Coillte Teoranta

Response to

"Towards a Sustainable Energy Future for Ireland"

1st December 2006

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1 Introduction

The Minister for Communications, Marine and Natural Resources has invited comments on the Green Paper - Towards a Sustainable Energy Future for Ireland (the "Green Paper"). Coillte welcomes the opportunity to respond to this Green Paper and our main views are set out in this paper.

Coillte welcomes the publication of the Green Paper and believes that it is vital to develop an integrated strategy across multiple Government departments and State Agencies to address Ireland's very serious energy difficulties. In particular, we welcome the establishment of the Ministerial Task Force on Bioenergy which, with the proper resources and commitment, has the potential to deliver a bioenergy strategy that can make a tangible difference to energy in Ireland.

We note in general that the Green Paper places a heavy emphasis on electricity in the overall energy picture. Mirroring the stage of development of EU energy policy, there is a notable lack of focus on heat (despite the fact that heat accounts for a third of primary energy consumption). In 2007 the European Commission is due to publish a directive on heating and cooling and it is very important that Irish energy policy should similarly develop in this area. This is particularly important in the context of bioenergy.

It is very important that the White Paper builds on the broad concepts outlined in the Green Paper and specifies the detailed initiatives and mechanisms that are required to implement the overall targets. It is also important as part of the consultative process that stakeholders have an opportunity to comment on the finer detail of these measures before they are finalised.

Coillte would welcome an opportunity to meet with the Department for Communications, Marine and Natural Resources to discuss this paper or any other issue.

Coillte's views are outlined in the main body of this document and our responses to relevant consultation questions are provided in the Appendix.

2 Executive Summary

1. **Wood has an important role to play not only in energy production but also in climate change mitigation through the production of environmentally friendly products and carbon sequestration[1]. These distinct roles should be recognised and supported. Government policy needs to be careful not to promote wood for energy to the detriment of the wood processing sector and in turn undermine the climate change benefits of wood products. (See Section 3.2).**

2. **The guiding principle in developing sources of wood biomass should be to seek out all material that is not suitable for the production of wood products and direct that into the energy market. The economic value that is added by turning wood into products is far greater than the value added in energy production. The employment potential in the wood products industry is also greater than that in energy production. (See Section 3.6 and Section 4).**

3. **The basic principle of Government policy in relation to biomass deployment should be to use biomass as efficiently as possible, that is, to produce the maximum amount of final energy given a specific quantity of biomass. We believe that, in the case of wood biomass, co-firing of peat stations does not adhere to this principle and is not the best use of an indigenous biomass resources. Wood biomass is best suited for use in heat and CHP installations. (See Section 3.3).**

4. **More decentralised use of wood biomass fits very well with efficiency objectives in terms of keeping plant location close to the source of supply with an appropriate level of volume demanded per installation. It is preferable to have a blend of a few large scale highly efficient plants combined with many smaller decentralised installations. (See Section 3.3).**

5. **Government policy should be mindful that unless addressed the anomalies of the current emissions trading system (and NAP) are likely to misdirect wood biomass towards less efficient users. Alternative supports and incentives, should be made available to installations outside the NAP scheme in recognition of carbon attributes, to drive the most efficient use of wood biomass, particularly for heat and CHP plants. (See Section 3.4).**

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[1] **Coillte owns approximately 1.5-2m tonnes of Kyoto compliant CO_2 sequestered by its forest estate.**

6. **To mitigate against a counterproductive trade off between the wood processing and wood biomass sectors, supports and incentives should be directed where they benefit both sectors. In particular, Government policy should focus on the early stages of the wood supply chain and create supports and incentives that gets wood out of the forest and ready for use (e.g. supports for thinning and harvesting of forests). Carbon benefits and climate change mitigation should be the justification for new supports and incentives designed to create major drivers in the development of both the wood biomass and wood processing sectors. This would have the effect of promoting wood use in general, with all its positive environmental attributes, through more competitive prices of end products. (See Section 3.5).**

7. **To maximise the potential of available wood biomass, Government policy should support all types biomass material and all sizes of biomass users. In this regard it is important to ensure that the level of processing is appropriate to the end use (in general, the larger the scale of installation the less processed the biomass fuel needs to be). This means ensuring the production of a broad a range of biomass fuels and not an over-concentration in any one particular fuel grade (there may be a current danger of developing overcapacity in wood pellet production with a corresponding constraint in supply of lower grade biomass). (See Section 3.6).**

8. **To identify and maximise indigenous biomass energy resources, Government support should be given to research into the sources of wood biomass and the systems required to bring it to market. (See Section 3.6).**

9. **The functionality of wood should cascade from a primary product, to re-use and recycling and then to energy. To encourage this Government support should be given to research into the initial processing of wood and to sorting and cleaning technologies to ensure that wood is more easily reused and recycled and is not treated as waste before its full potential is realised. (See Section 4.2).**

10. **Coillte supports the Green Paper target of 30% of total electricity consumption being generated from renewable sources by 2020 but without the caveat subject to 'technical considerations' which could render the target meaningless. Further the White Paper should provide detailed plans of the**

support initiatives required to achieve this target. (See Section 5.1).

11. In relation to access to the electricity grid, Coillte believes that Government policy should allow for full contestability for both transmission and distribution for all new wind farm connections. (See Section 5.2)

12. Due to delays in processing connection offers and delivery times for wind turbines, Coillte believes that the granting of a 10 year planning permission for wind farms as standard is essential and should be done in conjunction with accelerating the actual process of confirming grid connections. (See Section 5.3).

13. The cost associated with wind farm development have increased significantly. Government policy in relation to support measures, such as the REFIT programme, should recognise these changes in costs and allow them follow through and be reflected in the support prices. (See Section 5.4)

14. Energy derived from wind is variable and therefore requires a flexible and responsive generation portfolio to accommodate increasing wind penetration levels. Coillte believes that Government policy should create incentives for the construction of OCGT plant or incentives to CCGT operators to offer more plant flexibility to complement wind penetration. (See Section 5.5)

3 Bioenergy (Biomass and Biofuel)

3.1 Terminology

The terminology used in this area can be unclear and lead to confusion. We prefer to use the term "bioenergy" to describe renewable biological fuel for the production of heat, electricity and transport. Bioenergy can be further subdivided into (solid) "biomass" and (liquid) "biofuel". Greater clarity and consistency in terminology is important in order to ensure that bioenergy maximises its potential, particularly when designing market incentives and setting targets.[2]

For the remainder of this paper we use the term "biomass" to refer to solid biomass.

3.2 Wood can be used both for Energy and for Climate Change Mitigation

Coillte believes that bioenergy has a significant role to play as an energy source in Ireland and it is vitally important that the final White Paper gives adequate focus to its development. Coillte's primary interest is in the use of wood as a solid biomass resource[3]. Wood, however, has an important role to play not only in energy production but also in climate change mitigation through the production of environmentally friendly products and carbon sequestration. Coillte believes that the distinct roles of wood for products and wood for energy must both be recognised and supported by appropriate Government policy, incentives and targets. The White Paper needs to be careful not to promote wood for energy in such a way that would disadvantage the wood processing sector and in turn undermine the climate change benefits of wood products. (Wood processing and climate change mitigation is further discussed in Section 3 below).

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[2] The Ministerial Task Force on Bioenergy appears to recognise the distinctions outlined above. We would urge the White Paper to follow the Task Force's lead and use the more precise terminology.

[3] Coillte is also interested in the development other energy crops especially in relation to the output of Coillte nurseries.

3.3 Efficient Transformation of Biomass to Final Energy

The Green Paper sets out policy targets in relation to the contribution of biomass to the primary energy supply (e.g. co-firing up to 30% biomass at peat stations by 2015). The quantity of energy which is transformed from primary to final energy in the form of heat, electricity or liquid fuels, depends upon the efficiency of the conversion technology. This efficiency can vary from as low as 25% (biomass to electricity without the use of heat) to 85% in CHP installations. Choosing a more efficient conversion technology means that the final energy outcome from the same quantity of biomass can be over 3 times higher than using an inefficient technology.

While biomass is a renewable source of energy, its resource potential is limited and therefore it must be used wisely. The basic principle of Government policy in relation to biomass deployment should be to use biomass as efficiently as possible, that is, to produce the maximum amount of final energy given a specific quantity of biomass. We believe that, in the case of wood biomass, co-firing of peat stations does not adhere to this principle and is not the best use of an indigenous biomass resources[4].

In addition, co-firing biomass for electricity generation could absorb the majority of available wood biomass resources and thereby stifle the development of other, more efficient, means of final energy production. More decentralised use of wood biomass fits very well with efficiency objectives in terms of keeping plant location close to the source of supply with an appropriate level of volume demanded per installation. Rather than large inefficient central plants with high volume requirements (resulting in significant transport energy costs), it is preferable to have a blend of a few large scale highly efficient plants combined with many smaller decentralised installations.

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[4] Wood biomass is suitable for use in a wide range of applications and environments (industrial plants, hotels, schools, homes) whereas other solid biomass may be more limited in scope and therefore co-firing in peat stations may be the most appropriate use for that material.

3.4 Impact of Carbon Allowances in the Biomass Market

Implementing an appropriate Government policy to deploy biomass as efficiently as possible means creating the correct incentives and putting the right market structures in place. A key component of this is the role of carbon credits in directing the flow of indigenous biomass resources. Under the current regime only those installations that have been granted carbon emissions allowances under the National Allocation Plan (NAP) can trade in carbon by selling or buying spare allowances. Companies outside the NAP cannot trade on any carbon efficiencies that they bring to the environment; they cannot "create" carbon credits.

The rationale that targeting the worst offenders in greenhouse gas emissions can make the biggest difference in reducing overall emissions in the shortest time is well documented. The emissions trading regime is not aligned with Government policy, as set out in the Green Paper, of being energy efficient and maximising the potential of our indigenous energy resources. This is especially true of wood biomass.

Effectively only those installations on the NAP scheme have the ability to pay for the carbon credentials of biomass – they can offset penalties or generate income with spare allowances. This will obviously attract biomass towards those installations but they are not necessarily the most efficient users of the material (especially wood biomass) and therefore the country will not maximise the energy potential of its limited resources[5]. As outlined above, allowing biomass to be misdirected into plants with suboptimal conversion technology could mean that less than a third of the energy potential of Ireland's biomass would be realised.

The scope to reform the carbon trading system is likely to be limited in the short term. Nevertheless Government policy should be mindful that unless addressed the anomalies of the current system are likely to misdirect wood biomass towards less efficient users. It is legitimate for biomass producers to be able to trade on their carbon credentials and this should be seen as an opportunity to create a major driver for the biomass sector. Government policy should to establish alternative supports and incentives, which are made available to installations outside the NAP scheme, in recognition of carbon attributes, to drive the most efficient use of wood biomass, particularly for heat and CHP plants.

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[5] While there are a number of wood processing plants on the NAP, their level of allowances is very small in comparison to the major players.

3.5 Balanced Incentives and Supports are Required

The carbon attributes of wood biomass should form the basis of alternative incentives that would create a major driver for the biomass sector. However, as outlined elsewhere in this paper, Government policy must be careful not to promote the wood biomass sector to the detriment of the wood processing sector. Wood products, especially in construction, also exhibit environmental and climate change mitigation attributes that need to be promoted. It would be counterproductive to trade off wood processing against wood biomass (i.e. wood processors competing for wood resources against energy users who have a greater ability to pay due to incentives only available to the energy sector, like carbon credits[6]). To mitigate against this, supports and incentives should be directed where they benefit both sectors. In particular, Government policy should focus on the early stages of the wood supply chain and create supports and incentives that gets wood out of the forest and ready for use[7]. Such incentives would increase wood supply at an attractive cost whether for energy use or for wood processing and would allow both sectors to be supported and developed. This would have the effect of promoting wood use in general through more competitive prices of end products.

The balance required to do this is clearly complex and needs careful consideration. Three key principles should underpin Government policy:

- **Carbon benefits and climate change mitigation should be the justification for new supports and incentives designed to create major drivers in the development of both the wood biomass and wood processing sectors.**
- **The wood biomass and wood processing sectors should not be traded off against each other but should be developed in tandem.**
- **Wood biomass resources should be directed to those installations that produce the maximum amount of final energy given a specific quantity of biomass.**

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[6] This is an increasing problem for wood processors across Europe. Since the development of wood biomass in Ireland is at an early stage we still have the opportunity to ensure that the right balance in incentives and support is established.

[7] For example, supports for the thinning and harvesting of forests.

3.6 Ireland's Wood Biomass Resource

There are three main sources of wood biomass:

- **Direct (directly from the forest – forest residues, pulpwood, whole tree chips)**
- **Indirect (following processing in sawmills, co-products such as chip, bark and sawdust)**
- **Post consumer (recovered wood, C&D waste, pallets/ packaging, etc.)**

There are likely to be significant potential resources available directly from the forest, while the indirect (post-processing) sources already have well established markets for the material including wood pellet manufacturing. The post consumer area also has significant potential but there are important environmental considerations that need to be addressed to make this material suitable for biomass for energy.

Wood has both a product and an energy potential. As discussed in Section 4 below, the starting point when looking for sources of wood for energy must be to ensure that material that is suitable for the production of wood based products is not used directly for energy generation. The corollary of this is that we must seek out any material that is not suitable for wood products and direct that into the energy market. This is the guiding principle of Coillte's approach to biomass.

Consequently, Coillte is currently studying a number of potential sources of biomass including the collection of forest residues for energy use. While it will not be a simple exercise to turn this material into a viable resource, it does have potential especially in "pockets" or concentrations of available residues. This will clearly influence the scale and type of installation that is most suitable for the available resource and reinforces the importance of using the limited resource wisely.

Another key aspect of wood biomass is that the nature of the raw material should determine how it is used. In general terms, rougher material such as chips from forest residues is best suited to more industrial scale applications such as biomass CHP. In contrast, small scale users such as domestic boilers need pellets or high quality chips. To maximise the potential of the available biomass, Government policy should support all types biomass material and all sizes of biomass users. Further, it is a waste of resources to supply highly processed fuel such as wood pellets to facilities that can take rougher less processed biomass. The wood biomass end product should be appropriate to the application. (Coillte is concerned that

the currently high level of interest in wood pellet production is disproportionate to the realistic level of demand. If all the proposed projects go ahead there is a significant risk of overcapacity in the sector and this could have knock-on effects in the wood supply chain). This means ensuring there is production of a broad a range of biomass fuels and not an over-concentration in any one particular fuel grade.

To identify and maximise indigenous biomass energy resources, Government support should be given to research into the sources of wood biomass and the systems required to bring it to market.

4 Wood Processing and Climate Change Mitigation

As outlined above, the processing of wood into products has its own environmental and energy credentials which should be respected and promoted. In focusing on energy in the Green Paper, the Government needs to be careful not to lose sight of these attributes and should ensure that its policies do not disadvantage the wood processing sector when developing renewable energy.

4.1 Wood Processing Sector is a Sustainable User of Resources (both energy and wood resources)

The wood processing sector in Ireland makes a substantial contribution to environmental sustainability and reducing the impact of climate change. It has made important strides forward in the sustainable use of resources and in particular Coillte, through is Forest Stewardship Council (FSC) certification, ensures that Ireland's forest resource is utilised on a sustainable basis.

Using wood directly from the forest for manufacturing products contributes to sustainable development in the following ways:

- **Wood products are better for the environment so they should be supported over less environmentally friendly products, especially in construction (e.g. cement)**
- **Wood products require little energy for manufacturing**
- **Wood products are carbon sinks**
- **Wood products are an energy source at the end of their product life**
- **Wood processing already uses and is best placed to use biomass for process heating**
- **Wood processing continuously improves recycle rates – sawmills and boardmills use wood co-products and recycled wood in making primary products.**

4.2 Promote the Increased Use of Wood Products to Tackle Climate Change

The European Commission recognises that wood plays a major role in combating climate change. In the context of energy policy, Ireland should not focus on wood solely as a biomass fuel. Instead we must view wood first as the raw material for an environmentally friendly and sustainable range of products and then as an energy

source. The guiding principle should be to produce wood based products from material that is suitable for that purpose and to use the remaining material for energy.

Government policy should stimulate the increased use of wood products to replace environmentally inferior products, especially in construction. The greater use of wood products will, in turn, stimulate the expansion of Ireland's forests (afforestation), will reduce greenhouse gas emissions and will substitute wood for fossil fuel intensive products. It will also make forests more productive and thereby increase the availability of wood that is unsuitable for processing and can be used directly as biomass for energy. To this end, Coillte supports the maintenance of the Government's forestry policy target of afforestation of 20,000 ha per annum[8].

Government policy should also recognise the importance of the wood value chains:

- **The economic value that is added by turning wood into products is far greater than the value added in energy production (especially if it wood goes straight into electricity production which is highly inefficient).**
- **The employment potential in the wood products industry is far greater than that in energy production.**

The functionality of wood should cascade from a primary product, to re-use and recycling and then to energy. To encourage this Government support should be given to research into the initial processing of wood and to sorting and cleaning technologies to ensure that wood is more easily reused and recycled and is not treated as waste before its full potential is realised.

4.3 Government Policy should not Subsidise Wood Biomass for Energy to the Detriment of Wood Products

As described above, Coillte welcomes the increased use of wood in energy production but this must be done in a balanced way. This is a complex issue and needs careful consideration.

Wood is one of the most obvious biomass fuels and in the context of developing an energy policy is easy to forget the positive and very relevant attributes of wood products. It is essential therefore, that Government policy supports the greater use of wood in general,

[8] This view is supported by the Bacon Report of 2004 "Review and Appraisal of Ireland's Forestry Development Strategy" which recommended "that the strategic target should be afforestation of 20,000 ha per annum up to 2035".

both for energy and for products. This can be done through a range of initiatives across many areas, for example, ensuring that building regulations promote the greater use of wood in construction. As noted above, it is important to ensure that initiatives are not counterproductive by resulting in a trade off between wood biomass and wood processing. Coillte believes that supporting the early stages of the wood supply chain will not only ensure that this trade off does not occur but it will have the general effect of promoting wood use in general through more competitive prices.

5 Wind Energy

As our most plentiful indigenous sustainable fuel source, Coillte fully supports the maximisation of wind generated energy penetration into the grid. The optimal exploitation of this energy source can only be achieved by the improvement of grid infrastructure and by a responsive and flexible generation portfolio. Increasing wind penetration will lower our dependence on imported fossil fuels and add to the country's energy security of supply: a major priority of this energy policy document.

5.1 Wind Energy Targets

Coillte supports the Green Paper target of 30% of total electricity consumption being generated from renewable sources by 2020 but disagrees with the caveat that the target should be subject to 'technical considerations'. This disclaimer allows too much scope for the target to be circumvented or ignored and therefore will lack the driving force required for an effective and progressive policy on renewable energy. Coillte believes that the White Paper should set a target of 30% of electricity from renewable sources, without caveats, and provide detailed plans of the support initiatives required to achieve this target.

5.2 Access to the Grid

Grid connection is vital to the success of any wind farm development. The current system of grid connection, however, acts as a barrier to the development of wind energy in Ireland. It is essential that Government policy substantially improves grid access for wind plant and opens up contestability in all areas of the network.

The transmission network is in the ownership of EBS Networks and operated by EirGrid who allow contestability of transmission connections (new connections can be built by EirGrid or the developer). The distribution network, however, is owned and operated by ESB Networks and contestability on the construction of new distribution connections is not allowed. This non-contestability creates serious issues in relation to planning permission applications for the connection line and for the ability to control costs. This ultimately leads to increased uncertainty in developing wind farms.

The issue of control of the planning process is becoming more critical as high profile objections to grid connection lines by landowners is on the increase. Coillte believes that Government policy should allow for full contestability of all new wind farm connections.

5.3 Connection Offers and Planning Permission Period

The current time required to process grid connection offers creates very significant delays. As expressed above, a wind farm will have to wait on confirmation of a grid connection before turbines can be ordered and the current delivery period for wind turbines is approximately 18 – 24 months. These two elements must be completed within the context of the current 5 year planning permission period from the date permission is granted. Clearly this leaves very little room for manoeuvre. For example, applications from the Gate 1 connection process were being considered when the moratorium was announced in December 2003 and had to wait until mid-2005 to receive a connection offer. Also some of the applicants for Gate 2 have had validated connection applications in since early 2004 and are still awaiting conformation of the date they might receive a connection offer. This is an average of a 2 year wait for connection.

Considering the delivery period for turbines and the potential for delays in the grid line planning process, the planning permission period of 5 years is too short and again increases the level of uncertainty for wind farm projects. Coillte believes that the granting of a 10 year planning permission for wind farms as standard is essential and should be done in conjunction with accelerating the actual process of confirming grid connections.

5.4 Support Measures

The details of the REFIT programme, first announced in April 2005 and confirmed in May 2006, are welcomed by Coillte. Unfortunately, in the interim, the costs associated with wind farm development have increased significantly. Turbine prices have increased by up to 40%, grid connection costs have doubled in the last 2 years and interest rates on capital borrowings have risen by one-sixth in the last 2 years. It is essential that these cost increases are reflected in the REFIT prices available to Gate 2 projects. In short, Government policy in relation to support measures should recognise these

changes in costs and allow them to flow through to prices in the support measures.

5.5 National Generation Portfolio and Wind

Energy derived from wind is variable and therefore requires a flexible and responsive generation portfolio to accommodate increasing wind penetration levels. This can be achieved by more flexible brown generation plant, increased interconnection and energy storage. The most critical of these elements in the short term is flexible brown generation plant. Combined cycle gas turbines (CCGT) are base load plant with high thermal efficiencies but are relatively inflexible. Open cycle gas turbines (OCGT) are less efficient but are more flexible. Coillte believes that Government policy should create incentives for the construction of OCGT plant or incentives to CCGT operators to offer more plant flexibility to complement wind penetration.

Coillte supports the construction of the proposed 500MW East-West interconnector but believes that the original 1000MW proposal is more future proof.

6 Contacts

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Appendix: Consultation Questions

We have sorted our key points as set out in the executive summary above to respond to the relevant questions posed in the Green Paper.

ENSURING THE SECURITY OF ENERGY SUPPLY

2) How can generation and transmission adequacy in the electricity sector be improved?

- **Energy derived from wind is variable and therefore requires a flexible and responsive generation portfolio to accommodate increasing wind penetration levels. Coillte believes that Government policy should create incentives for the construction of OCGT plant or incentives to CCGT operators to offer more plant flexibility to complement wind penetration. (See Section 5.5)**

4) What are the challenges to greater participation by new players in the development and operation of power generation plant - and how should they be addressed?

- **In relation to access to the electricity grid, Coillte believes that Government policy should allow for full contestability for both transmission and distribution for all new wind farm connections. (See Section 5.2)**

- **Due to delays in processing connection offers and delivery times for wind turbines, Coillte believes that the granting of a 10 year planning permission for wind farms as standard is essential and should be done in conjunction with accelerating the actual process of confirming grid connections. (See Section 5.3).**

- **The cost associated with wind farm development have increased significantly. Government policy in relation to support measures, such as the REFIT programme, should recognise these changes in costs and allow them follow through and be reflected in the support prices. (See Section 5.4)**

6) What measures could be taken to encourage the exploration and production of indigenous energy resources?

- **To identify and maximise indigenous biomass energy resources, Government support should be given to research**

into the sources of wood biomass and the systems required to bring it to market. (See Section 3.6).

- **The functionality of wood should cascade from a primary product, to re-use and recycling and then to energy. To encourage this Government support should be given to research into the initial processing of wood and to sorting and cleaning technologies to ensure that wood is more easily reused and recycled and is not treated as waste before its full potential is realised. (See Section 4.2).**

8) Does the Green Paper generally set out the right policy directions for security of energy supply?

- **The Green Paper generally set out the right policy directions subject to our comments made in the main document. The White Paper needs to specify the detailed initiatives and mechanisms that are required to implement the overall targets. It is also important as part of the consultative process that stakeholders have an opportunity to comment on the finer detail of these measures before they are finalised.**

PROMOTING THE SUSTAINABILITY OF ENERGY SUPPLY

9) What can be done to improve the pace and range of development of renewable energy resources for electricity generation on a sustainable basis?

- **In relation to access to the electricity grid, Coillte believes that Government policy should allow for full contestability for both transmission and distribution for all new wind farm connections. (See Section 5.2)**

- **Due to delays in processing connection offers and delivery times for wind turbines, Coillte believes that the granting of a 10 year planning permission for wind farms as standard is essential and should be done in conjunction with accelerating the actual process of confirming grid connections. (See Section 5.3).**

- **The cost associated with wind farm development have increased significantly. Government policy in relation to support measures, such as the REFIT programme, should recognise these changes in costs and allow them follow through and be reflected in the support prices. (See Section 5.4)**

- **Energy derived from wind is variable and therefore requires a flexible and responsive generation portfolio to accommodate increasing wind penetration levels. Coillte believes that Government policy should create incentives for the construction of OCGT plant or incentives to CCGT operators to offer more plant flexibility to complement wind penetration. (See Section 5.5)**

10) In addition to electricity generation, what actions should be taken to develop renewable energy usage in the transport and heat sectors?

- **Mirroring the stage of development of EU energy policy, there is a notable lack of focus on heat in the Green Paper. In 2007 the European Commission is due to publish a directive on heating and cooling and it is very important that Irish energy policy should similarly develop in this area. This is particularly important in the context of bioenergy.**

12) What additional policy measures should be introduced to significantly expand energy RTDI and what are the priority areas of research, which need to be targeted?

- **To identify and maximise indigenous biomass energy resources, Government support should be given to research into the sources of wood biomass and the systems required to bring it to market. (See Section 3.6).**

- **The functionality of wood should cascade from a primary product, to re-use and recycling and then to energy. To encourage this Government support should be given to research into the initial processing of wood and to sorting and cleaning technologies to ensure that wood is more easily reused and recycled and is not treated as waste before its full potential is realised. (See Section 4.2).**

14) What are the key supply and demand questions to be addressed to underpin a fully cohesive National BioEnergy Strategy?

- **Wood has an important role to play not only in energy production but also in climate change mitigation through the production of environmentally friendly products and carbon sequestration. These distinct roles should be recognised and supported. Government policy needs to be careful not to**

promote wood for energy to the detriment of the wood processing sector and in turn undermine the climate change benefits of wood products. (See Section 3.2).

- **The guiding principle in developing sources of wood biomass should be to seek out all material that is not suitable for the production of wood products and direct that into the energy market. The economic value that is added by turning wood into products is far greater than the value added in energy production. The employment potential in the wood products industry is also greater than that in energy production. (See Section 3.6 and Section 4).**

- **The basic principle of Government policy in relation to biomass deployment should be to use biomass as efficiently as possible, that is, to produce the maximum amount of final energy given a specific quantity of biomass. We believe that, in the case of wood biomass, co-firing of peat stations does not adhere to this principle and is not the best use of an indigenous biomass resources. Wood biomass is best suited for use in heat and CHP installations. (See Section 3.3).**

- **More decentralised use of wood biomass fits very well with efficiency objectives in terms of keeping plant location close to the source of supply with an appropriate level of volume demanded per installation. It is preferable to have a blend of a few large scale highly efficient plants combined with many smaller decentralised installations. (See Section 3.3).**

- **Government policy should be mindful that unless addressed the anomalies of the current emissions trading system (and NAP) are likely to misdirect wood biomass towards less efficient users. Alternative supports and incentives, should be made available to installations outside the NAP scheme in recognition of carbon attributes, to drive the most efficient use of wood biomass, particularly for heat and CHP plants. (See Section 3.4).**

- **To mitigate against a counterproductive trade off between the wood processing and wood biomass sectors, supports and incentives should be directed where they benefit both sectors. In particular, Government policy should focus on the early stages of the wood supply chain and create supports and incentives that gets wood out of the forest and ready for use (e.g. supports for thinning and harvesting of forests). Carbon benefits and climate change mitigation should be the justification for new supports and incentives designed to**

create major drivers in the development of both the wood biomass and wood processing sectors. This would have the effect of promoting wood use in general, with all its positive environmental attributes, through more competitive prices of end products. (See Section 3.5).

- **To maximise the potential of available wood biomass, Government policy should support all types biomass material and all sizes of biomass users. In this regard it is important to ensure that the level of processing is appropriate to the end use (in general, the larger the scale of installation the less processed the biomass fuel needs to be). This means ensuring the production of a broad a range of biomass fuels and not an over-concentration in any one particular fuel grade (there may be a current danger of developing overcapacity in wood pellet production with a corresponding constraint in supply of lower grade biomass). (See Section 3.6).**

15) Do we need to choose between mandatory targets and better incentives for renewable energy and energy efficiency - or is a mix of both the best way forward?

- **Coillte supports the Green Paper target of 30% of total electricity consumption being generated from renewable sources by 2020 but without the caveat subject to 'technical considerations' which could render the target meaningless. Further the White Paper should provide detailed plans of the support initiatives required to achieve this target. (See Section 5.1).**

16) Does the Green Paper generally set the right policy directions for energy sustainability?

- **The Green Paper generally set out the right policy directions subject to our comments made in the main document. The White Paper needs to specify the detailed initiatives and mechanisms that are required to implement the overall targets. It is also important as part of the consultative process that stakeholders have an opportunity to comment on the finer detail of these measures before they are finalised.**

ENHANCING THE COMPETITIVENESS OF ENERGY SUPPLY

18) What policy measures and targets should be introduced to reform institutional arrangements and market structure, particularly in the electricity and gas sectors?

- **In relation to access to the electricity grid, Coillte believes that Government policy should allow for full contestability for both transmission and distribution for all new wind farm connections. (See Section 5.2)**

- **Due to delays in processing connection offers and delivery times for wind turbines, Coillte believes that the granting of a 10 year planning permission for wind farms as standard is essential and should be done in conjunction with accelerating the actual process of confirming grid connections. (See Section 5.3).**

- **The cost associated with wind farm development have increased significantly. Government policy in relation to support measures, such as the REFIT programme, should recognise these changes in costs and allow them follow through and be reflected in the support prices. (See Section 5.4)**

20) State-owned enterprises (e.g. ESB, BGE, Bord na Mona) have played a central role in the development of the energy sector. How should the role of State- owned energy enterprises respond to the challenges of meeting our energy needs in the future?

- **Coillte Teoranta is a company that is focused on environmentally sustainable development. This is true of its involvement in the wood processing, biomass and wind energy sectors. We believe that we have an increasing role to play in Ireland's energy sector.**

22) Does the Green Paper generally set the right policy directions for enhancing the competitiveness of the Irish energy sector?

- **The Green Paper generally set out the right policy directions subject to our comments made in the main document. The White Paper needs to specify the detailed initiatives and mechanisms that are required to implement the overall targets. It is also important as part of the consultative process that stakeholders have an opportunity to comment on the finer detail of these measures before they are finalised.**