



British – Irish Council Summit, London, 20<sup>th</sup> June 2011

## **An All Islands Approach to Energy Resources: Discussion Paper**

### **1. Introduction**

The BIC Electricity Grid Sub-Group was established following a paper drafted by the Scottish Government for consideration at the British-Irish Council's 12<sup>th</sup> Summit meeting in Cardiff during February 2009. It was agreed that the UK Government would lead on the work of this Sub-Group. Its objectives are to develop a more joined up approach to grid development, covering planning, regulation, research and development activity, and to work together to exert greater influence on emerging EU policy.

Since the BIC Summit in Guernsey on 25<sup>th</sup> June 2010, the Electricity Grid Sub-Group has met four times. A summary of business is at **Annex A**. The likely future workplan for the Sub-Group over the next year is at **Annex B**.

While the scope of an All Islands Approach (AIA) to energy resources is wider than the remit of the Electricity Grid Sub-Group, its membership includes representatives of all relevant administrations. As such, the Sub-Group was considered a convenient vehicle for the development of this initial paper on the AIA.

### **2. Scope of the All Islands Approach**

#### AIA Vision

An approach to energy resources across the British Islands and Ireland which encourages and enables developers to exploit commercial opportunities for generation and transmission, facilitates the cost-effective exploitation of the renewable energy resources available, increases integration of our markets and improves security of supply.

#### Scope and focus

The scope of the AIA is energy generation, with its associated offshore transmission and interconnection, given that such infrastructure can form key links between parts of the British Islands and Ireland to deliver the AIA vision. The role of the AIA is to support and enable developers to make cost-effective investment decisions that are not unduly impeded by boundary or cross-border issues.

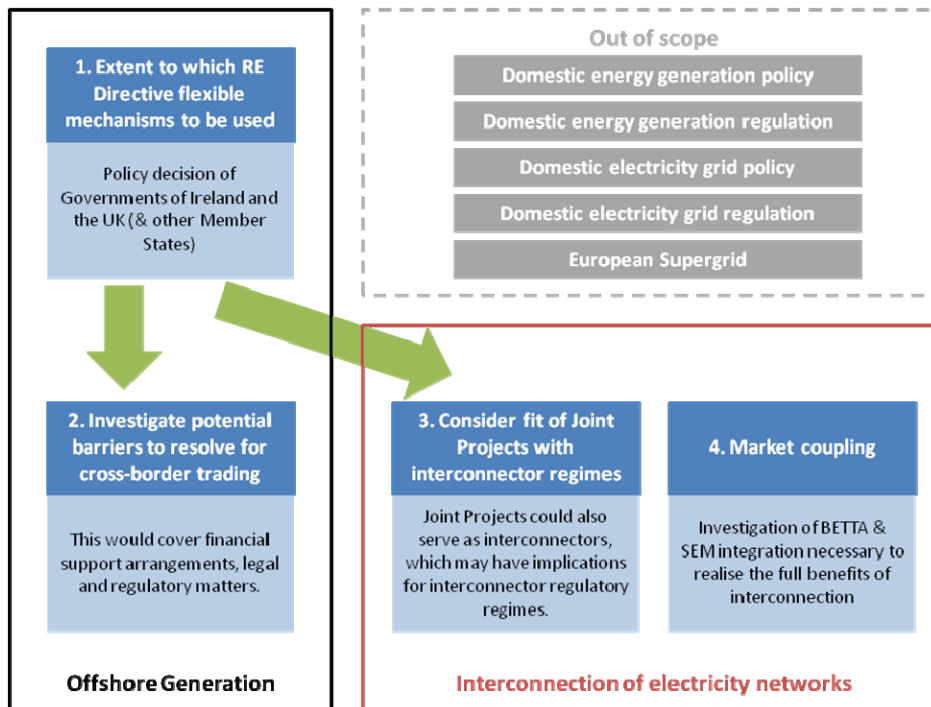
The AIA will draw on existing initiatives and will avoid duplication by only undertaking new work where there are clear gaps. It will therefore be informed by the Irish-Scottish Links on Energy Study (ISLES), feed into the North Seas Countries' Offshore Grid Initiative (NSCOGI) and the Commission's Concerted Action on the Renewable Energy Sources Directive (CA-RES) programme via the UK and Irish representatives, and note the work of regulators on interconnection regulation and on market coupling including on the France, UK and Ireland Regional Electricity Market Work Plan. For more details on these initiatives, see below and **Annex C**.

It is not the role of the AIA to take decisions on the energy mix across the UK or Ireland, nor to decide the type and location of infrastructure to be built, which are all commercial decisions. Further, the focus of the AIA is on boundary and cross-border issues; not domestic policy areas or the remit of the independent energy regulators.

#### AIA workstreams

The AIA currently involves four workstreams, the first and second relate to generation; the third and fourth workstreams relate to interconnection of electricity networks. These component workstreams are illustrated in Figure 1 below.

**Figure 1: Diagram illustrating component parts of All Islands Approach**



The **first workstream** (see Section 4 of this paper) involves the extent to which the Renewable Energy Directive flexibility mechanisms could be used by the UK and Irish Governments. Should Member States decide to use them, then the **second workstream** would involve assessing the financial, legal and regulatory issues which would need to be resolved to enable greater cross-border electricity trading and the **third workstream** would explore the fit of Joint Projects with interconnector regimes to the extent to which this is not addressed through the NSOCGI. The **fourth workstream** (see Section 5 of this paper) involves action that needs to be taken to achieve greater integration of wholesale British Electricity Trading and Transmission Arrangements (BETTA) in BIC partner areas with the Single Electricity Market (SEM) on the island of Ireland to realise the full benefits of interconnection, including under the European union’s France-UK-Ireland (FUI) regional electricity market initiative.

**RECOMMENDATION 1: that heads of administration agree the vision, scope and workstreams of the AIA set out above**

### 3. Principles underpinning the All Islands Approach

The development of the All Islands Approach should be guided by the following principles:

- Reflects the energy potential of each of the BIC member areas, and in the context of the policy aims, powers and responsibilities of each BIC member.

- Provides BIC members with access to a broader range of cost-effective, low carbon energy resources and contributes to future security of energy supplies and economic development.
- Enables investors to make rational energy investment decisions that are not impeded by boundary and cross-border issues between BIC members to the extent that this is consistent with energy security and low carbon objectives.
- Recognises that the UK and Irish Governments may use renewables trading on a limited basis, to meet their 2020 renewables targets. Any trading would be based on voluntary bilateral arrangements between the national governments and Crown Dependencies, and developed in conjunction with the relevant devolved Governments of Scotland, Wales and Northern Ireland.
- Supports renewables Joint Projects that provide mutual benefits to BIC members and help the UK, Irish and other BIC member Governments achieve their renewables targets at the same or lower cost to consumers while not undermining domestic financial support mechanisms.
- Ensures that the use of renewables trading does not result in the responsibility for renewable energy policy moving from national or devolved governments to EU institutions and ensures that trading supports the development of environmentally sustainable renewable energy.
- Supports the development of infrastructure that will enable trading of energy (in particular renewable electricity), while recognising that the market will determine the need for further interconnection capacity.
- Recognises existing initiatives and studies in this area – only creating new workstreams where there are clear gaps – and contributes to the work of the North Seas Countries' Grid Initiative (NSCOGI) and the European Commission's Renewables Energy Sources Directive Concerted Action programme.

***RECCOMENDATION 2: that heads of administration agree the principles underpinning the AIA set out above***

#### **4. Flexibility Mechanisms for Renewable Energy Trading**

BIC members have different renewable energy potentials and operate different national support schemes to encourage new renewable energy production. The costs of developing renewable energy projects can vary from one area to another, and other issues such as electricity grid capacity,

planning and permitting timelines as well as market and regulatory issues can influence the ability of a BIC member to develop sufficient renewable projects in time to achieve Member State binding 2020 national targets.

The Renewable Energy Directive (2009/28/EC), which sets binding renewable energy targets for each Member State, also establishes "cooperation mechanisms" by which Member States can join together to develop renewable energy sources. These mechanisms allow member States to trade statistical renewable energy value or to voluntarily work together to co-develop renewable energy projects and agree mechanisms to share the renewable value of those projects with each other. How these mechanisms would operate in practice in conjunction with devolved governments, and in the context of the renewable energy targets of devolved governments, is one of the issues the AIA flexibility mechanism workstreams should address.

The flexibility mechanisms include:

- "statistical transfers" (Article 6) whereby one Member State with a surplus of renewable energy can trade it statistically to another Member State. This form of trade may take place without any accompanying physical flows of electricity, i.e. only the 'renewable value' of the electricity is transferred.
- "joint projects" (Articles 7 – 10) whereby a new offshore or onshore renewable energy project in one Member State can be co-financed by another Member State and the energy production and renewable energy value shared statistically between the two. Joint projects can also occur between a Member State and a third country (including Crown Dependencies), if an equivalent amount of electricity produced is imported into the EU. The concept of joint projects could also allow for co-operation on projects which are built in one Administration being connected directly into the electricity grid of another Administration.
- "joint support schemes" (Article 11) whereby two or more Member States agree to cooperate on all or part of their support schemes for developing renewable energy and share out the generation and renewable value by agreement between them.

### Next steps

The UK and Ireland, in partnership with other BIC members, will explore the use of flexibility mechanisms between each other and with other Member States through the Concerted Action on the Renewable Energy Sources Directive (CA-RES) Programme, which started in July 2010 and will last three years (for further details see Annex C). During this time, workstream leads will also explore the use of flexibility mechanisms with Crown Dependencies.

Workstream 1 should also, at an early stage, involve an assessment for each BIC member of how much energy at different levels of cost could be unlocked through an All Islands Approach, as well as

identify a number of real or hypothetical case studies for exploring the potential benefits of using flexibility mechanisms.

***RECOMMENDATION 3: that heads of administration to agree explore the potential mutual benefits of flexibility mechanisms***

## **5. Electricity Market Coupling**

The Regional Initiatives were set up in spring 2006 by the European Regulators' Group for Electricity and Gas (ERGEG), at the request of the European Commission, as an interim step in moving from national electricity and gas markets to a single energy market. Seven electricity regions and three gas regions were created. France, UK and Ireland (FUI) together form one of these Regions. Annual electricity consumption in this FUI region is about 780 TWh, around 25% of the EU-27 electricity market.

On 4<sup>th</sup> February 2011, the European Council gave added momentum when it concluded that “the EU needs a fully functioning, interconnected and integrated internal energy market”. Two of the main challenges for market integration in the FUI regional electricity market relate to market fundamentals and transmission capacity

### Market fundamentals

‘Market fundamentals’ are primarily a result of the differences in the electricity market models of the three Member States. The electricity market liberalisation in France, UK and the cross-border Single Electricity Market (SEM) established on the island of Ireland evolved separately and have resulted in various market models. Great Britain has a bilateral market with a focus on intra-day trading, Northern Ireland and Ireland share a mandatory day-ahead pool and France trade electricity mainly through a power exchange. Some of the issues that will need to be addressed include the alignment of key market design elements which include gate closure times and network access and charging arrangements. Many of these issues are being highlighted in the Irish Scottish Links on Energy project, which will support the detailed understanding of the issues to be addressed. In addition, it will be important to ensure sufficient liquidity in each country’s electricity market and also the promotion of the harmonisation of auction rules on all interconnectors within the FUI region.

### Transmission capacity

‘Transmission capacity’ relates to the relatively low levels of interconnection in the FUI region. Presently there are two sub-sea electricity (DC) links, one between France and GB (2,000 MW) and another between GB and Northern Ireland (450 MW) but these account for only 3% of peak demand in the region. The BritNed (Britain–Netherlands) interconnector (1,000 MW) is due to be commissioned in mid 2011 with the East-West interconnector between Dublin and Deeside (500 MW) following on towards the end of 2012. Plans are also under consideration for wider interconnection, including between GB and Norway. The development of these new cross-border interconnectors between Ireland, GB and Continental Europe and the way they are operated in the market is crucial in bringing the FUI market integration process forward.

Government energy departments are working closely with the energy regulators and transmission system operators to deliver greater market coupling on a cost effective, incremental basis to achieve our ambitious renewable and climate change targets as well as improving our energy security of supply position. The regulators, within the France-UK-Ireland (FUI) region, are investigating options for cost effective market coupling over the medium term, taking account of the different market designs in each Member State, how the benefits of greater market integration apply in each case and the necessity of compliance with relevant EU directives.

***RECOMMENDATION 4: that heads of administration note and support progress on integration of GB and SEM wholesale electricity markets, including through the market coupling Roadmap***

## **6. All Islands Approach Work Programme**

Table 1 below sets out details of timeframes, workstream leads and related initiatives for the four AIA workstreams illustrated in Figure 1 and described above. Leads will work in partnership with the with the devolved Governments of Scotland, Wales and Northern Ireland and Crown dependencies in taking these workstreams forward. BIC members will work collectively to support each of the workstreams.

**Table 1: AIA workstreams timeframes and leads**

<b>No.</b>	<b>Workstream</b>	<b>Workstream timeframe</b>	<b>Workstream leads</b>
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i.	Analysis of potential benefits of flexibility mechanisms	To June 2013 (including through CA-RES)	<ul style="list-style-type: none"> <li>• Irish Department of Communications, Energy and Natural Resources</li> <li>• UK Department of Energy and Climate Change (Office for Renewable Energy Deployment)</li> </ul>
ii.	Investigation of potential barriers to deployment of flexibility mechanisms	To June 2013 (including through CA-RES)	<ul style="list-style-type: none"> <li>• Irish Department of Communications, Energy and Natural Resources</li> <li>• UK Department of Energy and Climate Change (Office for Renewable Energy Deployment)</li> </ul>
iii.	Analysis of fit of Joint Projects with interconnection regimes	To December 2012 (initially through the NSCOGI)	<ul style="list-style-type: none"> <li>• Irish Department of Communications, Energy and Natural Resources and the Commission for Energy Regulation (CER)</li> <li>• UK Department of Energy and Climate Change (European Policy team) and the Office of the Gas and Electricity Markets (Ofgem), working with the Northern Ireland Authority for Utility Regulation (NIAUR)</li> </ul>
iv.	Market Coupling	Ongoing - in line with EU timeframes	<ul style="list-style-type: none"> <li>• Irish Department of Communications, Energy and Natural Resources and CER</li> <li>• UK Department of Energy and Climate Change (European Policy team) and Ofgem, working with NIAUR</li> </ul>

***RECOMMENDATION 5: that heads of administration agree to the proposed timeframes for each workstream set out above***

## **7. Future Development of the All Islands Approach**

Final decisions on Member State aspects of each of the four initial workstreams are ultimately for the UK and Irish Governments and, in some cases, energy regulators to take. Further, as noted in the Introduction, workstreams 1 and 2 do not formally fit with the remit of the BIC Electricity Grid Sub-Group, which covers grid rather than generation issues (and the BIC Marine Sub-Group considers only a small generation sub-set). Also, the Grid Sub-Group only meets around three times a year, and covers a wide range of other issues. In light of these considerations, the workstreams will be taken forward by the leads set out in Table 1 above outside of the BIC Electricity Grid Sub-Group, in partnership with the devolved Governments of Scotland, Wales and Northern Ireland and Crown dependencies. However, the Grid Sub-Group will continue to be used to discuss grid-related aspects of the AIA, particularly those aspects that involve all BIC members, as the need arises. Progress on the workstreams will be a standing agenda item for discussion at Grid-Sub Group meetings.



Further workstreams could be added to the AIA in the future. One initial idea discussed in the BIC Electricity Grid Sub-Group during the development of this paper is the production of a guide for developers who are looking to invest in cross-border offshore generation or interconnection projects.

***RECOMMENDATION 6: that heads of administration: note that the AIA workstreams will be taken forward outside of the BIC Electricity Grid Sub-Group; commit to continued joint working between workstream leads and BIC members; note that the Grid Sub-Group will continue to discuss grid-related aspects of the AIA and workstream delivery.***

## **Annex A – Summary of BIC Electricity Grid Sub-Group business over the last year**

Since the BIC Summit in Guernsey on 25 June 2010, the Grid Sub-Group has met 4 times. Below is a summary of its business over the last year.

### 1<sup>st</sup> July 2010 meeting, Northern Ireland

The following business was conducted:

- Interconnector and energy trading developments, with a focus on potential UK-Ireland projects and proposed changes to UK interconnector regulation policy
- ISLES project update, a collaborative project between Northern Ireland, Ireland and Scotland to accelerate the development of offshore renewables across jurisdictions
- North Seas Countries' Offshore Grid Initiative (NSCOGI) – developments on negotiations for a Memorandum of Understanding between 10 North Sea countries
- BIC member grid policy round-up

### 1<sup>st</sup> November 2010 meeting, Isle of Man

The following business was conducted:

- Planning - lessons learned from the development of the Beaulieu-Denny onshore transmission connection and update on the implementation of the Planning Act 2008 and development of National Planning Policy Statements
- Smart Grids – presentation and discussion on the development of a smart grid in Ireland
- Renewable Energy Directive – update on the development of a UK National Renewable Energy Action Plan
- NSCOGI – update on negotiation of a Memorandum of Understanding
- BIC member grid policy round-up

### 24th January 2011 meeting, London

The following business was conducted:

- GB offshore transmission regulatory regime – update on developments, particularly the implementation of a generator-build option on an enduring basis
- Research and development – update on ISLES project and the GP Wind Project, which is being undertaken by the Scottish Government to address barriers to the development of wind energy by producing a good practice guide on reconciling renewable energy with other environmental objectives
- EU policy development – presentation to the group by the European Commission on European energy infrastructure priorities and forthcoming proposed EU legislation (energy infrastructure package)

- All Islands Approach (AIA) – initial policy discussion within the group regarding the letter from Minister of State Charles Hendry to BIC ministerial colleagues proposing an AIA to the efficient development and use of energy across the UK, Crown Dependencies and Ireland with the potential for renewable energy trading under the Renewable Energy Directive. There was agreement that this should become one of the themes for the June 2011 BIC Summit
- BIC member grid policy round-up

4<sup>th</sup> April 2011 meeting, London

The following business was conducted:

- Further discussion of the potential for renewable energy trading under the AIA
- Preparation for the June 2011 BIC Summit, including drafting of discussion paper
- BIC member grid policy round-up

## **Annex B – Future work programme for Electricity Grid Sub-Group over the next year**

Next year's business will be conducted under the three agreed Grid Sub-Group workstreams: (1) research and development; (2) regulation and planning; and (3) EU policy and funding. Likely topics for discussion and development are likely to include the following items, which are grouped under these three workstreams below.

### Research and development

- ISLES project
- GP Wind project
- North Seas Countries' Offshore Grid Initiative (NSCOGI) evidence gathering and research
- Electricity Networks Strategy Group (ENSG) update to 2020 onshore grid reinforcement strategy document, and potential extension to 2030

### Regulation and planning

- Further development of renewable energy trading policy among BIC members under the All Islands Approach (AIA)
- Discussion of policy and regulation developments, and implications, coming out of the following projects:
  - Interconnector regulation reform
  - NSCOGI
  - Offshore Transmission Coordination Project
  - Electricity Market Reform White Paper
  - Project TransmiT
  - RIIO

### EU policy and funding

- EU infrastructure legislative package
- EU transmission code development and other aspects of Third Energy Package implementation

## **Annex C – Some existing Initiatives related to the All Islands Approach**

### North Seas Offshore Countries Grid Initiative

The North Seas Countries' Offshore Grid Initiative (NSCOGI), to which Ireland and the UK are parties along with a further eight countries and which devolved administrations are supporting, includes a detailed work programme focusing on three areas:

- I. grid configuration and integration: will develop scenarios for possible offshore grid infrastructure taking account of national offshore wind development plans.
- II. market and regulatory issues: will identify areas where the incompatibility of national regimes acts as a barrier to offshore grid development and develop proposals for addressing these barriers in order to facilitate cross-border investment.
- III. planning and authorisation procedures: will propose measures to improve coordination of national planning and consenting procedures, with the aim of reducing the length and complexity of decision making for offshore grid projects

### ISLES

The Irish-Scottish Links on Energy Study (ISLES), a collaborative project between the Scottish Government, the Northern Ireland Executive and the Government of Ireland, is assessing the feasibility of creating an offshore interconnected transmission network and subsea electricity grid based on renewable energy sources off the coast of western Scotland and the Irish Sea. The study is funded mainly by the EU's INTERREG IVA Programme, managed by the Special EU Programmes Body (SEUPB).

The ISLES feasibility study is being undertaken in parallel with fundamental changes in industry and political thinking around future market, regulatory and infrastructure integration. Against this backdrop, the ISLES study is providing a significant and relevant body of evidence – with particular relevance to the interconnection of the wholesale electricity market – the British Electricity Trading and Transmission Arrangements (BETTA) in Great Britain with the cross-border Single Electricity Market (SEM) on the island of Ireland – to inform policy thinking; and provide a blueprint for the viability of a future integrated offshore transmission network.

The project has seven main workstreams (Regulatory; Technology; Economic Modelling; Economic Development; Infrastructure; Environment & Planning and Construction & Deployment). The outcomes are highlighting the scale and complexity of the challenges to be addressed in delivering an offshore integrated grid. The outcomes will inform all four component parts of the AIA approach.

In particular the regulatory workstream of the ISLES study, in assessing the regulatory framework, commercialisation, and standardisation across the BETTA and SEM market structures, highlights three key issues which are transferable to any similar project:

- Gaps in the legislative and regulatory powers, including planning and licensing
- Market implications of differing subsidy regimes - who gains the renewable benefit?

- Cross jurisdictional trading of renewable energy – interconnector pricing and access arrangements, combination of intraday & day ahead markets

Given that these issues link to those being considered by the North Seas Offshore Countries Grid Initiative, the ISLES Steering Group is working closely with UK and Irish colleagues leading the NSCOGI regulatory and market workstream.

The full outcomes of the feasibility study, and evidence base, will be published by December 2011.

### Good Practice Wind

A third initiative which will support the AIA is the Good Practice Wind project (GP Wind). This project is working to identify, analyse and address barriers to the development of wind energy, by developing good practice in reconciling renewable energy objectives with wider environmental objectives and actively involving communities in planning and implementation.

The project is being coordinated by the Scottish Government and is co-funded by the Intelligent Energy Europe Programme. It will develop a guide to good practice and a 'how to' tool kit, which will be used to facilitate the deployment of renewable energy in support of the 2020 targets.

GP Wind will demonstrate and disseminate good practice from individual partner countries (Belgium, Greece, Ireland, Italy, Malta, Norway, Spain and the UK) to target audiences across Europe, providing tools which can be used by industry, developers, European, national and local policy makers, regulatory authorities, environmental agencies and groups and local communities to improve the policy, guidance, process and practice of dealing with applications for new renewable energy projects.

The tool kit and best practice guide will be available when the project concludes in August 2012, however findings will be fed into the AIA as they emerge.

### The Concerted Action on the Renewable Energy Sources Directive (CA-RES) Programme

The CA-RES supports the transposition and implementation of the Directive 2009/28/EC and the achievement of the national targets. In the CA-RES, Member States exchange experiences and best practices and develop common approaches. It is organised as a structured and strictly confidential dialogue between national authorities responsible for the implementation of the Directive 2009/28/EC or their nominated representatives.

### Market Integration

The regulatory authorities are working together in the context of the France-UK-Ireland regional structure to develop a regional work plan to work towards the stated EU Council internal energy market goal, including market coupling.