was unable to make a decision and could not indicate when a decision was likely to be made, leaving the project in limbo. At least that was the case until December 3rd 2012 when Bord Pleanala finally gave for permission four of the six turbines to be built.

Case Study 4: Lessons learnt? EirGrid – The Grid Link Project

EirGrid, the Irish agency responsible for the national grid in Ireland seems to be taking many of these lessons on board. The agency is currently engaged in a Grid Link Project as part of a 25 year programme. The phase being undertaken at the moment is between the country's two largest regions Leinster and Munster.

This project is now at its second stage, which the agency identifies as 1. Information gathering; 2. Evaluate options; 3. Confirm design; 4. Prepare planning application; and 5. Wayleaving and construction. As defined by the agency stages one and two involve public and stakeholder consultation; stages three to five involve ongoing public information.

Stage one being completed resulted in the production of a Constraints Report. Constraints were seen as primary, secondary or other and appeared under the following catagories – population and settlement patterns; land use; Cultural heritage, Biodiversity; Water; Landscape and Visual and Soils and Geology. Consultation at stage two is meant to be about receiving public views on the constraints report and giving opinions on route options.

The method of consultation chosen for stage two was to hold ten eight-hour open days in different locations over an eight week period. In addition to this four semi-permanent offices were open once a week for six hours a day during the eight week period.

It should be noted that several EirGrid representatives attended the European Grid Conference at the European Parliament in Brussels in November 2011. It's clear that lessons have been learned. It is an improvement on what has happened elsewhere. It goes substantially in the right direction. However, this is more about greater public access to a process than actual public involvement in decision making. A further flaw is that much of the information is being given indirectly to people through elected representatives, a method that can and does discourage greater participation.

Case Study 5 – Distrust Earned – Landslide at Derrybrien

Public confidence in wind power in Ireland was dented in 2003 after a serious mudslide occurred during construction of a windfarm at Derrybrien, County Galway. The 'rush' to wind

has opened the danger of wind farms projects being proposed for anywhere and everywhere. Not all locations are suitable. Not all of those proposed wind developments are sincere in engaging about real environmental protection. Developing wind sites carries with it a responsibility to act responsibly. Failure to do so undermines the future and continuing acceptance of the technology.

A planning application for a windfarm development at Moycullen, County Galway was rejected by Bord Pleanala in August 2012 despite the recommendation of its inspector that the project should proceed. The bad experience of Derrybrien has continued to cast a shadow.

Latest Developments

In the meantime a small but significant number of Irish people are making their dislike and prejudice towards wind power known. This manifested itself with the publication of a private members bill in the lower house of the Irish Parliament, Dáil Éireann, in November 2012. This bill was tabled by a prominent member of the Labour Partie, Willie Penrose. It seeks to go beyond existing 'guidelines' and to statutorily define the circumstances under which it is more likely that wind turbines can be constructed. It is unlikely to get debated.

In April 2011, Chambers Ireland (one of the country's leading business organisations) produced a report entitled 'Strategic Infrastructure Planning: Making it Better'. The report contained several useful sections especially on the potential of wind power and the need to quickly install infrastructure to ensure its development.

The thrust of the report has an obvious business community bias, such as in reducing costs for project developers; its language is sometimes confrontational (referring to protesters rather than concerned citizens); but its goal co-incides with those of many who wish to develop renewable energy.

In January 2013 the Irish and British governments signed a memorandum of understanding in Dublin committing them to the development of a financial and legal framework for the trading of renewable power supplies across the two electricity markets. A joint steering group will determine the level of subsidy to be offered to companies. The two countries hope to be in a position to sign a full intergovernmental agreement next year to provide certainty to private companies planning renewable energy investments.

A number of companies are submitting proposals to build a nest of several hundred wind turbines in the Irish Midlands. Any of these projects would be a useful testing ground for a more participative approach to planning and permitting.

A view is developing that resistance to wind farms in the UK is leading to the withdrawal of developments in Ireland. The reality seems somewhat different in that wind farm developments continue in the UK although debate has been hardening.

An interesting contribution to that debate is a report produced by the Campaign for the Protection of Rural England entitled '*Generating light on landscape impact: How to accommodate onshore wind while protecting the countryside*' (April 2012).

The report accepts the need for measures that mitigate climate change, with renewable energy, especially wind power, being an important part of those measures. Among its proposals is the idea that landscape character assessments should become an essential part of the planning process. The report also argues that less emphasis should be placed

on community gain/benefit with wind farm developments and more should be placed on the question of community ownership.

A further interesting report comes from Northern Ireland, also part of the United Kingdom's jurisdiction. The report, entitled *'Living with Wind Turbines – An investigation into public perceptions and experiences of affected communities'* was produced by Shauna McAuley and Sean MacIntyre of the University of Ulster, on behalf of the Chartered Institute of Environmental Health. (June 2012)

The report examines the public perception of wind farms particularly in light of recently expressed concerns that health may become threatened by exposure to wind farms. On those health concerns the report says – *In 'Health Effects and Wind Turbines: A Review of the Literature', 2011, Knopper et al concluded that there are no peer reviewed studies that show a direct causal link between wind turbines and the negative experiences of those living close to them. It was found in the study that, where negative health effects had been reported, they were as a result of the stressed condition induced in some of those living near wind farms.*

This conclusion is supported in a report by the Chief Medical Officer of Health for Ontario, Canada, on the health effects of wind turbines, published in 2010. That report also notes that sound levels from wind turbines are insufficient to affect hearing. Annex1 of PPS18,suggests that the indicative noise level of a wind farm at 350m distance from a typical dwellling is 35-45 dB(A). Guidelines of night time noise levels released by the World Health Organisation indicate that levels should not exceed 40dB outside a dwelling in order to prevent sleep disturbance and preserve health.

Research into the health effects of shadow flicker – which happens when an observer is in a position where they can see the blades of a turbine pass in front of the sun, resulting in an intermittent shadow, was undertaken for a report prepared for the Massachusetts Department of Environmental Protection and Department of Public Health in 2012. The reported, compiled by an independent expert panel said that there was no scientific evidence that shadow flicker was enough to cause seizures. The panel did, however, recognise that shadow flicker 'can be a significant annoyance or nuisance to some individuals'. The degree of flicker which a nearby resident would be exposed to varies depending on the time of year, the time of day and the resident's location.

On the question of the general positive or negative public perception of wind farms the report quotes the study 'Public Attitudes to Wind farms; A Survey of Local Residents in Scotland' published in 2003, Braunholtz et al' This study surveyed 1,810 people who lived within 20km of a wind farm were interviewed by telephone. It found that, on average, 20% of people reported the wind farms having a positive impact on the area, 73% had no opinion and 7% felt there was a negative impact. A higher proportion of those living closer to the wind farms considered them to have a positive impact on the area (44%) as opposed to those living farther away (16%).

3. Initiatives in Public Participation

In Ireland as in the rest of Europe a great deal of academic research has been undertaken on methods of public participation in decision making. Among those in Ireland who have undertaken this research have been Professor Michael Marsh of Trinity College Dublin, Professor David Farrell of University College Dublin and Dr. Clodagh Harris of University College Cork.

In defining the quality of participation we need to illustrate a hierarchy of participation where in the first instance those most directly affected by the making of a proposal are informed of such a proposal at the earliest opportunity. The announcing of a proposal should then be accompanied by a process where appropriate questions can be and are asked; a process seen as being open where the possibility of a proposal not proceeding exists.

The quality of participation improves further if community interests are involved in the management of any development that arises from a successful proposal. The ultimate participation is achieved if shared community ownership of such developments is offered.

In the following chapters we highlight some generally accepted methods of participation. We present neither a comprehensive list nor a methodological hierarchy, but want to give an illustration of some of the methods which have been used successfully in the participatory planning of infrastructure.

(For a full overview of methods of participation, please consult the English-language version of www.partizipation.at)

In line with the above opinion on the quality of participation, we chose to highlight the following methods, which can be used locally. In addition we shed light on the available tools at European level:

1. Citizens' juries
2. Consensus conferences
3. Citizens' assemblies
4. Initiatives
5. Parliamentary Technology Assessment
6. Participatory budgeting
7. EU level tools: European Citizens' Initiative and petitions

In terms of public notification and ultimate confidence in any development being proposed, and depending on the scale of the development, Citizens Juries/Assemblies or Consensus conferences are models that assist best with the provision of information and the initiating of a process that best inspires public confidence.

Initiatives are a useful tool for community groupings that have been excluded from a process, enabling them to become part of such processes.

Parliamentary Technology Assessment is a method where elected public representatives can work with their electorates in providing highly technical information to help inform a process.

In the area of planning/permitting applications Participatory Budgeting could be a useful method if community groupings are involved or are being encouraged to become involved in the management and/or ownership of a proposed development.

The European level of decision-making, on the contrary, is often perceived as the most remote from citizens. Nevertheless, in recent years, in light of the improving quality of European participative democracy, new tools of participation have been introduced at the European

level. Namely the ECI, which – as the world's first transnational right of initiative – can be used to initiate legislation within the European Commissions' realm of legislative powers.

The ECI complements the already widely used right to petition the European Parliament with regards to the application of European law, by giving citizens on top of their right to "reaction" a right to "initiate" legislation. Petitions to the European Parliament can very efficiently call international attention to any infringement of a European citizen's rights by a Member State or local authorities in any matters of European interest or responsibility – including environmental questions.

As tools, the European level participatory instruments will obviously not be the first choice in local participatory planning procedures – but petitions to the European Parliament especially have been used to successfully pressure national lawmakers, and can therefore be seen as a supplementary tool worth highlighting.

An excellent web resource on these issues is the web site 'Participation and Sustainable Devlopment in Europe' http://www.partizipation.at/search-topic.html?&tx_oegut_pi1%5Bpointer%5D=1&cHash=f30de0f6e11b272f451af7eef21955ff

Here you will find examples of effective community and regional participation in decision making with further links on methods used and subjects covered.

1. Citizens' Juries

Citizens' juries were developed in the 1970s by Ned Crosby, of the Jefferson Center, a publicly supported non-profit organisation in the US, and by Peter Dienel in Germany with a proposal he called Planning Cells.

A citizens' jury can be described as a mechanism that brings together a small group of people who consider a particular issue and then produce recommendations in the form of a written report. The aim of Citizens' juries is not to pre-empt the decision making power of elected representatives but rather to try to ensure that representatives have an understanding of public opinion when they make those decisions.

Citizens' juries can be used for policy issues such as planning, technology, health and the environment. The average jury consists of twelve to sixteen persons who represent the best possible cross-section of a local community. Generally, two moderators are appointed to work with the jury to assist them in exploring each question from a variety of perspectives. Throughout the process, jurors work in a number of formats - plenary sessions; small groups; pairs; and individually, in order to ensure that everyone can contribute.

In these ways, a citizens' jury provides an unparalleled opportunity for citizens to learn about an issue and work together to find a common solution. However unlike a legal jury, they cross-examine the witnesses. When this has been completed, the jury draws together its conclusions and recommendations and presents them to the decision making body.

Since the 1970s citizens' juries have spread well beyond their US and German roots and can now be found around the world in countries such as Spain, Australia, Canada and Japan. Citizens' juries are gaining a considerable degree of momentum. A successful demonstration project in 2011 in the US state of Oregon saw the state legislature take steps to see if citizens' juries should be made a standard way of informing voters about ballot initiatives.

Citizens' juries offer a combination of information, time, scrutiny, deliberation and independence. It is argued that a citizens' jury provides an effective way to involve citizens from differing backgrounds in developing a well-informed, well-thought out and detailed judgement on a public problem or issue. By directly engaging citizens, a jury brings legitimacy and democratic control to non-elected public bodies and often leads to increased public support for the finally agreed policy.

Citizens' juries also contain a number of weaknesses. They can be quite expensive to run. They involve a very small number of people so there is a chance that the wider public may still hold a less informed view after the event. There remains a challenge in describing each representative in each group.

Citizens' juries are used worldwide to supplement representative democratic decision making, to improve its quality and to ensure that policy formulation and implementation can become more legitimate, effective, and sustainable. A citizens' jury is a tool that can be initiated by any civil society organisation or government body in order to provide a link between policy makers and citizens.

By bringing people together in this way and by educating members of the public, a citizens' jury is able to identify areas of agreement and build common solutions to challenging problems. However, it is important that the selection methods used consciously target marginalised groups to ensure that those without a strong voice in society should be given an opportunity to influence policy.

2. Consensus Conferences

The system of consensus conferences is a democratic method that seeks to promote scientific and technological debate amongst citizens. It can be described as a public enquiry by citizens to assess potentially controversial topics in science and technology.

Over the last twenty years consensus conferences have extended to different parts of Europe and the rest of the world. A conference consists of a citizens' panel, selected from the general public, who question expert witnesses on a topic at a conference. Recommendations are then distributed to those with an interest in the eventual decision. The panel consists of 10-16 people who meet for three days. Participants are provided with reading materials and attend preparatory events to ensure that they are informed on the topic before the conference commences. They are then asked to identify the main points of the debate and to decide on the questions to be asked. From this the conference selects its witnesses, deliberates on the information provided and drafts recommendations. At the end of the conference, the citizens' panel generates a report which includes its conclusions and recommendations. This is then presented to key decision-makers and the media.

The strengths of Consensus conferences are that they increase public awareness on issues; they are an open and transparent method that encourages trust; they provide ordinary citizens with opportunities to make their voices heard; and they motivate citizens to obtain greater understanding and further information.

The weakness of the consensus conference method is that it is expensive, for example, in the UK various consensus conferences have cost the UK government between £80,000 and £100,000, according to the People and Participation organisation there (2011). Conferences are also thought to be exclusive due to the small sample of citizens involved. Furthermore, the emphasis on the need for consensus benefits the more strong-willed participants.

The information, agenda setting powers and the space for questioning and discussion that consensus conferences afford participants greatly encourages debate and deliberation. Research undertaken by the Danish Board of Technology shows that participants in consensus conferences agree that the conferences help strengthen their views of participation and the democratic process. Overall they were very positive about the conference format. Similarly, research(Powell and Klienman, 2008) in the US on the Madison citizens' consensus conference on nanotechnology in 2005 found that citizens formed a group after the conference to continue their engagement on this issue.

This type of participation would be suitable for involving citizens in decision making on complex and technical issues such as fracking and the location of incinerators. The work of the Danish Board of Technology, a globally acknowledged exponent and proponent of consensus conferences, will be discussed elsewhere in this report.

3. Citizens' Assemblies

A citizens' assembly is a deliberative method that brings together a randomly selected group of citizens to discuss a policy issue and make recommendations on it. A wide variety of issues such as electoral systems, education, health, transport and telecommunications may be and have been discussed. Citizens' assemblies have been organised at a national or local level.

In Canada, the British Columbia Assembly was established in 2004 to investigate electoral reform and recommend an electoral system for the province. It was made up of 160 randomly selected citizens and divided its work into three phases. In the first phase the assembly spent a number of week-ends learning about electoral systems. This involved presentations and question and answer sessions from international experts. The second phase involved collecting evidence from citizens at fifty public meetings held throughout the province and from written submissions. The third and final phase saw the citizens discussing with each other the advantages and disadvantages of different electoral systems before taking a final vote on the options.

This process started in January 2004 ending in December of that year followed by the publication of its final report, which recommended the Proportional Representation by Single Transferable Vote system, PR(STV). As promised by the provincial British Columbian Government this recommendation was put to the electorate in a referendum in May 2005.

58% of the electorate voted to accept the recommendation of the Citizens' Assembly. However the provincial government had put in place two thresholds that had to be exceeded. These required that the proposal was supported by at least 60% of votes from across the province and 60% (48) of the 79 electoral districts. On the day, 77 of the 79 districts were in favour of the new electoral system but the overall vote at 57.69% fell short of the required 60%'

In June 2011 a group of Belgian academics established the **G1000 Project** – the country's first citizens' summit. The objective was to seek to renew Belgian democracy through a process that would complement, not replace, the existing representational system of democracy.

That this was being proposed during the 15 month period it took to construct a new federal government; is a fact that seems to have informed this initiative.

This citizens' summit took place in Brussels on November 11th 2011. Over 700 citizens of different ages, backgrounds and ethnicity from across Belgium came to discuss the political challenges the country faces and to develop

proposals on key issues. In keeping with best practice participants were randomly selected.

In parallel to this, participants who had not been selected to attend the event actively took part in the proceedings either on line at home (G-homes) or at smaller events at diverse locations across the country (G-offs). Information technology was used to feed the recommendations from the G-offs to the main event in Brussels. Specially developed software *Synthetron* allowed participants to virtually interact with their fellow citizens and put forward their proposals and recommendations from the comfort of their own homes.

The topics discussed on the day included: social welfare, wealth inequality and immigration policy. These topics had been chosen by citizens during the summer months when they were surveyed online to work out the priority of the issues of concern to them.

The final phase of the project involved a smaller group of participants, thirty two citizens. They met over the course of a calendar year to work with identified experts on the proposals that came from their summit and develop them into more concrete recommendations. This group includes 20 citizens from the G1000 summit, 8 citizens from the G-homes and 4 citizens from the G-offs. The final recommendations are being presented presently by the citizens to the Belgian Parliament.

The project was funded through fundraising where donations were welcome but no single donation could exceed more than 7% of the total budget. Individuals, companies, associations, foundations and/or the government were all invited to make a contribution towards the cost. It should be noted that a third of the cost was contributed in kind through the work of volunteers.

Citizens' assemblies are an effective way of working with citizens in democratic decision making. Research has shown that those who participate in a citizens' assembly show a greater interest in politics, display higher levels of political efficacy and express more willingness to discuss politics and become involved in political structures.

The disadvantage of citizens' assemblies is that the consultation requires the investment of a lot of time and resources in order for them to work effectively. Ultimately, the citizens do not usually set the agenda. Instead they are provided with a specific remit such as examining electoral systems in British Columbia and Ontario.

Citizens' assemblies allow for a varied but representative group of citizens to come together and discuss a specific issue (or set of issues) and make recommendations on them.

Ireland held its first citizens' assembly in June 2011 when **'We the Citizens'** hosted a group of 100 selected citizens at Kilmainham Hospital in Dublin for a week-end meeting. This initiative was born of the deteriorating economic situation in Ireland, and the need for an alternative public response.

Paid for by support of Atlantic Philanthropies, the vehicle of the American philanthropist Chuck Feeney, the initiative was organised on principles consistent with how citizens' assemblies have been organised. Participants were selected on a random but representative basis. Its initial phase consisted of seven regional meetings that engaged in first phase discussion of the issues identified and selected delegates for the final national assembly.

This assembly discussed a variety of topics ranging from gender representation in politics to the electoral system, the abolition of Seanad Eireann (The Upper House of the Irish Parliament) and

economic matters (spending cuts vs increased taxes). Research conducted by academics associated with the initiative noted that 'as a result of their participation and being given detailed information, citizens demonstrated a significant capacity to change their opinion and felt more positive about their influence on politics, compared to those who had not taken part. They also found that after the citizens' assembly participants changed many of their opinions on the economic issues discussed.

'We the Citizens' called for the Government to incorporate a citizens' assembly into its proposed Constitutional Convention, whose first meeting was held in December 2012. Another campaign group, 'Second Republic', is also lobbying for a citizens' assembly to deliberate on constitutional reform. Both suggest that an assembly should have as its remit the drafting of proposals for a revised Constitution which would then be put to the general public in the form of a referendum.

The Irish Government has put in place a 100 member constitutional convention that will include 66 citizens chosen through an opinion poll company to reflect representativeness. The remaining places will be taken by 20 Oireachtas (Irish Parliament) members and one parliamentarian from each of the political parties in Northern Ireland.

4. Initiatives

An initiative 'allows citizens to propose a legislative measure or a constitutional amendment if they are able to submit an initiative with the required number of signatures'. Initiatives are a form of direct democracy - the decision on the proposal is made through a popular vote.
The initiative is a concept allowing ordinary citizens the right to propose laws without the consent of their elected representatives. It is a democratic device that has been seen to strengthen democracy. It involves citizens more in policies that are important to them and makes the political system more accountable, transparent and efficient. The initiative can strengthen the link between the people, their parliament and the executive of government.

There are different types of initiatives (for a full typology, please refer to GEF's "European Citizens' Initiative Handbook", p. 32 – 35), for reasons of simplicity we highlight two main types.

A popular or citizens' initiative allows a given number of citizens to put their own proposal on the political agenda. If the necessary number of eligible voters supports the initiative, it will be decided upon by popular vote. The proposal may be, for example, to amend the constitution, adopt a new law, or repeal or amend an already existing law. Switzerland is the country most identified with this model of governance. In Switzerland, to propose new legislation 100,000 signatures are needed, which is approximately 2% of the voting population.

The agenda setting initiative is the right of a specified number of eligible voters to propose to a competent authority, such as a national parliament, the adoption of a law or a legislative measure. The legislative body can accept, adapt or reject the proposal. In contrast to the popular initiative, it is this authority which decides what is going to happen to the proposal. This form of initiative has been used, for example, in the United States and Austria. The agenda setting initiative provides an opportunity for measures to get a formal hearing and benefit from experienced legislators, which is something that does not happen with the popular initiative. Despite the risk that agenda setting initiatives may be blocked or delayed by the government, they offer the advantage of allowing further dialogue on the proposals.

The strengths of initiatives include:

1. giving citizens a direct say in the laws that govern them, particularly by giving them agenda-setting powers; and,
2. facilitating citizens to organise themselves and others.

Initiatives are criticised for:

1. engaging those who already participate in elections and other political processes but not those who remain disengaged;
2. having the potential to bring about a 'tyranny of the majority', where the interests of minorities can be overlooked or ignored (this is particularly the case with popular initiatives); and,
3. causing money to have a malign effect on the collection of signatures and on campaigning.

Initiatives are one of the few democratic mechanisms that give citizens the power to directly set the agenda. Ireland had the right of initiative under its 1922 Constitution. This allowed for laws to be proposed and the Constitution to be amended through an initiative of no less than seventy-five thousand voters on the register. This provision was not included in the country's 1937 Constitution.

The Upper House of the Irish Parliament (Seanad Éireann) agreed in 2012 to develop an initiative system to assist in its operation. It has yet to define or develop how such a system might work.

5. Parliamentary Technology Assessment

The need for better informed decision making about science and technology has given rise to a new discipline. Informing elected public representatives as an indirect means of engaging the general public is a central tenet of the Parliamentary Technology Assessment. Internationally the first model of this practice was the establishment by the US Congress of the Office of Technology Assessment (OTA) in 1972. In Europe during the 1980s and 1990s this model gained importance and can nowadays be regarded as being dominant in many European countries as well as being responsible for some major shifts in relation to science and society.

Today, the European Parliamentary Technology Assessment Network (EPTA) consists of 12 national parliamentary Technology Assessment institutions and the Technology Assessment body of the European Parliament as well as another five associate members with working relationships to their national parliaments. Different institutional models are being followed in different countries, depending on their political or parliamentary traditions and cultures.

- In some countries, (e.g. Italy, Finland, and Greece) parliamentary committees for TA have been established which (according to their agendas) invite experts to meetings or organise workshops and conferences. In the case of France the individual members of the committee carry out TA studies on their own and deliver the results in the form of reports to their parliament.

- In other countries parliaments have chosen a model that the parliament runs a scientific office on a contract basis with a scientific institute (e.g. in Germany and at the European Parliament) or as part of the parliamentary administration (e.g. in UK) to which TA

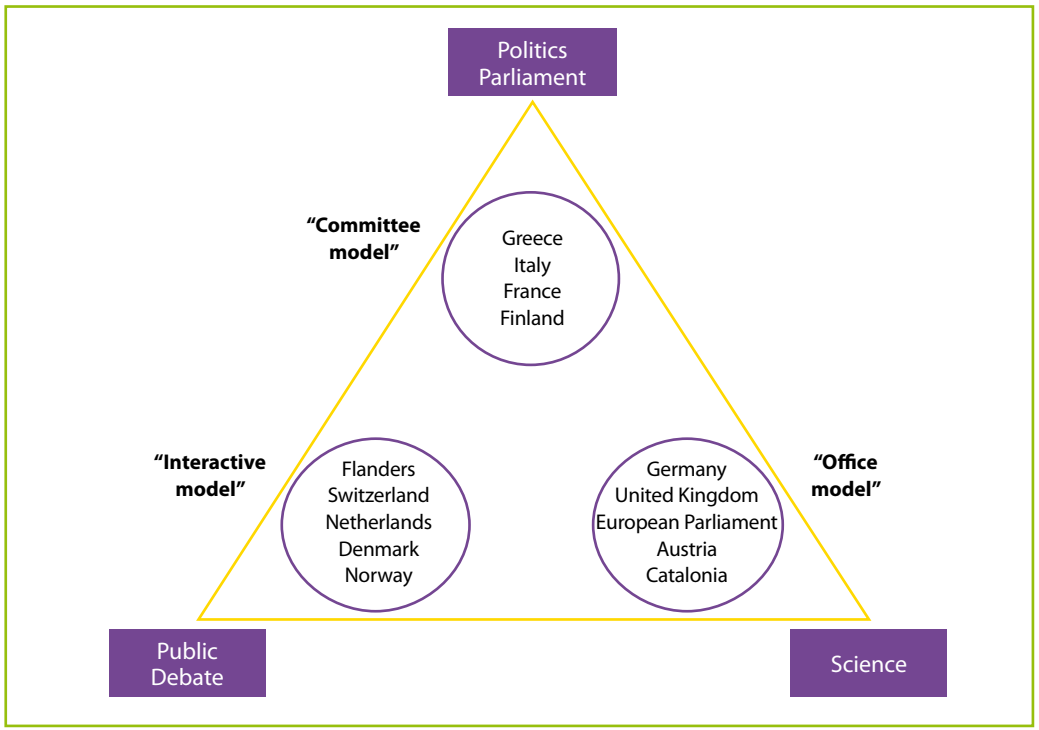
studies are commissioned according to the information needs of the parliament. These studies may result in short parliamentary briefing notes or in detailed reports. These draw on in-house research and also on input from a number of external scientific experts and stakeholders.

- A third type of parliamentary TA body is characterised by close co-operation between parliaments and independent institutes that support parliamentary deliberations with policy reports and organization of workshops or hearings. Often this kind of arrangement involves an additional mission of the institute which opens up to the general public. Technology Assessment in this form is not only to support politics by providing in-depth and unbiased analysis of possible effects of science and technology on society, but also to inform and intervene in public debates (e.g. in Denmark, the Netherlands, Switzerland, Flanders and Norway). This involvement with the public, stakeholders, societal groups and citizens, can be regarded as the European "improvement" on the classical TA model. The public is not only involved as an object of research, but as a direct actor.

The European Union has been encouraging the development of Technology by funding the PACITA network (Parliaments and civil society in Technology Assessment) through the seventh framework programme. (Source PACITA)

6. Participatory Budgeting

Participatory budgeting is a policy making process where citizens are included and are involved in policy decisions. The city of Porto Alegre in Brazil is where participatory budgeting has been most prevalent, combining public engagement with the monitoring of a city wide budget, mixing open citizen assemblies with



other, more flexible, representative forums. It involves three levels of citizen participation: popular assemblies, district budget forums, and a municipal budget council.

In the spring of each year, popular assemblies are held in each of the city's districts at which the previous year's budget is reviewed. All residents aged 16 and over are invited to participate in the district assembly. At these meetings participants vote on the priorities for investment in the city and select delegates to district budget forums. The number of delegates elected to the district budget forums is proportional to the number of citizens attending the district assembly and acts as a strong incentive for citizens to turn up and participate. The delegates in the district budget forums work together with the city administration to translate neighbourhood priority lists into an overall list of investment priorities for the district. Although the district budget forums are open to all citizens only the delegates can vote.

The citizens participating in the district assembly elect two councillors to the municipal budget council which is in charge of deciding the relative distribution of resources across the city's districts. The municipal budget council's decisions are informed by the priority lists and needs-based criteria developed by the district budget forums and are presented to the municipal council at the end of September each year. Porto Alegre's city council retains the legislative power to veto and alter the budget and its Mayor has the executive power to reject it on limited financial and technical grounds. Since this system has been developed, these vetoes have not been used, probably due to the popular will that the budget represents.

As a decision-making process Participatory Budgeting allows citizens to debate and negotiate the allocation of public resources either at neighbourhood level or at a larger city or state level. Practice has shown that are three key factors that must exist for Participatory Budgeting to function successfully:

1. strong local authority support;
2. an organised and civil society; and,
3. committed political leaders, who are also willing to be part of the process.

The success of participatory budgeting in engaging with citizens rests, in part, on the incentives it generates as there is a visible relationship between participation and outcome.

On the minus side research conducted on the profile of Participatory Budgeting participants shows that more men, adults and educated people participate than women, young or less educated individuals. It was also found that younger people, aged between eighteen and twenty nine are under-represented, whilst adults between thirty and sixty are over-represented. In addition, individuals who have completed second and/or third level education are overrepresented.

Participatory budgeting is also considered to be time consuming and costly. Budget options involve making difficult choices and cannot constantly be simplified to a small collection of options.

Since its original development, Participatory Budgeting has spread to a number of countries such as France, Germany, Spain, the United Kingdom, Fiji and to various parts of Latin America. The strength and effectiveness of this method is highlighted by the fact that participatory budgeting is today implemented in over twelve hundred places worldwide. In addition, Participatory Budgeting is being promoted by organisations such as the World Bank, the United Nations, Habitat and the Asian Development Bank.

What is significant about this method is not only that citizens make decisions about public spending, but also that they have agenda setting powers in deciding the spending priorities from the beginning of a process.

If introduced at a local level in Ireland or elsewhere in Europe, Participatory Budgeting would give citizens a clear link between spending and raising money, making decision-making more transparent, inclusive, considered and representative. This, however, would require local government reform and the decentralisation of revenue raising powers. In particular it would require a willingness to do things entirely differently.

SPECIAL FOCUS: European level tools of participation.

Petitions

Within the European Union the use of petitions is most prevalent in the European Parliament. Its Petitions Committee is one of the busiest in the Parliament. Petitions are outlined in Article 227 of the Treaty on the Functioning of the European Union.

Any citizen of the European Union or resident of a Member State, may, individually or in association with others, submit a petition to the European Parliament on a subject which comes within the European Union's fields of activity and which affects them directly. Any company, organisation or association with its headquarters in the European Union may also exercise this right of petition.

The petition may present an individual request, a complaint or observation concerning the application of EU law or an appeal to the European Parliament to adopt a position on a specific matter. Such petitions give the European Parliament the opportunity of calling attention to any infringement of a European citizen's rights by a Member State or local authorities or other institution.

The subject of the petition must be concerned with issues of European Union interest or responsibility such as:

- rights as a European citizen as set out in the Treaties,
- environmental matters,
- consumer protection,
- free movement of persons, goods and services, internal market,
- employment issues and social policy,
- recognition of professional qualifications,
- other problems related to the implementation of EU law.

Structured best for detailed discussions on Europe-wide policy issues, an example of the work of the Committee is that in November 2012 the Petition Committee released an update of its 2011 study "Impacts of Shale Gas extraction on the environment and on human health".

http://www.europarl.europa.eu/committees/en/peti/studiesdownload.html?languageDocument=EN&file=77879

A strong disadvantage of petitions comes from the limitation of the Parliament's role according to the Treaties, as it cannot initiate legislation. Since April 2012 however, another, stronger, European Union initiative has come into in existence.

The European Citizens' Initiative

The European Citizens' Initiative (ECI) provides citizens with the opportunity to intervene in EU politics and to co-determine the political agenda. With their signatures, one million EU citizens can call upon the European Commission to address their concerns,

suggest a solution and, if considered necessary, to enact legislation.

As a new instrument its effectiveness is still being assessed. It has the potential to be the strongest direct democratic tool available to citizens of the European Union. The European Citizens' Initiative is strongly supported by many in the Green movement. The Green European Foundation has followed the development of the initiative closely, with several publications from 2010 to 2012. (http://gef.eu/fileadmin/user_upload/GEF-09-64_European_Citizens__Initiative_web_final.pdf and http://gef.eu/fileadmin/user_upload/Publications/ECI/The%20European%20Citizens%27%20Initiative%20Pocket%20Guide.pdf). The publications aim to help EU citizens understand how the ECI works and to encourage its use.

The ECI came into legal effect on April 1st, 2012. Having been included in the Treaty of Lisbon, it has now been put into operation. One million signatures are required from EU citizens from a minimum of a quarter of member states, to be collected over a specified time period (1 year). While the initiative does not enable a direct legislative response from the European Commission it does require an appropriate response. With this tool it is clear that direct democracy in the European Union is going in a better direction.

Currently, the first submitted initiatives (on topics as diverse as water privatisation, high quality European education, or abortion) are still in their signature collecting process. Once they have reached the required number of signatures, the response of the European Commission will be interesting to follow, as it might set the practice for how ECIs are handled. In the energy area, so far only one initiative has been submitted – My voice against nuclear power. The Commission did not allow the registration of this initiative, on grounds that the subject fell manifestly outside the Commission's powers to propose legislation. No initiatives concerning renewable energy have been put forward so far.

4. Lessons and Applications – The Danish and German Experiences in the European context

Denmark

The response of Denmark to the energy crises of the 1970s was to build a number of coal fired electric power plants. This would lead to high per capita CO_2 emissions leading to a rethink of policy. Wind power began to be looked at more favourably. The passing of a law in 1988, in the wake of the Chernobyl disaster, forbidding the construction of nuclear power plants, further restricted energy options. Danish grassroots movements had a substantial role in the national debate, with renewable technologies being strongly promoted by the Danish Organisation for Renewable Energy.

Planning of wind power was deliberately streamlined by authorities in order to minimize hurdles. While many countries had tried to subsidise green technologies such as wind power, no viable system has yet been produced. Denmark embarked on an ambitious programme. The government provided potential developers with 30% of the initial capital cost in the early years of a project, gradually reducing this to zero, while still maintaining a feed-in tariff.

Denmark, unlike Ireland, has relatively modest average wind speeds. Onshore resources are highest in the Western part of the country,

and on the Eastern islands with coastlines facing South or West. The country has very large offshore wind resources, and large areas of sea territory in shallow water depth. There have been no major problems from wind variability, although there have been temporary problems with the connection of wind power from offshore wind farms to the national transmission grid.

Denmark has the advantage of being connected by transmission line to other European countries meaning it does not need to install additional peak-load plants to balance its wind power. It allows the country to purchase additional power from other countries when necessary. With this back up Denmark plans to increase its wind power share to 50% of consumption.

Wind power production is currently about 20% of electricity consumed in Denmark. Some debate exists as to how much of this that is actually consumed in Denmark, with claims that a large proportion of wind power is being exported. Some excess capacity has been exported to Germany, Norway, and Sweden. Denmark's Nordic neighbours have considerable hydropower resources and can rapidly reduce their generation whenever wind farms are generating surplus power, saving water for later, and can export electricity to Denmark when wind power output drops.

The development of wind power as a policy option in Denmark has led to a parallel development of a wind turbine manufacturing industry. The Danish wind turbine industry is the world's largest accounting for 38% of the global market. Around 90% of its output is exported. The industry employs 20,000 people in Denmark producing an annual turnover of some €3 billion.

To encourage investment in wind power the Danish government offers tax exemptions to taxpayers for generating their own electricity or to meet the needs of a nearby community. This could involve purchasing a turbine, however more often it involves purchasing shares in wind turbine co-operatives that in turn invest in community wind turbines. By 1996 there were around 2,100 such co-operatives in the country. Public opinion in Denmark has indicated that this tax exemption has helped the popularity of wind turbines, with opinion polls showing that almost nine out of every ten Danes support wind energy over other energy sources.

By 2001 over 100,000 Danes were members of wind turbine co-operatives, responsible for installing almost 90% of wind turbines in the country. By 2004 this figure had increased to 150,000 although the proportion of the number of turbines owned by co-operatives had fallen to 75%.The success of the Danish co-operative system has encouraged their development in other countries such as Germany and the Netherlands.

Among the mechanisms to encourage a greater take up of wind power in Denmark was the establishment in 1986 of the Danish Board of Technology. Since its inception the Board of Technology has been responsible for the promotion of information and the stimulation of citizen debates on technology issues.

The main method the Board has developed to achieve this has been the organising of consensus conferences on a wide variety of issues such as food irradiation, human genome mapping, gene therapy, the future of fishing, genetically modified food and noise and other technology.
The Board of Technology created much public confidence in its activities through independent technology evaluations. Working directly with the Danish public, and often in tandem with the Danish parliament, it outlines technological alternatives and explains the consequences of

new technologies to other decision-makers and to the Danish public with the purpose of furthering public debate and knowledge of technology.

After the election of a new Danish government in 2011 there was a change in policy. The Danish Board of Technology, which while independent had been fully funded by the Danish government, was now to become a non-governmental organisation with no guaranteed long term State support. Despite this change of the emphasis the Board of Technology has maintained most of its expertise and seems committed to continuing in this new form.

In Ireland in 2009, then Energy Minister Eamon Ryan launched a microgeneration initiative along the lines of the Danish model. A support price of 19 cent per kilowatt hour of electricity produced was offered to home owners, farms and small business. It was meant to apply to the first 4,000 micro-generation installations countrywide over a three year period. Eligible installations would include small scale wind, photovoltaic, hydro and combined heat and power. This meant that participants could generate their own electricity and be paid for the excess they don't use.

The take up has not been anything like the Danish experience. There have been a number of reasons for this. Firstly, and most importantly, the tariff rate has not been attractive enough. Secondly, the Danish emphasis on community ownership has not been an essential part of the Irish initiative. The Danish government in its plans to meet the EU 2020 is committed to a dramatic increase in its use of renewables. It should be said that the practices that have worked successfully for them in the past inform their plan rather than price incentives.

Germany

The share of electricity produced from renewable energy in Germany has increased from 6.3% of the national total in 2000 to about 25% in 2012. In 2010, investments totaling €26 billion were made in the country's renewable energy sector. Recent figures indicate that some 370,000 people in Germany are employed in renewable energy sector, most in small and medium sized companies. Most of these jobs are attributed to the Renewable Energy Sources Act first passed in 2000 at the instigation of the Green Party (Die Grunen) then in federal government for the first time. On this basis, Germany has styled itself as "the world's first major renewable energy economy".

The passage of the EU Directive on Electricity Production from Renewable Energy Sources in 1997 obliged member states to work towards a target of 12% renewable electricity by 2010. Germany passed this target early, by 2007 the renewable energy share in electricity consumption in Germany had already reached 14%. The current German targets set in 2010 are as follows:

- Renewable electricity – 35% by 2020 and 80% by 2050
- Renewable energy – 18% by 2020, 30% by 2030, and 60% by 2050
- Energy efficiency – Cutting the national electrical consumption 50% below 2008 levels by 2050

As of now most renewable energy in Germany is produced through wind turbines and biomass plants. However in recent years the country has placed efforts into increasing generation through solar, geo-thermal, bio fuels and hydro power.

Movement towards greater generation of renewable energy has seen Germany become the third largest user of wind power, behind China and the USA. By the end of 2010 over 20,000 wind turbines were located in the country. It is estimated that wind power in Germany provides over 70,000 jobs. Like Denmark considerable expertise has been developed in the manufacture of wind turbines and their technology, much of which is now being exported.
Current German government policy is to encourage the development of large off shore wind farms, where the wind blows more consistently than it does on land, and where turbines won't have a significant effect on inhabitants. A lesser emphasis on onshore wind farms is seeing greater attention being given to solar power. Some analysts expect the solar electricity share could reach 25% of electricity generated by 2050. This has been helped by the near halving of the price of photovoltaic systems since 2006.

Germany's renewable energy sector is seen to be among the most innovative and successful in the World. Nordex, Repower, Fuhrländer and Enercon are wind power companies based in Germany. SolarWorld, Q-Cells and Conergy are seen to be leaders in solar power. Every third solar panel and every second wind rotor is now made in Germany. Nearly 800,000 people work in the German environment technology sector; an estimated 214,000 people work with renewables in Germany.

Germany's approach to renewable energy has differed from Denmark in that its growth, while led by government policy, has been largely industry led and has not had anything like the same degree of community ownership that has been encouraged in Denmark.

Several German non-governmental organisations such as Germanwatch http://germanwatch.org/en/home have worked to improve public involvement in decision making and the development of sustainable energy infrastructure. With funding from the 7th Framework Program for research of the European Commission, and working with Potsdam Institute for Climate Impact Research, Climate Action Network France, the International Research Center on Environment and Development, International Network for Sustainable Energy – Europe; it developed a three year programme (2009-2012) the ENCI-Lowcarb Project (Engaging Civil Society in Low-Carbon scenarios). The project set out to develop a method for engaging civil society via national climate policy.

Energy sector stakeholders such as associations, trade unions, and businesses each played an important role in the development and review process. Stakeholders contributed to greater understanding of specific policy measures and decisions on technology needed to reach defined carbon reduction figures.

A wide range of stakeholders (civil society groups including trade unions and non-governmental organisations, private companies, banks, state and local authorities) took part in this project. They were given a number of choices to define or select acceptable carbon mitigation measures. Their contributions were worked through energy models to create scenarios economically and technically consistent as well as acceptable to stakeholders.

The process consisted of team building and workshops, followed by a secondary review round of stakeholder dialogue meetings. The project being held in Germany and France allowed for the identification of some cultural differences. Stakeholder meetings were run in parallel in both countries. In France a greater number of stakeholders were identified. A joint session took place towards the end of the project.

In Germany participants were asked to agree and developed scenarios that would reduce carbon emissions from 1990 levels by 85%. The French group were given no target and without that target could only identify and agree measures that would bring about a 68% reduction. The difference could be seen as a German belief in what was necessary and a French understanding of what was acceptable.

The project has led to an ongoing network being deveoped between the participating organisations. Among the findings was the need differentiate between the technological and the social/political both in the providing of information and the making of decisions.

As this was a theoretical exercise not linked to the making of a practical decision, the project's participants would recommend that wider research take place on a more European scale where the stakeholders would also include government representatives that were not part of this exercise.

The national policy of the German government is being matched and even exceeded by effort in several Land governments. The forming of a coalition government in Baden-Württemberg, with the Green Party as the lead party of government, has fostered enthusiasm for German preeminence in the renewable energy sector. This has been highlighted in the report – A European Union for Renewable Energy, Heinrich-Böll-Stiftung (2012).

This enthusiasm is highlighted by Franz Untersteller, Minister of the Environment, Climate Protection and the Energy Sector, Baden-Württemberg, writing in the introduction of this report –

The transition to renewable energy also offers significant opportunities in the field of research. Charged not only with the task of accelerating the transition from fossil fuels and nuclear power to renewable energy, research also provides industry with the necessary basis to allow it to play a leading international role in the field of the new energy economy in the years and decades to come.

The same also applies to two fields that are essential for the success of the Energiewende: energy efficiency and energy conservation. A sustainable energy supply based on renewable energy can only be achieved through the exploitation of the significant potential for energy saving and increased efficiency to be found in the generation and distribution of energy. There are major energy reserves in the building stock in particular – herein also lie opportunities for the economy and for research.

I am convinced that the Energiewende can succeed. It is also clear to me that the necessary conditions must be created in order for it to do so – at a European as well as at national and regional levels.

The Baden-Württemberg government is on course to achieve 38% generation from renewables by the year 2020.

It should be noted that although Germany, like Denmark, has made massive strides in developing renewable energy, significant road blocks still exist in developing transmission lines, as this report highlights –

http://www.agoraenergiewende.de/fileadmin/downloads/publikationen/Agora_12_Insights_on_Germanys_Energiewende_web.pdf

The European context: A European Union for Renewable Energy?

Many Green actors all over Europe argue for a transition to 100% renewables by 2050. Studies, such as the Heinrich Böll Foundation's study ERENE – a European Community for Renewable Energy (www.erene.org) or the European Renewable Energy Council's study "RE-thinking 2050" (www.rethinking2050.eu) show that this is not only feasible, but bears the potential to lead to many economic and social advantages. These would include benefits in terms of global competiveness, security of supply and employment.

- 100% renewables as a goal is possible, many studies prove it
- As yet no European level agreement exist on this goal
- The European Commission has stated that decarbonisation is a must and more renewables are always in, whatever the scenario or energy mix chosen.

Of course enthusiasm of itself will not bring the hoped for outcome. The Heinrich Böll Foundation's 2012 Report on a "European Union for Renewable Energy" asks the following pertinent questions:

- Which competencies are necessary at the European level to develop grid extensions that would enable the transition to renewable energy sources?
- How can grids be designed in a way that is compatible with the production of renewables?
- What kind of support is needed to enhance the transition to renewables in Europe?
- And how can a European alignment of support and remuneration schemes increase the share of renewable while avoiding negative effects on producers, consumers and taxpayers?

There is also a need to be more strenuous in refuting the arguments of those who don't believe that renewables should play a significant part in our future energy mix. One of the strongest myths that needs to be challenged is the mistaken belief that renewables lead to rising electricity costs, particularly for low-income households. The truth is that rising electricity prices are far more likely to be caused by rising consumer prices, the increased cost of fossil fuels, rising taxes and higher profit margins for energy companies.

Because of the need to refute such myths the development and provision of renewable energy must be rooted in public participation and democratic debate, if only to help to spread the benefits more equally between communities thus increasing political as well as economic ownership of the technology and of the policies behind it.

Debate, it is hoped, will help persuade other institutions such as the European Investment Bank, as well as others, how renewable energy could become a central pillar of sustainable growth throughout the European Union. Such growth is not only the challenge of the moment, it is likely to the main issue on the economic agenda for the next decade and beyond.

Nor can this debate be taken in isolation. The European Union for Renewable Energy report, for example, notes that the processes involved in grid planning in Europe are little known outside of the small expert community and the processes of grid planning lack transparency and legitimacy. The transparency of grid planning processes and civil society participation must, therefore, be enhanced in order to boost acceptance of renewable generation and grids.

The transition to renewable energy is also a central tenet of the 'Green New Deal' proposed by, among others, the Greens in the European

Parliament. This is a particular area in which Europe can truly lead and make a valuable contribution.

It is a critical time to be doing so. Over a short time period around two thirds of all power plants will have to be replaced. Simultaneously large parts of the European transmission and distribution grid are in need of major re-investment and require rebuilding or modernising as well as greater integration.

It is significant that there is currently no agreement within the European Union on a 100% renewable energy target. According to the Treaty on the Functioning of the European Union (TFEU), it is currently the prerogative of Member States to determine their own energy mix. The Commission can nevertheless put forward proposals which can have an impact on the energy mix of the Union under article 194 TFEU, which states that it is the task of the EU to promote the development of renewable forms of energy. If this impact is significant, there must be unanimity in the Council and there is no co-decision with the European Parliament. This shows that the political will for a transformation towards 100 per cent renewable energy must be generated within Member States.

Most European citizens are in favour of a stronger role for renewable energy. It needs to be acknowledged though that consumers are wary of additional costs, and of new technological developments they do not fully understand. A fully and openly informed EU citizenry can be an indispensable ally for transforming our energy systems. This long-term vision needs to be backed up by ambitious medium-term targets.

The present European energy market is not functioning effectively. Competition is distorted by the failure to properly cost factors such as damage to the environment and to health, as well as by open and hidden subsidies for fossil fuel and nuclear power. Transforming the market is hindered by a lack of adequate infrastructure and conflicting national regulatory approaches and corporate self interests.

Renewable energy breaks this pattern by creating benefits both for the environment and for society. To overcome and balance these market distortions, mechanisms are needed to level the playing field between fossil-fuel based and renewable energy.

Many renewable energy technologies require significant upfront capital investment which brings about a further need for investors to be able achieve reliable returns.

The European Commission has stated that the goal is for a transition to a low-carbon Europe by 2050 in its paper http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52011DC0885:EN:NOT. Each scenario considered by the Commission points to a growing share of renewable energy in the energy mix. What these scenarios lack is how a renewable based low-carbon Europe can be achieved by 2050. Many scenarios continue to include unsustainable or unproven technologies. They also lack clear post-2020 targets for renewable energy that highlight a combined high renewable/high energy efficiency scenario.

Uncertainty over the EU's greenhouse gas reduction goal which has seen a shift from '80 to 95%' to an 80% minimum level, and is undoubtedly a backward step from the earlier positions agreed in the EU.

That said, the Renewable Energy Directive is working well and should continue in operation. Further elements to encourage Europe's energy markets and to further develop renewables energy support schemes need to be identified. The environment for investment for renewable energy needs to provide investors

with clear guidance. This is vitally important for the future success of renewable energy.

In practical terms priority access to the grid for renewable energy producers remains crucial to achieve growth in the speed of the deployment of renewables. Part of this process has to be that subsidies for conventional fuels have to be phased out. The same principle also needs to be applied to the open and hidden subsidies for nuclear energy.

Countries that have relied on voluntary targets and soft measures to support renewables have fallen behind. Lessons must be taken from this. Bringing about a binding European target, combined with effective national support mechanisms, will provide such investment security. This in turn will help to bring down capital costs. It is also important to note that previous targets for renewable energy have frequently been over achieved. Being optimistic when it comes to the future of renewable energy in Europe therefore is realistic.

The penetration of variable renewables such as wind and solar is still very low: less than 5% of electricity consumption in over two thirds of EU member States. The Danish and German experiences need to be built on in order to achieve success on a truly European platform. It is clear as well that national feed-in tariff systems have been the most effective support mechanism for providing cost-effective support for renewables. These tariffs are an effective application of the polluter pays principle, enshrined in the European Treaties.

It is argued that tariff levels and feed-in tariffs need to be technology based, reflecting the different stages of development of renewable technologies. Some technologies need greater support than others. The level and appropriateness is something still to be ascertained through experience.

Another important question is the debate on whether renewable energy is best served within a centralised or decentralised energy system. In this debate the criteria that have to be met are
a) The size of the installed capacity of electricity generation facilities;
b) The distance between the place of production and the place of consumption;
c) The dependence of the supply system on high-voltage transmission lines; and
d) The ownership structure of generating plants or networks.

With renewable energy, fuels no longer need to be transported all over the world. Renewable energy allows the efficient exploitation of energy sources on a small scale and in areas with low concentrations. Small installations for electricity generation can be extremely efficient. Smaller installations allow capacity to be increased as need arises. It should also be noted that the problem is that the economies of scale are also huge, especially when it come to wind and ocean energy power.

The question of location is important. In rural, sparsely populated communities, the switch to renewables gives the opportunity to achieve a localised self-sufficient energy supply. In higher population centres with high electricity demand, the consequence of the shift to renewables under current circumstances is the opposite. This has been because of the trend that has seen larger power stations located further away from the areas they are meant to be serving.

The degree to which electricity is obtained from high-voltage grids determines to what degree a generating system could be determined to be decentralised. Should a high-voltage network be limited to national territory or can it operate across borders? The energy revolution will be defined by the eventual spatial distribution of the transmission and distribution networks.

It is on the question of ownership that the distinction between centralised or decentralised systems pivots. Renewable energy allows small facilities to operate profitably. This opens up new opportunities for households, farmers, energy co-operatives or local communities to take ownership of energy supply facilities.

The lesson learned from energy modelling in Denmark is that local integration of wind electricity is more economical than exporting electricity to neighbouring countries, despite Denmark being one of the most interconnected countries in the world. The Danish example shows that the potential of local integration should be examined closely. However neither should we see distributed versus transmission power systems as an either/or choice.

The high percentage of co-generation and district heating in Denmark favours the local integration of electricity. In other cases, the transmission of electricity will be more economic. In some parts of Europe cross-border transmission will be shorter than the use of national lines and more cost efficient than other options. With Ireland, an island on the Western edge of Europe, this option is vital and unavoidable and demands a Europe wide approach.

A common factor in the success of renewable energy has been the degree of local ownership. Most small and medium investments are locally owned. Interest in shared ownership is as much about receiving benefits as it is about earning profit. Local ownership enhances public acceptance and support for renewable energy. It helps to create local revenue. In addition, strong public participation is important for 'emotional ownership'.

Such participation through local ownership should be incentivised by adequate support. To be made more attractive, schemes should be designed in a simple and transparent way so as to not create barriers to newcomers to the renewable energy business. While it would be difficult to directly prescribe for this there are several methods that could be considered such as issuing project bonds or regulating for methods to achieve minimum levels of community ownership.

To reach the European renewable energy target of a 20% share by 2020, investments in renewable energy need to double from the current levels. The global economic crisis has impaired growth in the renewable energy sector. Costs have been driven up. Investors have become more cautious even though large sums remain available for investment. In this financial environment fewer projects are thought capable of delivering a guaranteed return. The crisis has also led to significant differences between the cost of capital in different countries.

The European Investment Bank is the long-term financing institution of the European Union, its house bank. The financing it provides is meant to support the EU's policy objectives. The EIB focuses on six priority objectives, one of which is the development of Trans-European Networks of transport and energy (TENs) and sustainable, competitive and secure energy. In order to finance such projects the EIB borrows on the capital markets. It operates on a 'not for profit maximising' basis.

In the current financial crisis, the importance of the EIB for the financing of renewables has increased. While renewable energy investments showed a certain immunity to the early phases of the financial crisis, more recently there has been a downward trend in renewable energy investments due to policies which have created uncertainty in the market. The EIB remains the chief vehicle for the financing of major national infrastructure for renewable energy.

Certain countries have been pioneers in advancing the policies and politics of renewable energy in Europe. A group of such front-runner countries should lead by example; it should support the full implementation of the Renewable Energy Directive. This group should advance co-operation on research and development and the necessary infrastructural development, as well as the flexibility of the overall system.

While most countries rely on internal efforts to reach their renewable energy targets by 2020, many countries stress in their National Renewable Energy Action Plans that, beyond 2020, stronger co-operation with other countries will be essential. Cross-border cooperation can bring a number of positive gains, such as flattening peaks of variable renewable energy and complementing storage capacities.

The European bodies (Entsoe) for grid planning are not long established and given that many of the decisions concerning the European grid need to be taken in the coming years, the process needs to be improved urgently. In particular its legal basis needs to be strengthened. In October 2011 the Regulation on 'Guidelines for trans-European energy infrastructure', by the European Commission was published, providing a draft framework.

Each EU member country has been asked to establish a one-stop shop for stronger levels of co-ordination between the authorities involved, as well as ensuring that public participation be increased to make the permitting process faster, identifying potential obstacles and possible solutions early on.

The electricity grid we develop in Europe depends on the energy mix we create. This will be partly determined by European law and otherwise decided in by the Member States for Europe's future.

An intelligent grid planning is only possible when all of the elements that bring flexibility into the system are taken into account. Expanding the transmission grid is only one of several options for providing flexibility to a future European energy system based largely on variable renewable energies.

To achieve a cost-efficient flexible energy system that fully meets existing standards of energy security, a broader integrated planning process is necessary. In the long term, this requires an integrated planning process in which the relevant options for flexibility (flexibility in demand, flexibility in generation, storage and grids) together contribute to the best solutions.

Transparency and the participation of citizens in grid planning, development and implementation are important conditions for public acceptance. The European energy transformation will succeed only if it is a people's project as much as it is a political and technical project. The majority of European citizens are in favour of renewable energy and are willing to accept new renewable energy installations or the expansion of existing grids for this purpose. At a local level, however, strong public opposition may often arise – particularly in the communities where such projects are located. The so-called 'NIMBY' problem ('Not In My Back Yard') cannot always be fully solved, as there may always be a certain level of opposition from residents directly affected by new infrastructural projects. But acceptance of grids and renewable energy installations can be enhanced if the public is involved in the decision-making process, from grid planning to the implementation of single power lines or the planning of renewable energy installations.

While it may not be possible to reach full acceptance (meaning that people actually like the outcome), it is possible to reach full legitimacy (meaning that people accept the process as being right and fair). Furthermore, the inclusion of local citizens can actually improve outcomes, with decision-makers able to take advantage of their knowledge of the area. The values and preferences of the local population can be identified and obstacles for implementation identified at an early stage.

The need for grids has to be determined through a transparent process, based on energy planning and fully taking into account alternatives to grid extension. It is important that the public understands which projects or lines need to be built, and on which assumptions, in order to increase acceptance. This is why public participation and transparency should be implemented at the earliest possible point in the process – the energy planning stage.

Public participation is crucial in the spatial planning processes. It should be the objective of such participation processes to bring the best arguments into discussions at an early stage in order to increase the likelihood of a preferred outcome in order to avoid public resistance where possible.

Benefit-sharing schemes for local stakeholders can increase the level of public acceptance and could be made possible on a Europe-wide scale. European law needs to be reviewed in order to enable benefit sharing and public ownership of renewable energy infrastructure.

For participatory planning to become a success, it is important to fully communicate its purpose, and for the outcome of the process to be open. Not only the opportunities but also the limits of the process need to be clear to all participants in order to avoid raising unrealistic expectations.

In addition, in order to gain public acceptance of the grid it is essential to effectively communicate the 'whys' – the reasons for its construction – in particular to those citizens that will have to accept an outcome they did not wish for. Aside from early involvement, continuous dialogue is also necessary to make sure that the different proposals brought to the table are properly addressed in discussions, and provide the public with feedback explaining which arguments have been taken into account and which have not. This dialogue may help to create mutual trust and willingness to agree on common solutions on both sides. This is indispensable.

The method of participation must to be chosen carefully, the right target groups must be involved and the process needs to be professionally moderated. While some Member States have developed good participatory methods, planning processes have to become more transparent, and stakeholders need to have access to all the relevant data. With the increasing complexity of energy planning, the building of stakeholders' and other actors' ability to fully participate in the planning process is essential.

5. Recommendations and Conclusions

European Union

The European Union needs a common vision for the future of its energy supply. Such a vision should be based on the principle of sustainability and must respond to the urgency of climate change. Some Member States have decided to phase out nuclear power and to accelerate the deployment of renewable energy sources. At the same time, others intend to build new nuclear power plants, are proclaiming a new golden age of gas or are pinning their hopes on carbon capture and storage technology. – A European Union for Renewable Energy, Heinrich-Böll-Stiftung (2012).

The setting of EU targets for renewable energy should be matched by adopting common approaches throughout the Union on how strategic infrastructure for renewable energy is decided upon, with widespread public acceptance in the shortest possible time period. To achieve this national planning organisations need to be operating to common principles and approaches, where necessary underpinned by EU directives.

Alignment is also needed in terms of subsidies and incentives offered by each EU member state. An agreed approach to feed in tariffs would also encourage greater take up of renewable energy in those member states which are behind their targets. Incentives should be structured to offer higher support to encourage community ownership helpful for achieving better public acceptance.

A re-assessment of EU labour directives to allow for maximum local employment in energy initiatives would also encourage greater public support.

Continued and stronger support for European Union programmes that foster greater public involvement in environmental initiatives such as Life, Energy Cities and Pacita is also desirable.

Technology Assessment

A European Union-wide Technology Assessment agency or national bodies operating to a common standard are needed for the public to believe that an independent stand alone body can provide informed, value free information. A particularly important requirement is the development of a common EU approach to parliamentary technology assessment in order to better inform elected public representives and allow them to improve their leadership of their local communities.

Pre-Design

Where a number of communities are involved in a potential project, either as part of a route or within a selection of alternative sites, pre-design consultation should occur simultaneously. Communities should never be played against each other. If consultation is undertaken correctly communities may wish to compete with one other to be part of what are seen as beneficial projects.

Consultation should be as open as possible. A stepped approach to consultation should be avoided. All actors involved in a process should be known to each other at the earliest, interacting with each other to think about what is being proposed and how it is likely to happen.

Site Acquisition

A common feature of those objecting to renewable energy projects is the large numbers of adjoining property owners who object to not gaining financially from what is being proposed. This needs to be recognised. The purchase price of a site should be made up of a direct payment to the property owner plus tiered compensation payments to adjoining property owners.

Consultation Process

The quality of a consultation process is vital. Participants must feel that their input has an effect. From the onset a consultation process must have an uncertain outcome. People will not participate, nor believe in, a process they believe is facilitating a pre-determined result.

Community Contracting/ Community Gain

By entering into a contract with a recognised community grouping, an energy provider increases the prospect of development proposals becoming publicly accepted. Such contracts can include

- the degree of community ownership and/or management involvement with the energy facility;
- the level or resources being made available for community use;
- percentage of local people to be employed at the project;
- preferential access by community of the energy created; and
- procedures for reviewing contract and for dealing with potential disputes.

Scale of Development

There is no clear answer as to whether a number of large developments (the German approach) or a larger number of smaller developments (the Danish approach) is more appropriate in developing infrastructure for renewable energy. It is probably the most effective strategy to seek an effective combination of both approaches.

Planning Process

The body determining a planning/permitting decision must be seen to be a stand alone, independent body. Its decisions cannot be influenced by the policies of local, regional or national government that contradict established planning principles.

There should be a harmonisation in the European Union of the time period between when a planning application is submitted and when a final decision is made, taking into account any appeal process.

All aspects of a planning process should be open and transparent.

Any proposer of an energy development should be seen to be making every effort to make the public aware of their plans, not only through media advertising or the holding of public meetings or open days, but also by directly mailing all residents, as is currently the practice in Scotland, within 1km of a proposed development. This should also include greater use of the internet as a tool for public information in relation to the planning process.

Landscape Character Assessments

The suggestion by the Campaign for the Protection of Rural England in its report 'Generating light on landscape impacts: How to accommodate onshore wind while protecting the countryside' that Landscape Character Assessments become part of the planning/permitting process has merit and should be pursued.

Pilot Project:

To best promote the principles of better participation in decision making, a pilot project should be established around a renewable project or transmission link. If successful this pilot project could become a template for better decision-making and planning.

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Meetings/Seminars Attended

"Energy transition meets participation" organised by Heinrich-Böll-Stiftung, Berlin, October 2011.

European Grid Conference 'Beyond Public Opposition' – hosted by Rebecca Harms MEP and organised with the co-operation with Renewables-Grid-Initiative (RGI) and Smart Energy for Europe Platform (SEFEP), European Parliament, Brussels – November 2011.

Political Science Association of Ireland (PSAI) deliberative and participatory democracy specialist group symposium, National University of Ireland – March 15th 2012.

PACITA Summer School - Renewable energy systems and the role of parliamentary technology assessment – University of Liege – June 25th/28th 2012.
PACITA Politics, Science and Society workshop, Dublin – September 18th 2012.

PACITA Practitioners' Workshop – Instituto de Tecnologia Química e Biológica. Universidade Nova de Lisboa, September 19th/21st 2012.

Report Launch 'A European Union for Renewable Energy – Policy Options for Better Grids and Support Schemes': Heinrich-Böll-Stiftung – Representation of the State of Baden-Württemberg to the EU, Brussels – September 27th 2012.

Energy Cork launch, Cork – December 2012-12-09

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