



**Department of Communications Marine and Natural Resources
Green Paper**

Towards a Sustainable Energy Future for Ireland

**Response to the Green Paper from Viridian Group plc
1 December 2006**

Executive Summary

Viridian welcomes the publication of the Green paper and the opportunity it provides to comment on the many important energy policy questions that need to be addressed.

Viridian's investment in the electricity market is substantial and naturally we have a keen interest in ensuring a proper electricity market where the current dominance is addressed in an effective manner and new investment is provided with a sustainable opportunity.

The DLT Report, which we draw from in this response, provided what we believe to be a very good analysis of the factors and shortcomings in the market today. We were disappointed that the recommendations regarding substantial structural reform of the ESB were not adopted. However we were pleased to see the subsequent commitment to a programme of divestment/closure of some 1500MW of plant and the intention to make available a land bank of generation sites which would facilitate further independent entry into the market. While we regard this as a good step a specific programme of plants and their retirement dates is now required to provide the independent sector with the necessary confidence to enter the market.

We agree with the Green Paper in its assessment that Security, Competitiveness and Sustainability are the right criteria to judge an energy policy and while we concentrate in our response on the needed reform of the electricity market we provide comment on wider strategic questions where we feel our expertise and experience allow us to make a useful contribution.

We support the view that closure/divestment of ESB plant and the availability of generation sites, as directly supportive of the security objective in the Green Paper. Encouraging greater participation and investment in the market must correlate to improved security and a greater competitive dynamic. We do not agree however that allowing ESB to build further base load plant at Aghada is supportive of competition. Indeed, depending on the plant closed and divested, it is possible that ESB could have more sales into the market after divestment, from a plant portfolio that will then include Aghada.

Reform of ownership of generating plant is by far the biggest step to encouraging greater competition therefore we urge a specific programme of closure/divestment to provide the necessary confidence for independents to invest.

A landbank of suitable generating sites should be made available to facilitate new entry. These sites should clearly be at locations where there are no barriers to use.

We support the intention to contribute to sustainability by setting a very challenging target for renewables. The successful implementation of the first REFIT programme and the response from developers and electricity market suppliers provides a high level of confidence that an appropriate scheme will bring forward new developments. To this end the department should immediately consult on the form of a scheme to bring forward the sizeable tranche of 'Gate 2' windfarms.

The remainder of this response provides more detail on the views contained in this Executive Summary and suggests steps and matters for consideration in wider, strategic energy policy areas.

Introduction

Viridian Power & Energy welcomes the publication of the Green Paper and the clear signals within it of government's intention to address the major challenges associated with providing a comprehensive and coherent energy policy. We agree that the three identified "pillars" (of Security, Competitiveness and Sustainability) are central to future energy policy objectives.

Overall, the Green paper clearly sets out the challenging choices now facing Ireland. Continued economic growth in Ireland drives an increasing demand for energy in an economy with limited interconnection to larger markets and limited resource of indigenous fuel upon which to depend in times of shortage.

There has been a historical disconnection between energy costs and energy prices in Ireland. That disconnection may well have been of value in the past. However, we are now at a point where a significant proportion of the ESB's power generation assets are approaching the end of their useful lives, and where replacement investment decisions must be made in the context of a modern and competitive economy. In addition, the EU requirements for market liberalisation in member states cannot operate in the absence of cost-reflective pricing of energy.

It will certainly not be acceptable for a progressive economy to run short of electricity capacity. New, modern and environmentally efficient power stations will have to be built over the next few years. Electricity prices will have to reflect the costs of new investment, and although competition will undoubtedly promote improved performance in the sector, and will exert downward pressure on price

rises over time, it is quite simply impossible to avoid the external costs that will be needed to achieve the necessary levels of investment.

However we believe that there are significant gains to be had from the high infrastructure and operational costs of electricity and gas networks.

Whilst the many issues and choices explored in the Green Paper may all be relevant, and whilst the targets and aspirations set out within it may be highly desirable, the steps that follow the Green Paper must be more definitive in setting out how the required results will be delivered in an acceptable and realistic time frame.

Viridian considers that the challenge now is to convert the Green Paper objectives into clearly defined mechanisms that are capable of delivering on its energy policy objectives. Investors in new power stations will need a firm programme for which portions of the ESB generation portfolio may close in the future. Also, the desire for a very significant renewable energy contribution to the energy mix will not be achieved without action to provide a long-term support programme capable of underpinning the investment risks involved in renewable technologies.

Whilst the Single Electricity Market (SEM) should provide improved long-term signals for future investment, it is clear that in the shorter term investor confidence in the new market is likely to remain cautious, hence the need for a clearly defined process for new plant entry, linked to closure of existing old plants, to ensure that security of supply is maintained. In addition, more attention should be given to a more flexible generation fleet that would facilitate increased renewables penetration, and provide enhanced security of supply.

Viridian has demonstrated its commitment to the Irish energy market and to open competition. With our investment at Huntstown, Viridian was the first (and remains the only) entirely independent participant to engage in the generation market. When Huntstown Phase Two is completed next year, we will have committed an investment of €500m, and our plants will be supplying some 16% of the Irish market. Our retail business (Energia) is now the largest independent supplier to final electricity customers throughout the island.

Viridian has already demonstrated its willingness to take decisions in the face of market uncertainty, but we are disappointed by the continuing lack of impetus toward the achievement of a level playing field for all participants in the market.

If not properly addressed the nature of ESB's dominance has the potential to have a negative impact on prices in the SEM. There is extensive international experience and evidence that indicate that this price-setting dominance needs to be addressed if the pool is to work efficiently and prices are to reach economic levels.

The introduction of competition in generation also provides a catalyst for more rapid improvement in levels of O&M cost, productivity, availability, flexibility of operation and innovation. An environment more conducive to the entry of new

generation capacity would allow the retirement of older uneconomic facilities and thereby improve the overall cost and technical ability of Ireland's generation fleet.

In an effort to remedy the effect of ESB dominance, the regulator has been forced to adopt distortionary measures such as the Public Service Obligation levy, the VIPP scheme and top-up and spill prices which are not market-reflective.

We believe if no change is made to the current market structure, that the market will continue to develop and evolve slowly; that availability and efficiency changes, where they happen, will come about over a long period of time. ESB will be left to address security of supply concerns (which may be materially driven by the availability of their current plant) in the absence of new entry and that ESB is likely to renew its fleet which will create further market power issues. In this scenario regulation will remain intensive and with inherent limitations.

Market liberalisation and the requirement to replace the ageing portion of the ESB generation fleet provides an excellent opportunity to break from this cycle of market evolution.

Specific Proposals

The ESB should be required to submit for approval within a period of not more than three months a programme for the closure of its older power stations (including Aghada) and the release to the "land bank" of those potential generation sites (or sites immediately adjacent to them and therefore capable of employing their infrastructure connections following programmed closure).

It is much more difficult for an independent to gain the necessary confidence needed to enter the marketplace by major capital investment in power station assets, without being sure that there will be "market space" for sale of the product. A closure programme would significantly assist this process.

A "Land Bank" of strategic power generation sites should be made immediately available to the independent sector.

A primary cause for concern amongst those seeking to enter the Irish energy market has for many years been the dominant position of ESB. The next major power station in prospect (at Whitegates Refinery near Cork) is being developed by BGE. If, in addition to this development, ESB are permitted to further expand their market strength via ownership of a new base load plant (without ring fencing provisions or any other structural mechanism to limit their market power) then these combined developments will be perceived as a further reinforcement of dominance in the sector. Together with the East-West interconnector in 2011/2012, this will preclude further major independent investment for many

years. It is therefore imperative that suitable sites are made immediately available to independent new entrants as part of a land bank.

The Single Energy Market must be delivered on time, and should present clear, meaningful and effective signals for the delivery of the required power generation technology, and also for the required patterns of “demand side” behaviour.

For example, it is normally the case that generation plant delivering “peak” or “mid-merit” capacity to a power system will consist of older facilities with relatively low energy efficiency and relatively high carbon costs, but able to operate economically for short periods at marginal costs because their capital costs are largely written off. If, in order to facilitate the development of wind power the market system is to value increased physical flexibility, then it will be necessary to provide market messages capable of delivering new plant investments that meet these requirements.

The SEM should include core features designed to present clear messages to the demand side of the market. Demand side measures can be powerful and effective in achieving improvements in power system security and performance, and should be developed and deployed as part of a co-ordinated approach to market messaging.

Open market competition clearly requires structural change sufficient to remove the dominating influence (and therefore significant barrier to competition) presented by a vertically integrated state owned incumbent that owns and controls the vast majority of the sources of production as well as the means of distribution and delivery.

This conclusion is clear and unequivocal with the Deloitte & Touche report, and has been a consistent message from those seeking to enter the Irish market for a number of years. The position will not be entirely solved by the introduction of a land bank, which is a measure in itself (although welcome from the perspective of future development prospects) insufficient to introduce a competitive dynamic within the existing marketplace.

As a means to the encouragement of generation competition, the ESB Public Electricity Supplier (PES) should be required, in accordance with a clear Economic Purchasing Obligation, to invite tenders from independent operators for the supply of electricity to its business, and to demonstrate to the Regulatory Authorities that its subsequent purchasing decisions are made on the basis of least cost economic principles.

The targets for renewable energy should be enabled through a cohesive and well-understood programme of market supports that are capable of delivering the required results in the required timeframe.

These incentives should be capable of presenting strong and desirable messages to all of the potential participants in the development process, from landowners and developers right through to the network operator and the eventual power purchaser.

More effort and attention should be directed toward Biomass and Biofuels as real alternatives for the production of renewable energy.

The land and agricultural resources available to Ireland would strongly suggest that more positive development in this area should be encouraged and supported as part of the Energy Policy mix.

Biomass fuelled power stations have in the past been subject to difficulties associated with the commercial and investment risks arising from the need to secure suitable fuels in sufficient volumes, and also the uncertainties around the value of the production output energy over the long term given the many changes that have taken place in market structures, agricultural policy and pricing mechanisms in the recent past.

If these concerns can be overcome with the help of specific policy measures to incentivise and secure the required farming, collection and transportation infrastructure, and to underpin the required long term investment with power purchasing incentives and / or appropriate tax instruments, then Biomass technology (which does not suffer from the inevitable variation associated with wind power) has the potential to add significant benefits to the renewable generation / reduced carbon objective.

The Legacy Benefit Adjustment Mechanism, as proposed by the Regulatory Authorities, should be supported and adopted as part of the Government's energy policy.

The Regulatory Authorities have proposed¹ a Legacy Benefit Adjustment (LBA) mechanism to be applied to ESB that will adjust ESB's allowed net market revenue by removing excess profitability resulting from benefits arising solely as a result of their historical incumbent position within Ireland. These benefits may include but not be limited to:

- Favourable long term fuel contracts
- Favourable carbon allocation
- Fully depreciated assets in the market

¹ Market Power Mitigation in the SEM Directed Contracts: Price, Form and location: Decision paper, 8th September 2006

Viridian regards this proposal as essential to achieving a level playing field in the market. We also note its fairness to all customers in that these benefits are not limited only to ESB customers but are shared across the market.

Government should support the regulatory authorities approach, and adopt this concept as part of the energy policy objective to develop competition in the electricity market.

As part of the development and encouragement of “demand side” measures, there should be positive support for research and development associated with “smart meter” technology.

In association with market pricing that reflects the marginal cost of energy, metering can be applied to provide information to energy users (including domestic users, which drive a high proportion of the maximum demand for electricity) of the direct consequences of their energy use behaviour, then (as has been demonstrated by experience with “keypad” metering in Northern Ireland, this has the potential to be a highly effective mechanism for achieving improved levels of power system security.

There should be a search for, and agreement upon, key framework elements of a UK & Ireland energy policy.

Initially, this should focus on appropriate market alignment with Northern Ireland, but ultimately it should be our defined objective to secure a harmonised electricity market across the UK and Ireland to form one interconnected market system, such that in the longer term Ireland is part of a larger and more efficient electricity market.

The 500MW East-West Interconnector and the North-South Interconnector are both recognised as beneficial to system security and competition and also in terms of facilitating the development of renewable energy.

Both interconnectors should be pursued with urgency.

All power generation facilities should be encouraged to undertake the strategic storage of oil stocks sufficient to meet the short term requirements for power generation, and this process should be incentivised by the provision, within the SEM structure, of an appropriate oil storage / availability payment to reflect the costs involved and the strategic national benefits arising.

Response to specific consultation questions

3.2.1. In addition to enhancing the contribution of renewable energy, what actions could be taken to further diversify the fuel mix for electricity generation and reduce dependence on oil and gas?

Clean Coal / IGCC

Clean coal (using integrated gasification combined cycle, or IGCC) technology is relatively expensive (in comparison with gas fired technology) and requires a plant of relatively large scale. It is unlikely, given the size of the Irish market and the market competition landscape, that any independent developer would take the step of investing in such a major project on its own initiative. However, the potential benefits, in security, environmental and competitive terms, could justify a multiparty development with appropriate mechanisms for support.

LNG

A Liquid Natural Gas terminal is already being investigated for potential development, and this is noted in the Green Paper. It is possible that such a facility could be built in proximity to / association with generation facilities. LNG as an alternative to pipeline gas would provide additional security and competition in the Irish gas market.

Biomass .

More effort and attention should be directed toward Biomass and Biofuels as real alternatives for the production of renewable energy.

The land and agricultural resources available to Ireland would strongly suggest that more positive development in this area should be encouraged and supported as part of the Energy Policy mix. Biomass fuelled power stations have in the past been subject to difficulties associated with the commercial and investment risks arising from the need to secure suitable fuels in sufficient volumes, and also the uncertainties around the value of the production output energy over the long term given the many changes that have taken place in market structures and pricing mechanisms in the recent past. If these concerns can be overcome with the help of specific policy measures to incentivise and secure the required farming, collection and transportation infrastructure, and to underpin the required long term investment with power purchasing incentives and / or appropriate tax instruments, then Biomass technology (which does not suffer from the inevitable variation associated with wind power) has the potential to add significant benefits to the renewable generation / reduced carbon objective.

Distributed Generation

VPE consider that there is considerable scope for development of smaller generation facilities at consumer premises. This has benefits in term of security of supply, reduction in network capacity requirements and can reduce emissions if appropriate technology is used. It also provides a useful demand-side

management for customers. Modern technology allows distributed generation to be aggregated. Viridian would welcome further support in this area and would point to the success of small-scale distributed renewable development in Northern Ireland and the general trend internationally towards further support for distributed generation.

3.2.2. How can generation and transmission adequacy in the electricity sector be improved?

Generation:

The future Single Energy Market should present clear, meaningful and effective signals for the delivery of the required power generation technology, and also for the required patterns of “demand side” behaviour.

The provision of a “land bank” will not, on its own, be sufficient to generate competitive activity in the sector, because the largest barrier to entry remains the substantial uncertainty around the future market, and the effective dominance of ESB as by far the largest player in this market. The SEM structure, if correctly designed, has the potential to address this issue in the longer term if the proposed regulatory mechanisms are effective in achieving their market objectives. However, in the shorter term it will be necessary to introduce specific mechanisms that will be effective in the encouragement of more immediate investment. These could be in the form of contractual support / underpinning or ‘tiered’ capacity payments.

For example, it is normally the case that generation plant delivering “peak” or “mid-merit” capacity to a power system will consist of older facilities with relatively low energy efficiency and relatively high carbon costs, but able to operate economically for short periods at marginal costs because their capital costs are largely written off. If, in order to facilitate the development of wind power, the market system is to value increased physical flexibility, then it will be necessary to provide clear market messages and/or incentives capable of delivering new plant investments that support higher levels of wind penetration.

A potential mechanism for achieving this would be a form of “Contract for Differences” that would effectively place a cap & collar around the income receivable under the proposed “Capacity Payment Mechanism”, thus underpinning the necessary investment by new entrants to the market. Such contracts could be offered by the Transmission System Operator (Eirgrid) as part of their remit to ensure efficient power system management and planning, and the net costs arising (if any) could be spread amongst all users of the network in the interests of market efficiency.

Transmission:

The 500MW East-West Interconnector (which will provide 1,000MW of swing capacity to the electricity network), and the second North-South Interconnector, will both provide enhanced benefits in terms of competitive market access and in terms of support for renewable development.

It will be important to ensure that interconnector capacity is made available under rules that ensure fair access to and distribution of this capacity.

3.2.3. What actions should be taken to create strategic storage capacity in the gas sector?

An action that is critical to this process is the creation of a trading market mechanism that places an openly traded value on storage capacity and / or “line pack” network capacity, and which presents all market participants with the opportunity to have access to and trade that capacity.

Suitable storage facilities should be identified and encouragement given to developers.

3.2.4. 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?

The greatest obstacles to greater participation by new entrants are (a) the lack of a market where participants can be sure of obtaining adequate returns on their investment (which may be addressed in the longer term through the development of the SEM), and (b) the continuing dominance of ESB.

ESB controls (or is directly contracted to) more than 90% of the generation market in the Republic of Ireland, and owns all of the mid-merit and peaking plant on the power system. ESB owns and controls the entire transmission and distribution network and the whole of the domestic electricity market.

Given the present uncertainty on how the SEM will operate and the level and the uncertainty of future market prices, it is very difficult to make the case for investments in the present environment.

Competition clearly requires structural change, and this conclusion is clear and unequivocal in the Deloitte & Touche report. It has been a consistent message from those seeking to enter the Irish market for a number of years. It is also the stated position of the Competition Authority.

The completion, on time, of the all-island Single Energy Market is a vital prerequisite to the achievement of competition, and it is important that the market rules incorporate effective mechanisms to control the dominance of ESB within the power generation market until such time as structural change is implemented.

In addition to this, however, there are a number of specific measures that should be taken in order to facilitate the introduction of competition across all sectors of the electricity generation market.

The ESB should be required to submit for approval within a period of not more than three months a programme for the closure of its older power stations and the release to the “land bank” of these (or immediately adjacent) potential generation sites. There should be a clearly understood process under which the new plant can be developed and built with the prior assurance that identified existing generation will close at or about the point in time when the new generator has been commissioned. It is very much more difficult for an independent to gain the confidence needed to enter the marketplace with major capital investment in power station assets, without being sure that there will be “market space” for sale of the product, and this is particularly relevant where the market is dominated by an incumbent for which it is by no means clear that closure/market withdrawal would follow the patterns applicable in a commercial environment. A clearly defined closure programme would significantly assist this process.

A “Land Bank” of strategic power generation sites should be made immediately available to the independent sector.

The ESB Public Electricity Supplier (PES) should be required, in accordance with a clear Economic Purchasing Obligation, to invite tenders from independent operators for the supply of electricity to its business, and to demonstrate to the Regulatory Authorities that its subsequent purchasing decisions are made on the basis of least cost economic principles. These tenders should include medium and long-term power purchasing contracts capable of providing financial support to a potential new generation investment.

3.2.5. How, and over what timeframe, should Ireland pursue greater electricity interconnection with Europe?

There should be a search for key framework elements for a wider “UK and Ireland” Energy Policy. Initially, this should focus on appropriate market alignment with Northern Ireland, but ultimately it should be our objective to secure, within the next ten years, a harmonised electricity market across the UK and Ireland to form one interconnected market system, with one system operator, such that Ireland is part of a wider and more efficient single market.

The East – West interconnector is a necessary step to initiate this process of integration. Its size compares well against the 2,000MW interconnector between the UK and France. A high swing capability (1,000MW) is important to support wind power investment, but the markets will not converge in price terms unless/ until there is a single market. In the meantime the product will inevitably be priced at the margin based on the market alternative (as is expected for the pricing of Corrib gas).

Interconnection brings advantages in terms of security, diversity, and wind facilitation, but it will not result in significant market price reductions, and may in reality serve to depress domestic competition and increase dependence on the UK market. It is important to recognise that the process of interconnection, once started, must proceed all the way to market integration if the objective is price convergence.

We would argue for the NDP funding to be applied to the East–West interconnector as a method of lowering asset costs and thereby providing greater stimulation to competition.

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

More effort and attention should be directed toward Biomass and Biofuels as real alternatives for the production of renewable energy.

A range of incentives (similar to ReFIT for wind) will be necessary to 'kick-start' these technologies. Such an approach is being developed in the UK with the 'banded' ROCs proposal.

3.2.7. Given the existing level of dependence on imported fossil fuels, what needs to be done to enhance contingency measures?

All power generation facilities should be encouraged to undertake the strategic storage of oil stocks sufficient to meet the short-term requirements for power generation, and this process should be incentivised by the provision, within the SEM structure, of an appropriate oil storage/availability payment to reflect the costs involved and the strategic national benefits arising,

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

Our view is that security of electricity supply is best assured via a number of investors willing to enter the market.

Greater security of fuel supplies can be assured via LNG and storage facilities plus the requirement for power stations to hold strategic fuel stocks.

The paper sets out well the basic facts around the challenge and sets broad objectives for dealing with a range of issues. The next step is to set out clear and effective instruments capable of effecting change in the short to medium term. Firm proposals for structural change, or proposals for the introduction of definite market instruments that will incentivise and deliver actual investment in new generation facilities, are needed.

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

Renewable energy projects will not be built on a purely merchant basis. In order to meet the stated targets of 30% by 2020 clear long-term support mechanisms that are widely understood, and which can be depended upon for debt financing are required.

Further supports are needed to take out the stop-start nature of the renewable development process;

The immediate follow on to the already successful ReFit programme would actively encourage the next phase of renewable development.

Green Credits or Renewable Obligation Certificates, as used in the UK would, for example, enable the development of market trading instruments and the clear valuation of the benefit of “green energy” as a tradable commodity could possibly be a longer term option.

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

The Government should focus on making the greatest efforts where the results will be most efficient, and where large-scale decisions can best be focussed.

Electrical transport can provide a valuable basis for smoothing the demand profile and providing an effective nationally distributed storage of energy, and developments in this area could be correlated closely with the increased development of our wind resource.

3.2.11 What significant new initiatives could be taken to increase energy efficiency across the economy and in particular in households, business, the public sector, the transport sector and built environment?

As part of the development and encouragement of “demand side” measures, there should be positive support for research and development associated with “smart meter” technology.

If, in association with “market pricing” that reflects the marginal cost of energy, metering is applied to inform all energy users (including domestic users, which drive a high proportion of the maximum demand for electricity) of the direct consequences of their energy use behaviour, then (as has been demonstrated by the success of “keypad meters” in Northern Ireland) this has the potential to be a highly effective mechanism for achieving improved levels of power system security.

3.2.12 What additional policy measures should be introduced to significantly expand energy RTDI and what are the priority areas of research that need to be targeted?

As noted in the response above, the Government should focus its policy measures and its RTDI expenditure on those areas best able to deliver practical results in a realistic timeframe. It is suggested that these would include;

- Smart Metering (perhaps to incorporate the use and trading of “Green Credits” as part of their functionality).
- The wider use of electricity in the transport sector.

We agree also with the emphasis on energy efficiency, CHP and bioenergy.

3.2.13 In light of the Government’s Science, Technology and Innovation Strategy, what needs to be done to radically expand the national energy research capacity?

It will continue to be important for Ireland to make a reasonable and appropriate contribution to original energy research programmes within the EU context, and Ireland should continue to play a full part in this.

However, we should focus our domestic effort on finding practical applications for technology that already exists. Applications that will facilitate and expand the value of competition or that will improve and expand the provision of customer information and choice, and applications for technology that will enable the practical use of renewable energy resources and the maximisation of storage for the optimisation of the capacity equation.

3.2.15 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?

Viridian believes that a mix of both provides the most effective way forward. Targets are powerful devices to focus effort and to measure progress, but the delivery process will almost certainly rely on commercial incentives since it is these that release the provision of external funding for investment and which in turn drive the commercial and competitive dynamic of development.

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

The Green Paper contains the right objectives for the further development of sustainable energy, but we reiterate that policy instruments are now needed to enable their delivery.

3.2.17 In the context of liberalisation of the Irish Energy Market, what further actions should be taken to develop more fully competitive electricity and gas markets and what specific barriers need to be overcome?

As set out above in answers to previous questions, the principal barrier to effective competition is the present market structure and the position of incumbents in those markets.

Market liberalisation and market competition requires that structural issues are addressed. The evidence from elsewhere is that rule based systems and regulatory devices (including those we suggest in this response and which we expect to see within the developing SEM arrangements) will not serve well as a proxy for conditions under which innovation, efficiency and productivity are consistently sought and directly rewarded.

In addressing the present circumstances, it is evident that the major specific barriers are those presented by the present institutional arrangements and market structure.

The prospects for competition in the domestic market in the near term are not good. New capacity entering the market will target the largest customers. The market entry (branding etc) and acquisition costs are significant barriers to entry to the domestic market. To stimulate domestic competition it would be possible to 'carve ou't domestic market packages from the PES.

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

Recognition and inclusion of all of the issues set out above and within the Green Paper cannot result in an outcome that will instantly please everyone in the marketplace. Unless Ireland moves rapidly to renew its fleet of generating plant to a more efficient, low carbon base, then it is inevitable that Ireland will suffer energy prices in the European upper quartile, and higher than average price volatility levels arising from exposure to external factors outside our immediate control.

A key policy measure should be to actively seek generating plant replacement. This can be sought through a encouraging the entry of new market participants.

As set out above in answers to previous questions, there should be a clearly defined programme for the retirement and closure of older and environmentally inefficient plant aligned with the release of sites to the private sector as a means of encouraging new entrants and wider competition across the market.

Appropriate support for 'Gate 2' renewables should be addressed as a matter of urgency.

3.2.19 While a significant proportion of our energy prices are determined by international oil and gas prices, what actions should be taken domestically to reduce the cost of electricity and gas to the consumer?

The application of more efficient thermal plant and of renewable technologies both have the potential to significantly reduce the volumes of primary fuels required to produce electricity, whilst open market pricing will enable the development of “demand side measures” with the capacity to reduce the incremental costs associated with the delivery of peak reserve capacity.

The points made in response to previous questions are principally focussed on the delivery of specific measures to enable and to facilitate competition. This is the common thread that must be addressed as a matter of urgency.

Measures to develop storage facilities will provide part of the answer.

3.2.20 State owned enterprises (Eg ES, BGE, BnM) have played a central role in the development of the energy sector. How should the role of state-owned enterprises respond to the challenges of meeting our energy needs in the future?

If state-owned companies are to remain in the market in competition with the private sector then their commercial structure needs to be such that they behave as private sector entities. It should not be underestimated the concern that the private sector carries in relation to existing alongside state-owned companies.

Our view is that the competitive market activities of these companies should be very strictly ring-fenced from their monopoly activities to the point of full legal separation of the businesses and financial ring-fencing.

Full unbundling of ownership is the only effective solution, but absent of this step, distinct separation is essential.

The ‘monopoly’ interests of state companies should be given the specific remit of fostering the development of the competitive market.

3.2.21 What further actions should be taken to alleviate fuel poverty?

The main focus for the market should be in the encouragement and support of fuel efficiency and provision of information on consumption. Smart metering technology is a powerful tool in this context.

Suppliers to the domestic market should be required to draw up specific fuel poverty action plans.

Energy efficiency funding for domestic schemes should be introduced.

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

The Green Paper provides the basis for a good start. However severe structural constraints in the form of energy asset ownership (in both electricity and gas) remain.

With the steps recently announced regarding closure/divestment of ESB plant and the release of generating sites, we should expect competition to start to develop. If government wants to see substantial competition (including the domestic sector) emerge in anything like the near term then we would suggest a more radical approach to reform is required.