Reference	**White Paper on Energy 2007 – Summary**
Taoisheach Cover letter	"…….. the primary objectives of our energy policy as set out in this White Paper are: ***security of supply***, ***environmental sustainability*** and ***economic competitiveness***.
Minister Noel Dempsey	
Cover letter	The hallmarks of the Irish energy market by 2020 will be ***reliable supply***, ***highly efficient use of energy, competitive prices and sustainable, diverse energy sources***. It will be securely underpinned by ***robust infrastructure*** and cutting edge technology. The Irish energy enterprise sector itself will be, by 2020, a ***market-led***, knowledge based sector characterised by innovation and driven by research and technology developments. The energy market will have more players and more competition and will operate in a ***lightly regulated*** environment. This White Paper is about delivering change. ***We will work in partnership with all stakeholders*** to achieve that change. Individually and collectively, everyone has to step up to the mark. Energy efficiency goals require us all to scrap the habits of a lifetime – at home and at work. This is a ***collective national enterprise***. Ireland's sustainable, secure and competitive energy future demands no less.
Executive Summary	
Page 5	The ***Framework Social Partnership Agreement*** 'Towards 20 6' has set agreed priorities and outcomes for Irish Energy Policy and these are fully reflected in this White Paper. ***The National Development Plan 2007-2013*** fully reflects the strategic role of energy in underpinning our overall social and economic objectives. The joint commitment by both Governments to the ***All-Island Energy Framework*** is demonstrated by the strengthening and deepening of all-island cooperation across energy matters. ***The immediate priority is delivery of the Single Electricity market in 2007*** while continuing to enhance the all-island approach to gas, renewable energy, energy efficiency and energy research. The outcomes of the consultation process are set out in Section 2 of this White Paper Section 3 of this White Paper sets out the Government's comprehensive action-oriented Energy Policy Framework to 2020
Actions to Ensure Security of Energy Supply	
Page 6	The Government's ***overriding policy objective*** is to ensure that ***energy is consistently available at competitive prices*** with minimal risk of supply disruption. ***The underpinning Strategic Goals are***: ▪ Ensuring that electricity supply consistently meets demand ▪ Ensuring the physical security and reliability of gas supplies to Ireland ▪ Enhancing the diversity of fuels used for power generation ▪ Delivering electricity and gas to homes and businesses over efficient, reliable and secure networks ▪ Creating a stable attractive environment for hydrocarbon exploration and production ▪ Being prepared for energy supply disruptions The range of actions underway and planned under each Strategic Goal for Security of Supply are set out in Sections 3.2 to 3.7 of this White Paper.

Actions to Enhance the Competitiveness of Energy Supply	
Page 7	The Government endorses the case for a process of structural change in the electricity sector and will deliver change,… The Government intends to create a new impetus for choice and innovation in a ***lighter regulated environment*** and delivering a responsive and stable energy market. ***<u>The underpinning Strategic Goals are</u>***: ■ Delivering competition and consumer choice in the energy market ■ Delivering the All-Island Energy Market Framework ■ Ensuring that the regulatory framework meets the evolving energy policy challenges ■ Ensuring a sustainable future for Semi-State Energy Enterprises ■ Ensuring affordable energy for everyone ■ Creating jobs, growth and innovation in the energy sector The range of actions underway and planned under each Strategic Goal for competitive energy supply and competition in the market are set out in Sections 3. 6-3.2 of this White Paper.
Integrated Approach to Delivery	
Page 7	The Government will work in ***partnership with all stakeholders*** to achieve our goals for a sustainable energy future. Section 4 of this White Paper sets out our commitments to delivering the energy policy framework in close cooperation and regular engagement with all players. The Government intends to carry out ***interim reviews*** of the **<u>Energy Policy Framework</u>** ***every two years***, reporting on progress and adjusting targets and policy actions as necessary. There will also be a ***fundamental review***, informed by public and stakeholder consultation, ***every five years***. The Strategic Goals for integrated delivery of energy policy objectives are: ■ Strengthening our national capabilities in the energy policy field ■ Ensuring a whole of Government approach to energy policy ■ Reaching out to stakeholders in implementing our strategic goals for energy ■ Ensuring accountability and transparency through regular progress reporting and review The range of actions underway and planned under each Strategic Goal are set out in Sections 4.2 to 4.5 of this White Paper.
Section 1	**<u>BACKGROUND</u>**
1.1.1	The objective is to deliver a sustainable energy future, starting now, with a time horizon of 2020 but also looking beyond that.
1.1.5	The ***IEA's latest World Energy Outlook*** (November 2006) sets out a fully comprehensive Alternative Policy Scenario for Governments to consider. It provides in depth analysis, including cost-benefit analysis, and details of policies and measures which, if implemented by Governments, would significantly ***reduce the rate of increase*** in energy demand and in emissions through to 2030. The policy measures range across supply and demand side energy efficiency in generation, transport and building, increased use of renewable energy sources, the nuclear power option, together with investment in energy infrastructure.
1.1.8 1.1.8	We welcome the Alternative Policy Scenario findings as drivers for change for Ireland and for all countries. ***Irish energy policy is also being informed by the important work of the IEA (2006)*** on energy technology scenarios and strategies to 2050. We will, under the new policy framework, develop Ireland's own energy forecasting and analysis capability taking account of the implications of global trends and IEA scenarios.

	This will be a key part of the planned review of energy policy goals and targets every two years from 2007 onwards.
1.2.1	Ireland's energy policy priorities are framed in the context of the European Union. Boosting investment, in particular in energy efficiency and renewable energy, can create jobs, promote innovation and the knowledge-based economy.
1.2.2	The Government has welcomed the EU Commission's Strategic Energy Review and supporting Action Plan published in January 2007.
1.3.4	Over the period of the National Development Plan the ***Energy Programme*** will entail some ***€8.5 billion in investment in energy***, funded in part by the Exchequer, by the Energy Semi-State Bodies and from other non-public sources.
1.3.5	**The Energy Programme comprises three elements.** **Strategic Energy Infrastructure Programme** Over ***€ 1.25 billion*** will be invested in ***key strategic energy infrastructure projects*** including new electricity interconnection, improved gas interconnection and strategic reserve capacity. **Sustainable Energy Sub-Programme** At least ***€276 million will be invested in the sustainable energy*** sector over the period of the NDP in support of the targets for sustainable energy including renewable energy, energy efficiency and innovation. **Semi-State Energy Companies Sub Programme** The Semi-State Energy Companies (BGE, ESB, Bord na Móna and EirGrid) will build on the progress made under the last NDP by investing ***over €7bn***, ***mainly in the electricity and gas transmission*** and distribution networks, in new and modernised power generation and in wind energy projects.
1.3.6	The National Development Plan will also see ***direct investment of just under € 150 million in energy research and innovation*** which will also enable the leveraging of additional funding under EU Programmes including the Seventh Framework Programme.
1.3.8	The National Action Plan for Social Inclusion 2007-2016 is the overall policy framework within which we will take ongoing and enhanced measures to tackle ***fuel poverty***
1.3.9	The Planning and Development (Strategic Infrastructure) Act 2006, provides for the streamlining of the planning process for certain types of major energy, transport and environmental infrastructure of strategic importance.
1.3.11	The ***Wind Energy Development Guidelines for planning authorities 2006*** are designed to ensure consistency of approach to wind energy developments throughout the country and to provide clarity to prospective developers and local communities.
1.3.12	The joint commitment by both Governments to the All-Island Energy Framework is demonstrated by the strengthening and deepening of all-island cooperation across energy matters. The immediate priority is delivery of the Single Electricity Market in 2007
1.4.1	The IEA is currently engaged in an in-depth review of Irish Energy Policy. Its last review was undertaken in 2002. The IEA will finalise its report in June 2007.
Section 2	**OUTCOME OF ENERGY GREEN PAPER CONSULTATION PROCESS**
2.4	***Sustainability of Energy Supply***
2.4.8	The importance of improvements in energy efficiency was emphasised in responses, with much

	support for the "***Power of One***" Campaign. A number of responses stressed the need for the Campaign to be backed up with ***strong support measures***. Many responses stressed the need for more challenging building regulations which would require the implementation of renewable and energy efficient technologies as well as comprehensive enforcement of existing regulations.
2.4.9	The need to develop combined heat and power and district heating was also identified as an area where energy efficiency could be improved at a structural level.
2.4.10	Concern was expressed about fuel poverty.
2.4.11	The importance of research and development was fully recognised with particular emphasis on the need to develop energy research capacity.
2.5	***Competitiveness of Energy Supply***
2.5.3	In the context of the structure of the ***electricity market***, there were many recommendations for the ***full separation of the network from generation assets***. There was strong support for giving EirGrid ownership of the transmission assets to underpin the independence and transparency of transmission.
2.5.7	The proposal to ***review the regulatory regime*** following the establishment of the Single Electricity Market was ***welcomed***. Some respondents stressed the need for ***examination of the powers and duties of the CER*** which underpin the existing arrangements.
2.6	***Policy Delivery***
2.6.1	Many ***called for greater clarity*** in relation to the various roles of ***Departments and their Agencies in delivering energy policy objectives.*** ***Many responses supported the recognition of and a clear remit for Local Energy Agencies.*** The existing and ***future role of Sustainable Energy*** Ireland was also highlighted in the context of developing structures which will fully support the development and delivery of energy policy.
Section 3	**THE POLICY FRAMEWORK**
3.1	***Actions to Ensure Security of Energy Supply***
3.1.2	Currently over 90% of Irish energy requirements are imported.
3.1.4	…the key imperative for Ireland is to deliver essential and timely ***investments in our domestic energy infrastructure***. ***Ensuring Ireland's generation adequacy*** position between ***2007 and 2011*** and planning for adequacy beyond 2012 ***is an immediate and critical priority*** which will require close cooperation between EirGrid, CER and Government as well as existing and potential new players in the power generation sector.
3.1.5	The ***Government's overriding policy objective*** therefore is to e***nsure that energy is consistently available at competitive prices*** with minimal risk of supply disruption. The underpinning Strategic Goals are as follows: ■ Ensuring that electricity supply consistently meets demand ■ Ensuring the physical security and reliability of gas supplies to Ireland ■ Enhancing the diversity of fuels used for power generation ■ Delivering electricity and gas to homes and businesses over efficient, reliable and secure networks ■ Creating a stable attractive environment for hydrocarbon exploration and production ■ Being prepared for energy supply disruptions
3.2	**Strategic Goal 1: Ensuring that Electricity Supply Consistently Meets Demand**
3.2.3	**Actions:** ■ We will deliver the ***Single Electricity Market in 2007*** which will contribute to reliability and security of supply and which will progressively deliver a robust integrated infrastructure and

	more ***competitive energy prices for business*** and consumers on the island; ■ We will support the progressive ***development of a regional electricity market*** with ***UK and North-West Europe*** over the next five years underpinned by new interconnection; ■ We will ensure delivery of the ***second North South electricity interconnector by 2011*** which will more than double the existing cross border electricity transfer capacity to over ***680 MW***; ■ We will ensure delivery of the ***East-West electricity interconnector*** no later than ***2012*** which will provide ***500MW*** of capacity and which will remain in State ownership vested in EirGrid; ■ We will ask EirGrid to undertake cost benefit analysis and feasibility planning within the next two years for decisions in relation to further interconnection with Britain or potentially with Europe; ■ We will give positive consideration to an Exchequer contribution to the cost of strategic energy infrastructure to address security of supply over the period of the National Development Plan 2007-2013; ■ We will ensure ***completion of the ongoing capital investment programme in transmission and distribution networks by 2010*** and oversee further extensive investment in a programme expected to total ***€4.9bn up to 2013***; ■ We will, ***through EirGrid, publish a Grid Development Strategy in 2007*** covering the period ***2008-2025***, which will set out the plans for the ***development of the transmission system over a 20 year horizon***. The Strategy will take account of growing transmission demands given our economic growth as well as technology developments. It will be aligned to and facilitate greater certainty in relation to generation plant location, the growth of renewables, interconnection and the development of the all-island energy market framework as well as spatial strategy and regional development objectives; ■ We will ensure that the strategic network development approach is ***underpinned by coordinated local, regional and national approaches to issues***, which balance local interests with the national imperative to deliver strategic energy infrastructure. This approach will be supported by the new arrangements provided for in the Planning and Development (Strategic Infrastructure) Act 2006; ■ We will ***give immediate priority to ensuring that generation adequacy margins are improved*** taking account of growing demand through appropriate actions by CER, EirGrid and the Power generation sector including: • the ***provision of accurate forecasts by generators*** on plant availability and performance to enable EirGrid to plan confidently the operation of the system; • ***EirGrid*** and ***CER*** to design a system of incentives/penalties and other measures to raise, in the short term, the standards of availability and performance of the existing plant portfolio; • Transparent and timely publication by EirGrid on a monthly in arrears basis of historic plant availability; • ***EirGrid and CER*** to develop immediate proposals for the development of new sites for additional flexible generation which could be procured and developed, if needed; • ***CER and EirGrid*** to facilitate and oversee the competitive provision of additional mid-merit/flexible generating plant of at least 240MW over the next 2- 8 months to address demand and capacity constraints in the immediate term. This will also contribute to a more balanced power generation portfolio in support of competition and the growth of wind energy on the system; • ***EirGrid and CER*** to plan for the undertaking of a fast build option over the next 2 months should this be warranted for generation security of supply reasons and the ownership and operation of such plant will be awarded by competitive tender; • We expect a positive response by existing and potential players to the making available of ***three serviced ESB sites in 2007 under the CER/ESB divestment agreement***. ■ We will oversee the transformation of the generation portfolio between 2007 and 2013 through the ***CER-ESB Agreement on planned divestment of 20% of the existing ESB conventional plant portfolio by 2010***, matched by the provision by independent operators of replacement conventional plant with operational flexibility which can support and complement the significant growth in intermittent wind powered generation while delivering increased capacity, security of supply and competition in support of the economy; ■ ***We will oversee delivery to schedule of the new 430MW plant at Aghada (ESB) and 400MW plant at Whitegate (BGE) by 2009;*** ■ We will mandate EirGrid, in consultation with CER, to ***develop a landbank of ESB owned sites by 2008 to facilitate independent power generation investment up to 2020***. The landbank will complement the CER/ESB agreement which provides for the release of ESB sites in 2007 and incrementally up to 2010. Other suitable State-owned sites will be identified by

	EirGrid which could augment the ESB sites in the landbank. EirGrid will begin analysis immediately to support development of the landbank in the interest of security of supply and competition; ■ We will complete a comprehensive ***cost benefit review in 2008*** of ***the potential for distributed generation*** and on the implications for electricity networks as a long-term alternative or supplement to the existing centralised system. The review will take account of ongoing research by SEI, the results of the Grid Study and the long term Grid Strategy, addressing the incentives and barriers (including licensing and planning issues) that impact on the development of distributed electricity generation; ■ We will ***facilitate and support the development of energy storage,*** such as additional pumped storage, through targeted R & D and ongoing work by EirGrid. This will support renewables integration, security of supply and the effective working of the electricity market.
3.3	**Strategic Goal 2: Ensuring the Security and Reliability of Gas Supplies**
3.3.1	Ireland has a well developed framework to ensure the adequacy of gas supplies and transportation infrastructure into the country. Recent years have seen substantial investment in the transmission network and the new pipelines recently completed (Mayo Galway & South-North) will ***enable the indigenous gas find at Corrib to be brought to the market,*** ***Business as usual*** projections indicate that ***more than 70% of our electricity would be generated from natural gas by 2020***. <u>Our alternative scenario, with renewables contributing 33% by 2020, will see greater diversity in the fuel mix with gas contributing just under 50% to power generation</u>.
3.3.2	The UK is now the source of some ***87% of our natural gas*** and the UK's own demand for imports is growing strongly. Norway will remain a significant supplier of gas to UK in the medium term.
3.3.5	**Actions:** ■ We will ask CER to take a strategic "look forward", taking account of EU and global trends, on a 20 year time horizon in its Gas Capacity Statement 2007-2014. This will support enhanced long term planning to 2020 and beyond for security of gas supply; ■ We will review the ***scope for enhanced fuel switching in gas based power generation*** as a contributor to security of supply; ■ We will set an explicit Security of Supply standard for the natural gas system from 2008 which will also set the framework for evaluating future supply options and protection standards; ■ We will, through ***CER, agree*** and implement the necessary arrangements ***in 2007*** to address the ***impact of*** changes in the ***UK regulatory regime for gas exit***; ■ We will continue to ***invest in the gas network for security of supply and regional development through BGE's investment programme of over € 1.7 billion*** under the NDP 2007-2013; ■ We will continue to actively encourage private sector interest in investing in gas storage facilities and LNG and review the potential role for Government intervention in the event of market failure in light of the study's findings; ■ We will put in place an ***all-island strategy by 2008 for gas storage and LNG facilities*** in light of the outcome of the all-island study; ■ We will continue to progress the ***all-island gas market, with 2010 set as the target date for implementation of streamlined tariff*** and market arrangements for the all-island market; ■ We will ensure that infrastructure reinforcement in the Ireland/Scotland gas interconnection network is undertaken as necessary, on a fully cost effective basis; ■ We will continue to enhance arrangements for regular structured dialogue with UK on issues of mutual interest in relation to gas supply and demand; ■ We will, together with CER, work with the UK and the EU to deliver the Regional Gas Market initiatives and regional regulatory structures in the medium term which will facilitate gas trade between Ireland, the UK and Northern Europe; ■ We will explore the medium to longer term options for further gas interconnection in light of the all-island market and development of the regional gas market; ■ We will work in Europe to ensure Ireland's needs are met under EU plans to assist diversification by Member States currently dependent on one gas supplier; ■ We will work proactively with other EU Member States and the Commission through the forum of the Gas Coordination Group and the Energy Correspondents Network to ensure Coordination of security of supply measures by EU in the event of an energy crisis or a major gas supply disruption;

- We will work to develop a comprehensive energy dialogue with key partners, within the EU and the wider international framework, and drawing on input from our national diplomatic network;

3.4 Strategic Goal 3: Enhancing the Diversity of Fuels for Power Generation

3.4.1 In the absence of significant additional hydro resources, and given the statutory ban on nuclear generation, Ireland's dependence on natural gas for power generation would be 70% by 2020 without policy intervention.

3.4.2 The Government will maintain the statutory prohibition on nuclear generation in Ireland. The Government believes that for reasons of security, safety, economic feasibility and system operation, nuclear generation is not an appropriate choice for this country.

3.4.3 ***Coal is in very long world supply*** and is not correlated to oil or gas supplies in price or supply sources. Hence its renewed attraction as a contributor to fuel supply diversity and security.

The completion of the ***€368 million retrofit of Moneypoint Power Station*** will significantly help to meet emission requirements and enhance efficiency. Carbon capture and storage (CCS) offers great potential and is in developing use. However the entire CCS process in conjunction with electricity generation has not yet been demonstrated on a commercial scale.

Subject to developments, the Government would envisage the commercial operation of a ***new clean coal power generation plant before 2020.***

3.4.4 ***Co-firing of biomass*** with peat and other fossil fuels offers identified potential and the ***Government is fully supportive*** of its development. ESB and Bord na Móna will continue to work with the biomass sector on the potential of ***co-firing in the short term at the three State owned peat stations***. ***Biomass power generation projects will be supported through the REFIT scheme.***

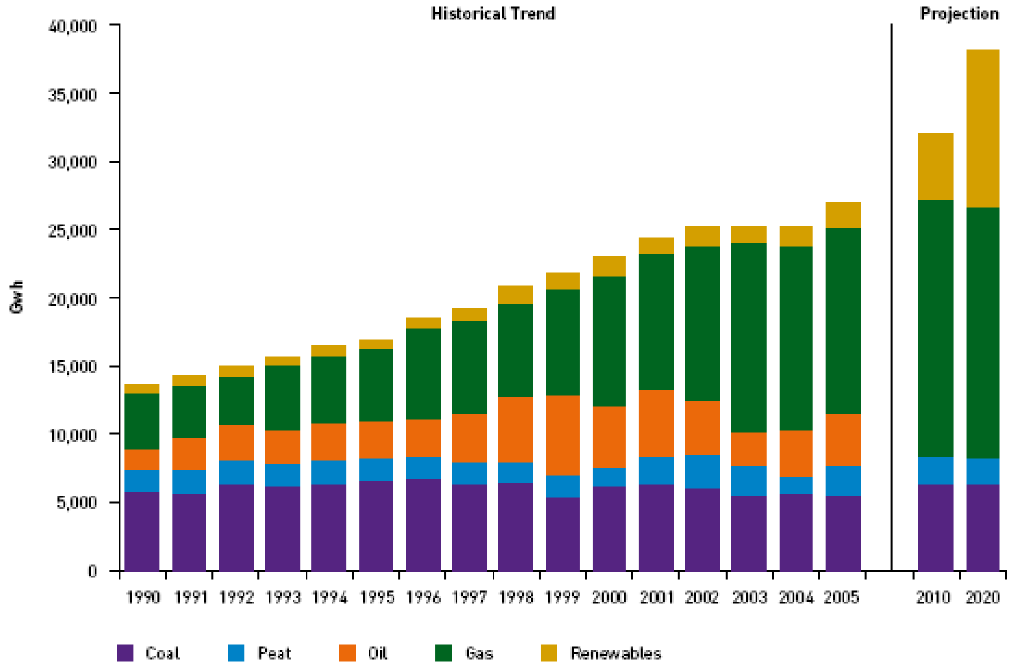
3.4.6 The Government is committed to delivering a significant growth in ***renewable energy*** as a contribution to fuel diversity in ***power generation with a 2020 target of 33% of electricity consumption***. Wind energy will provide the pivotal contribution to achieving this target. We also need a balanced portfolio of renewable technologies including biomass and ocean technology.

3.4.7

Fuel	Electricity Gen. Fuel Inputs (ktoe)			Growth	Average Annual Growth Rate			Fuel Shares	
	2005	2010	2020	05-'20	05-'20	05-'10	10-'20	2005	2010
Coal	1416	1793	1783	25.9	1.5	4.8	-0.1	28%	31%
Oil	766	8	0		-43.9	-60.2	-33.4	15%	0%
Gas	2044	3051	2934	43.6	2.4	8.3	-0.4	40%	51%
Peat	504	504	465	-7.6	-0.5	0.0	-0.8	10%	8%
Electricity	176	176	176	0.0	0.0	0.0	0.0	3%	3%
Renewables	180	420	1128	526.7	13.0	18.5	10.4	4%	7%
Total	**5086**	**5951**	**6487**	**27.5**	**1.6**	**2.8**	**1.1**		

Source: SEI, 2007.

Electricity Generation by Fuel 1990-2020



3.4.7

Electricity generation by fuel 2005-2020

Fuel	Electricity Generated (GWh)			Growth	Average Annual Growth Rate			Fuel Shares		
2005	**2010**	**2020**	**05-'20**	**05-'20**	**05-'10**	**10-'20**	**2005**	**2010**	**2020**	
Coal	5447	6193	6159	13.1	0.8	2.6	-0.1	21%	19%	
Oil	3876	46	1	-100.0	-43.2	-58.8	-33.4	15%	0%	
Gas	13652	18804	18445	35.1	2.0	6.6	-0.2	52%	59%	
Peat	2101	2069	1902	-9.5	-0.7	-0.3	-0.8	8%	6%	
Renewables	1872	4884	11684	1096.2	18.0	38.0	9.1	7%	15%	
Total	**26949**	**31996**	**38191**	**46.6**	**2.6**	**4.2**	**1.8**			

Source: SEI, 2007.

3.4.8

Diversity of fuels for power generation- <u>Actions</u>

- We will ***maintain the statutory prohibition on nuclear generation*** and monitor developments in other Member States and global trends in terms of implications for Ireland;
- We will pursue the ***scope*** in the medium term ***for additional coal fired generation*** subject to the environmental challenges being addressed and the pace and scale of technological and commercial development, as well as planning frameworks, in relation to Carbon Capture and Storage;
- We will, in that context, set a ***target for biomass firing at Moneypoint generating station by 2010***, in light of ongoing economic, technical and feasibility work by ESB;
- We are setting the ***target of 30% co-firing at the three State owned peat power generation stations to be achieved progressively by 2015*** beginning with ***immediate development*** byBord na Móna of its pilot project at ***Edenderry Power Station***;
- We will encourage biomass in power generation by ***supporting biomass technology transfer***, investment in specific biomass R & D and tackling of supply side (biomass feedstock) issues;
- We will ***extend the REFIT electricity support scheme to encompass co-firing*** and maintain the REFIT scheme in support of biomass electricity;
- We will ***deliver on the targets in the Bioenergy Action Plan***, through continued strategic alliances across Government Departments and Agencies;

	■ We will eliminate the dedicated oil demand for the power generation sector by 2020 while reviewing the strategic necessity for dual firing at gas plants; ■ We will achieve ***15%*** of ***electricity consumption from renewable sources by 2010*** through existing and new projects under the REFIT Scheme, extended as required; ■ We will achieve ***33% of electricity consumption from renewable sources by 2020*** through support for research, development, commercialisation, and technology transfer as well as grid connections and planning issues for offshore wind, ocean technology and biomass; ■ We will, together with the NI Authorities, ***set an all-island 2020 renewables target during 2007*** informed by the All-Island Grid Study; ■ We will review the options for a consistent approach to supporting renewable energy in the all-island framework; ■ We will ensure the necessary transmission system planning and development in support of renewables by EirGrid and SONI and the Regulators in the all-island framework; ■ We will ***limit Ireland's relative dependence on natural gas for power generation to approximately 50% by 2020***; ■ We will, under the National Energy Efficiency Action Plan, introduce measures to further enhance the energy efficiency of the power generation sector which will contribute to demand management and security of supply.
3.5	**Strategic Goal 4: Delivering Electricity and Gas over Efficient Reliable and Secure Networks**
3.5.1	The Semi-State Energy Companies (ESB, EirGrid and BGE) will invest in the region of €4.9bn in electricity and gas distribution and transmission networks under the National Development Plan 2007-2013.
3.5.2	**Actions** ■ We will keep the ***electricity and gas network infrastructure as strategic assets within State ownership***. These assets will never be privatised; ■ We will ensure under the National Development Plan that the Energy Semi-State Companies deliver the necessary infrastructure development and refurbishment on a timely basis to 2013 and beyond, regulated to international standards and procured cost effectively; ■ We will continue to meet regional development requirements by supporting the major electricity investment programme underway and planned by ESB Networks in the high voltage transmission network and distribution network and connections to 2010 and beyond as approved by CER; ■ We will ensure that energy infrastructure investment programmes beyond 2013 are consistent with strategic, economic, regional and all-island objectives; ■ We will ensure through EirGrid's Grid Development Strategy 2007-2025 and in light of the All-Island Grid Study the necessary action to ***ensure that electricity transmission and distribution networks can accommodate, in an optimally economic and technical way, our targets for renewable generation for the island to 2020 and beyond***; ■ Informed by ongoing and further planned analysis, including the cost/benefits, of distributed energy potential, we will assess the long term implications for our distribution/transmission networks of realising that potential; ■ We will ensure, through BGE's investment programme, the efficient, cost effective and economic extension of the gas network, and its development on an all-island basis which is already underpinned by the recent completion of the South-North gas pipeline; ■ We will continue to support the major programme underway by BGE to upgrade and renew the gas transmission and distribution networks taking account of regional development needs; ■ We will oversee the roll-out of the new town connections along the Mayo-Galway Pipeline to ensure completion to schedule; ■ We will also support the connection of other new towns in line with regional growth and development objectives, having regard for BGE's economic criteria.
3.6	**Strategic Goal 5: Creating a Stable Attractive Environment for Hydrocarbon Exploration and Production**
3.6.1	The overarching objective of securing our national energy supply will be a key driver in the development of Ireland's approach to hydrocarbon exploration and production. This strategy is already underpinned by fiscal terms designed to attract an increased level of exploration activity, which will also ensure a higher return to the State from more profitable fields, where increased levels of exploration result in potential reserves being proven.

3.7	***Strategic Goal 6: Being Prepared for Energy Supply Disruptions***
3.7.3	**Actions:** ■ We ***will establish the National Oil Reserves Agency (NORA) as an independent statutory body in 2007***; ■ We will maintain and regularly review comprehensive and integrated contingency plans to mitigate energy supply disruptions in line with our EU and IEA obligations; ■ We will, in light of the recent National Oil Stockholding Policy Review, rebalance the strategic oil reserve by maximising Ireland's wholly-owned stocks of oil and the level of stocks held on the island, subject to increased storage availability and value for money considerations; ■ We will increase the current level of the levy on certain oil products in 2007 in order to underpin our oil stockholding strategy; ■ In light of the findings of a Review of Security of Oil Supplies to Ireland, to be completed in 2007, we will introduce further strategic measures in 2008; ■ We will shortly publish a Handbook on Oil Supply Disruptions Contingency Measures and update regularly in consultation with stakeholders;
3.8	***Actions to Promote the Sustainability of Energy Supply and Use***
3.8.2	The commitment to a sustainable energy future is shared North and South and is being jointly pursued within the All-Island Energy Market Development Framework.
3.8.3	The planning code will play its part in facilitating greater penetration of renewable technologies at residential, commercial and power generation levels. Amendments have been made to the Planning and Development Regulations to introduce exemptions from planning requirements for certain classes of micro-renewable technologies at residential level.
3.8.4	The underpinning ***strategic goals for sustainable energy*** are as follows: ■ Addressing climate change by reducing energy related greenhouse gas emissions ■ Accelerating the growth of renewable energy sources ■ Promoting the sustainable use of energy in transport ■ Delivering an integrated approach to the sustainable development and use of bioenergy resources ■ Maximising Energy Efficiency and energy savings across the economy ■ Accelerating Energy Research Development and Innovation Programmes in support of sustainable energy goals
3.9	**Strategic Goal 1: Addressing Climate Change by Reducing Energy Related Greenhouse Gas Emissions**
3.9.5	**Actions:** ■ We will ensure that energy policy and climate change policy goals are closely aligned and that strategies for reducing energy demand and energy related emissions contribute to national climate change targets; ■ We will create strong linkages between energy policy and transport policy goals given that the transport sector is 99% oil dependent and accounts for around 33% of total Irish energy demand; ■ We will progressively ***achieve 33% of our electricity consumption from renewable sources by 2020 with 15% the target for 2010***; ■ We will ***implement the National Bioenergy Action Plan*** through a cohesive Government approach across the agriculture, environment, enterprise, transport and energy sectors; ■ We will work to reduce demand for energy across the economy, guided by a strategy on energy efficiency. ***We will publish an Energy Efficiency Action Plan by June 2007***.
3.10	**Strategic Goal 2: Accelerating the Growth of Renewable Energy Sources**
3.10.2	At least ***€270 million will be invested*** under the National Development Plan 2007-20 3 through ***Sustainable Energy Programmes and Schemes overseen by SEI,*** as part of investments and support measures of ***over €670 million in renewable technologies***. We are also supporting research projects to develop the use of agriculture products in the biofuels sector as well as energy crops and wood energy.
3.10.4	The ***Wind Energy Development Guidelines for Planning Authorities 2006*** underline the need for a "***planed" approach to wind and other renewable projects***. Our framework support for renewables must continue to be fully cost effective. This is by no means unique to Ireland. The challenges for all Governments, at EU level and globally, in promoting renewables are

	clearly articulated in the ***EU Energy Strategy and in the IEA World Energy Outlook 2006.***
3.10.5	Growth in ***Combined Heat and Power*** deployment is an ***important objective to 2020***. The national economic benefit from CHP grows with scale of deployment. It is also the case that CHP investment yields a relatively low return at high risk. So barriers need to be addressed and supports maintained in order to realise the deployment potential, not just in community and buildings, but also in large scale plants.
3.10.6	The Government intends to make ***Ireland a world leader for research development and deployment of Ocean Energy technologies***, through the ***National Ocean Energy Strategy*** with the aim of utilization within a decade. Ongoing work is being intensified by SEI, the Marine Institute, UCC and other institutions, ESB and EirGrid to develop and deliver solutions to the challenges. Ireland is also working within the IEA Ocean Energy Systems Implementation Agreement and EU FP7 to encourage and benefit from collaboration on a wider scale.
3.10.8	The National Bioenergy Action Plan underscores the Government's commitment to a fully integrated approach to delivering on our ambitions for renewable and bio energy resources.
3.10.9	The Government has announced the introduction of a biofuels obligation scheme by 2009.
3.10.10	**Actions:** ■ We will achieve ***15% of electricity consumption on a national basis from renewable energy sources by 2010 and 33% by 2020***; ■ We will set, jointly with Northern Ireland during 2007, a further all-island renewable energy target for 2020, which will complement and reinforce the ambitious national target of 33%. This will be informed by the recommendations of the forthcoming All-Island Grid Study and further consultation with the renewable energy sector North and South; ■ We will achieve at least ***400MW from Combined Heat and Power by 2010*** through continued support under the CHP Deployment Programme and R & D supports with particular ***emphasis on biomass fuelled CHP*** and will aim to achieve at least ***800MW by 2020***; ■ Within two years a further target for CHP will be considered for 2020 in light of further feasibility studies by SEI into CHP applications, a review by CER of potential administrative and regulatory barriers and decisions on appropriate price support mechanisms for electricity generated from new high efficiency large scale CHP. Our approach will be in line with the EU Directive on CHP and further EU developments; ■ We will set an initial ambition of at ***least 500MW of installed ocean energy capacity by 2020*** underpinned by national and international work to accelerate technology advances and solutions to infrastructural and economic issues; ■ We will support further long term development of offshore wind projects through a review of cost benefits, further R & D and developing solutions for effective integration of offshore wind energy into the grid and addressing barriers, in consultation with the industry, including planning, licensing and capital costs. Our strategies to address the challenges for offshore wind will take full account of the EU Renewable Energy Roadmap which includes plans to initiate work on a European Offshore Supergrid; ■ We will ***pursue the potential for solar energy*** in Ireland in photovoltaic and solar thermal research, technology and manufacture with a view to optimising deployment of solar energy in electricity and heating by 2020; ■ We will ***achieve a minimum target of 5% market penetration of renewables in the heat market by 2010***, facilitated ***through the expanded Greener Homes*** and ***Bioheat grants programmes*** and the development of further initiatives to encourage renewable energy in the domestic, community, commercial and industrial environments; ■ We are setting a further target of ***12% renewable heat market penetration by 2020***. This target reflects the available resource and is ambitious when coupled with the ***additional target for co-firing with biomass;*** ■ We will ***achieve the EU target of 5.75% biofuels market penetration by 2010*** which will be delivered through the existing mineral oil tax relief scheme, the planned biofuel obligation on fuel supply companies and the promotion of biofuels in public fleets; ■ We will provide further market certainty and encourage projects of scale by ***moving to a biofuels obligation on fuel suppliers by 2009***, this will be developed and put to industry and public consultation within the next 2 months. This will further underpin delivery of the 2010 target; ■ We are setting ***a biofuels penetration target of at least 10% for 2020*** in light of EU developments and all relevant factors including supply and demand side issues and global sustainability impacts;

	■ We will support further research of second generation biofuels including collaborative projects with other countries through SEI and the Energy RTDI Programmes; ■ We will work with SEI to develop sustainable energy programmes specifically designed to address the additional energy challenges faced by residents of our small offshore islands.
3.11	**Strategic Goal 3: Promoting the Sustainable Use of Energy in Transport**
3.11.4	In November 2005, ***Transport 21*** was launched, which is a ***€34.3 billion capital investment*** framework for the transport system for 2006 to 2015. Overall € 18.5 billion will be invested in the national roads programme, which will upgrade national roads, remove bottlenecks, reduce congestion, improve journey times and, consequently, improve competitiveness. Furthermore, € 15.8 billion will be provided for public transport projects, in a significant rebalancing of public expenditure, which will encourage commuters to switch to public transport.
3.11.10	**Future Action Plan**: ■ Better integration of transport infrastructure and land use planning; ■ ***Fiscal measures to reduce transport demand, including road pricing*** or congestion charges once sufficient infrastructure has been provided and public transport alternatives are in place; ■ Support measures that aim to achieve greater energy efficiency from the transport sector and influence behavioural change, including car sharing schemes and workplace travel plans; ■ ***Public awareness campaigns*** on issues such as eco-driving, which ***aims*** to achieve up to a ***20% improvement in fuel efficiency*** among private transport users; ■ Support for EU-level agreements with motor manufacturers' associations to reduce CO_2 emissions of new passenger cars to an average level of ***130 g/km by 2012***; ■ A ***mandatory comparative labelling system for new cars based on CO_2 emission*** levels and continued support for the mandatory provision of consumer information on fuel economy and CO_2 emissions in order to influence behavioural change; ■ ***Changes*** to both vehicle registration tax ***(VRT) and motor tax***, which should provide further ***incentives for choosing fuel-efficient cars*** with lower CO_2 emissions. The extension beyond December 2007 of the preferential VRT treatment currently available to series production hybrid electric, flexi fuel and electric vehicles will be considered; ■ Support for a ***national biofuels obligation on fuel suppliers of 5% by 2009***, which will provide market certainty and encourage projects of scale; ■ The use of ***100% pure plant oil (PPO)*** in captive fleets maintained by ***local authorities*** and public bodies, and ■ Support for ***measures to include the aviation and maritime sectors in the EU Emissions Trading Scheme (ETS)***, as part of a multilateral commitment by Member States.
3.12	**Strategic Goal 4: Delivering an Integrated Approach to the Sustainable Use of Bioenergy Resources**
3.12.3	**Actions:** ■ We will ***implement (and report annually on) the strategies and targets in the National Bioenergy Action Plan*** through integrated and coordinated action across Government Departments and State Agencies in consultation with stakeholders; ■ We will continue to roll-out, and review and expand as necessary, the fiscal and grant schemessupporting bioenergy development and deployment including: • Greener Homes • Bioheat • REFIT • Bio Energy Crop Scheme • Energy Crops Assistance Scheme • Biomass Harvesting Scheme • BES & Seed Capital Schemes • Research and Development and Innovation Schemes for forestry, biofuels, crops and technologies ■ We will ensure that the ***public sector leads the way as exemplar through the deployment of bioenergy heating, the use of renewable electricity and CHP in public buildings as well as the use of biofuels in the public transport fleets.*** Specifically, we are mandating with immediate effect that ***Dublin Bus and Bus Éireann move all their fleet to a 5% biofuel blend and plan to achieve a 30% biofuel blend in all their new busses,*** with the technical capability to achieve this to be incorporated into tenders for new fleet; ■ We will support the delivery of targets for biomass in the heating sector; ■ We will accelerate progress in developing a reliable supply chain in the wood energy sector

	for the private as well as the national forest estate; ■ We will ***encourage*** progress in the timely implementation of non-hazardous Waste Management Plans by local authorities in providing ***optimised "waste to energy" solutions*** compatible with our national waste policy goals for prevention reuse and recycling, including the National Strategy for Biodegradable Waste 2006, and taking account of EU and international experience; ■ We will work to develop an all-island approach to bioenergy, including shared opportunities for scale in supply, over the next three years.
3.13	**Strategic Goal 5: Maximising Energy Efficiency and Conservation**
3.13.12	**Actions:** ■ We will achieve ***20% savings in energy across the electricity, transport and heating sectors by 2020***, in line with EU target and are setting an indicative target of ***30% for 2020*** to surpass the EU ambition; ■ Following the consultation process, we will finalise the ***National Action Plan on Energy Efficiency by June 2007*** which will be subject to annual review; ■ We will sustain the National Energy Efficiency Campaign ***"Power of One***" over the next three years at national, regional and community level as well as across the economic sectors and make it an all-island campaign during 2007; ■ We will ***promote the adoption of the Irish Standard for Energy Management in all workplaces*** and will, ***in particular***, support its implementation in ***SMEs;*** ■ We are ***committed to updating <u>national building regulations</u>*** governing energy efficiency of new buildings and buildings subject to major renovations. A full review of the scope, structure and form of the current regulations (Part L of the Building Regulations) will underpin the ***next amendment which will come into effect in 2008***. The aim is • To ***provide for the systematic upgrading of energy performance standards***, • To ensure that Ireland's standards are among the best in Europe and that they make the maximum practical contribution to achieving CO_2 emission targets, • To reflect relevant technological developments and • To ***reduce energy demand by 40% relative to current standards***. ■ We have introduced ***Building Energy Rating (BER)*** of new dwellings from January 2007. We will extend the requirement for rating to new non-domestic buildings from July 2008, and to existing buildings (domestic and non-domestic) offered for rent or sale from January 2009. This will provide the information necessary for energy efficiency to become a factor in purchase and sale decisions in the housing market and to drive the provision of higher standards in the housing stock; ■ We will, ***under the National Development Plan*** and ***Regional Operational Programmes*** 2007-2013, continue to ***fund energy efficiency programmes*** and ***targeted initiatives*** at national and ***regional level;*** ■ We will give ***priority to*** expanded cost-effective ***demand side management initiatives for industry and consumers from 2008*** under a fully costed comprehensive DSM Plan ***to be finalised by the end of 2007***; ■ We will initiate steps in 2007 in conjunction with CER, SEI and energy suppliers, to roll-out the provision of ***real time energy displays for households*** which have demonstrable potential to reduce energy bills; ■ We will ***oversee the introduction over the next five years of smart meters for all electricity*** customers, (new and existing housing stock) informed by the Dundalk Pilot Project and a technical economic and cost review to be completed in 2007. We will, in that context, review the most appropriate funding mechanism to meet the cost of installation; ■ We will support targeted R & D and innovation in energy efficiency and technology conversion under the ***Energy RTDI Programme 2007-2013***; ■ We will ***lead by example setting a target of 33% for energy savings across the public sector***. This will be achieved by introducing comprehensive ***Energy Efficiency Programmes (targets and standards) for Government Departments, State Agencies, Local Authorities, the Health Service and the public sector overall***. The Programmes which will be ***rolled out progressively from 2008*** will build on the achievements to date under the Public Sector Investment Programme and the work of the Energy Management Bureaux; ■ We will publish an action plan for Green Public Procurement, with the aim of achieving, by 2010, a level of Green Procurement equal on average to that achieved by best performers in Europe. The plan will focus on targets to be achieved, how to drive the adoption of green procurement by public and semi public authorities, indicators for measuring progress and the legal and administrative framework for public procurement;

3.14	**Strategic Goal 6: Delivering Energy Research Technology Development and Innovation Programmes in Support of Sustainable Energy Goals**
3.14.1	The Government has committed an ***unprecedented level of funding*** to science, technology and innovation under the ***Science Technology and Innovation Strategy 2006-2013***. The National Development Plan fully endorses the Strategy and sets a vision for 20 3 of Ireland internationally renowned for research excellence and at the forefront of using new knowledge for economic and social progress within an innovation culture.
3.14.4	The ***Seventh Framework Programme*** and the ***Intelligent – Energy Europe Programme*** will play a ***key part in delivering*** a cohesive EU research and innovation platform, building on Member States own programmes. We also ***welcome the work of the International Energy Agency***, in support of the G8 Plan of Action, to focus on efficient and emerging technologies and the pioneering Energy Technology Perspective to 2050. The Government will enhance Ireland's involvement in the IEA Energy Technology Collaboration Programme as well as supporting Irish researchers to maximise take up under FP7 and Intelligent Energy Europe.
3.14.7	The ***Irish Energy Research Council will play a key role*** in the prioritisation, coordination and oversight of energy research to 20 3 and beyond. The Council will advise on the setting of priorities for Irish energy research, taking a leading role in linkages with key national bodies as well as EU and international programmes and bodies. The Council will coordinate existing RTDI, provide policy advice and analysis and support strategic initiatives and capacity building, complementary with existing initiatives. The ***Council has been requested to prepare a comprehensive Energy Research Strategy*** 2008-2013 during 2007 which will also reflect the National Strategy for Science, Technology and Innovation.
3.14.8	**ACTIONS** ■ We will ***directly invest over € 150 million in Energy Research under the NDP 2007-2013*** which will also leverage additional funding under EU programmes; ■ We will ***request ESB, BGE, Bord na Móna and EirGrid to enhance their contribution to energy RTDI*** as part of their corporate strategies from 2008 onwards; ■ We will, through the ***Irish Energy Research Council, publish a comprehensive Energy Research Strategy 2008-2013 during 2007*** which will set the priorities for Irish energy research taking account of EU and international developments; ■ We will keep existing energy research structures North and South under review, jointly with the Northern Ireland Authorities and in consultation with the Irish Energy Research Council, to ensure effective collaboration across the energy research community; ■ We will encourage and incentivise the active engagement of Irish energy industries with R & D Programmes through the Irish Energy Research Council; ■ We will progressively develop a strong national energy research capability across all disciplines through significant funding for capacity building under the Charles Parsons Awards. This will complement other opportunities through IRCSET, Science Foundation Ireland and EU Programmes and have a strong all-island dimension; ■ We will continue to develop all-island energy research cooperation through the Irish Energy Research Council including developing joint opportunities under the EU Seventh Framework Programme; ■ We will ensure a ***fully coordinated approach across Departments and Agencies*** (SEI, Enterprise Ireland, Teagasc and Marine Institute) to the commercialisation by the energy industry of Energy R & D through the ***establishment of a group representing Departments, Agencies, Industry and the Irish Energy Research Council.***
3.15	***Actions to Enhance the Competitiveness of Energy Supply***
3.15.4	The Strategic Goals underpinning the competitiveness of energy supply and competition in the energy market are as follows: ■ Delivering competition and consumer choice in the energy market ■ Delivering the All-Island Energy Market Framework ■ Ensuring that the regulatory framework meets the evolving energy policy challenges ■ Ensuring a sustainable future for Semi-State Energy Enterprises ■ Ensuring affordable energy for everyone ■ Creating jobs, growth and innovation in the energy sector
3.16	**Strategic Goal 1: Delivering Competition and Consumer Choice in the Energy Market**
3.16.11	**Actions:** ■ We will ***keep the electricity and gas network infrastructures*** as strategic national assets ***in State ownership*** and these assets will never be privatised;

	■ We will implement full market opening of the gas market in 2007; ■ We will ***complete the legal unbundling of BGE's transmission and distribution operations*** and establish the new BGE subsidiary as the Irish system operator in 2007; ■ We will work with Northern Ireland to expedite an all-island Transmission System Operator for the all-island gas market; ■ We will consider and consult on the cost benefits of further restructuring of BGE following full market opening in 2007, in light also of EU developments; ■ We will work with CER to drive the development of a regional gas market over the next 5 years for Ireland, Britain and France through a coordinated regulatory and policy approach; ■ We will, through CER, examine ways in which to utilise the competitive pressures of the UK market, including options for improving access for market participants to UK gas volumes; ■ We will ensure ***full operational independence of the Distribution Systems Operator*** as an ESB subsidiary by completing the legal unbundling by mid-2007; ■ We will, in conjunction with CER, take the necessary steps to ensure that ***ESB's distribution network business***, which is a natural monopoly, is ***operated under a risk-related rate of return sufficient to remunerate debt and retain capital to finance network investment requirements up to 2013***. The resultant savings, through reduced network tariffs and a lower shareholder dividend from the networks business, will be passed on in full to electricity customers. The impact of this arrangement, which is subject to compliance with State Aid Rules, will be kept under regular review; ■ We will ***establish EirGrid as the National Transmission Grid Company by end 2008, transferring to EirGrid ownership of the transmission assets***. This will create efficiencies, reduce duplication and achieve full independence thus enhancing competition and transparency and reducing costs; ■ We will ***progress the scope for an all-island single Transmission System Operator***, following the establishment of the SEM, in conjunction with the Northern Ireland Authorities and the two Regulators; ■ We will ensure that energy ***consumer interests are systematically protected*** and promoted through, in particular, supporting and ***resourcing the role of the National Consumer Agency as the statutory advocate for consumers*** in the regulated sectors. We will take further steps to ensure proactive communication, consultation and full transparency for consumers in relation to regulatory and policy actions in the energy field; ■ We will ensure the progressive reduction in ***ESB's market share in power generation to around 40% in an all-island market context by 2010 through the CER-ESB Asset Strategy Agreement of November 2006;*** ■ We will ***encourage BGE and Bord na Móna to develop their role in power generation*** and supply in competition with the ESB and Viridian and other Independent players through, in the first instance, their investment in Whitegate and Edenderry powerplants respectively; ■ We will ***mandate EirGrid*** to work immediately in consultation ***with CER to develop the state owned landbank to facilitate new independent generation***, including flexible/mid-merit plant, noting that several sites are becoming available immediately under the CER/ESB Asset Strategy Agreement; ■ We will work with the Northern Ireland Authorities to ensure that policy actions to be taken North and South are fully complementary with the Market Power Mitigation Strategy being developed by the Regulators for the SEM; ■ We will ***support the continued development of ESBI*** as a successful international player with strategic and economic benefits for Ireland; ■ We will ensure, through CER, the delivery of real and effective competition in energy supply by progressively reducing the dominance of ESB PES in competitive sectors of the retail electricity market, while retaining its residual function of ensuring the Universal Service Obligation; ■ We will ***ring fence the output from the new Aghada power generation facility*** from the rest of ESB Power Generation in terms of licence and business separation conditions and ensure that the output is ***sold to suppliers other than ESB Public Electricity Supply in the interest of competition***; ■ We will ensure adequacy of electricity supply 2007-2012 for the economy and consumers through the actions being taken under our security of supply goal and other measures outlined in this White Paper.
3.17	**Strategic Goal 2: Delivering the All-Island Energy Market Framework**
3.17.4	**Actions:** ■ We will oversee the successful introduction of the ***Single Electricity Market in 2007*** through enactment of the respective underpinning legislation and completion of the detailed market mechanisms by the Regulatory Authorities. We will also oversee full systems design by EirGrid and SONI and full readiness by market players by mid 2007;

	■ We will ensure the essential ***completion of the North South Electricity Interconnector by 2011 ;*** ■ We will work with Northern Ireland to ensure that market dominance and competition issues continue to be addressed in the Single Electricity Market context; ■ We will progress the delivery of all the strategic goals in the All-Island Energy Market Framework to 2010 including: • Delivering the all-island gas market and joint gas infrastructure and transmission policy; • An all-island strategy for gas storage and LNG this year; • An all-island 2020 target for contribution by renewable energy to electricity generation to be set this year informed by the All-Island Grid Study; • Sustained cooperation on support for the development and deployment of renewable technologies including wind, ocean, biomass and solar; • An all-island energy efficiency promotion campaign and delivery of the 20% EU target for 2020 on an all-island basis; • Cooperation on energy Research Technology and Innovation including an all-island energy research strategy (through the Irish Energy Research Council) and leveraging joint opportunities under the Seventh Framework Programme; • Examination by 2010 of benefits for creation of an all-island regulatory body for energy; • Security of supply and emergency planning; • Joint review of the case for a Single Electricity Transmission System Operator after the establishment of the SEM; • We will jointly review and update the All-Island Energy Market Framework in 2007 in light of progress to date and set fresh goals for the period 2008-2013 with the time horizon of 2020 taking account of the shared objective to develop a regional energy market with Britain and France in line with EU developments.
3.18	**Strategic Goal 3: Ensuring that the Regulatory Framework Meets the Evolving Energy Policy Challenges**
3.18.6	**Actions:** ■ We will comprehensively review the Irish energy regulatory framework following the introduction of the Single Electricity Market and in the overall context of the All-Island Energy Market, regional energy market development and further developments in the EU internal energy market. The overall objective of the review will be to ensure the optimum regulatory environment to meet the energy challenges up to 2020 in relation to security of supply, sustainability and competitive markets. The review will involve comprehensive consultation with all stakeholders on the island, with the EU Commission and with the OECD.
3.19	**Strategic Goal 4: Supporting a Sustainable Future for the Semi-State Energy Enterprises**
3.19.9	**Actions:** ■ We will ensure the delivery under the NDP 2007-2013 of the State bodies' planned capital programmes for critical energy infrastructure; ■ We will review dividend policy in conjunction with Department of Finance during 2007 with a view to balancing Shareholder and overall energy policy goals; ■ We will agree corporate strategic plans for the Semi-State Companies beyond 2010 within12 months; ■ We will support ESBI in its commercial development as a strong international player as part of the ESB Group.
3.20	**Strategic Goal 5: Ensuring Affordable Energy for Everyone**
3.20.6	Actions: ■ We will deliver, under the National Action Plan for Social Inclusion 2007-2016, sustained collective action by all relevant Departments and Agencies to systematically ***tackle fuel poverty*** through effective delivery of existing schemes and the introduction of new measures as required; ■ We will ***establish in 2007*** a fully representative ***Inter Departmental/Inter Agency Group*** to oversee and drive coordinated ***delivery of all fuel poverty initiatives and programmes chaired by the Office of Social Inclusion***. The Group will report, under the NAPs institutional structures to the Cabinet Committee on Social Inclusion, as well as to the Cabinet Committee on Infrastructure; ■ We will ensure the ***full involvement of all agencies and local authorities*** in enhancing programmes for fuel poverty at national, regional and local level; ■ We will ***ask CER to work with all energy suppliers and support agencies*** to intensify existing measures and ***identify and implement additional actions in time for Winter***

	2007/2008 to help their vulnerable customers including smart metering projects; ■ We will regularly review and enhance as necessary the fuel allowance scheme and capital investment measures aimed at improved energy efficiency and demand reduction in support of eliminating fuel poverty; ■ We will, ***through the SEI Warmer Homes Scheme, continue to deliver energy efficiency investment measures*** in low income housing and finalise a framework for significant extension of the Low Income Housing Schemes which will accelerate the pace of remedial actions; ■ We will ***publish this year***, and regularly update thereafter, a ***directory of all national and local schemes*** of assistance in relation to fuel poverty which will ensure awareness by vulnerable groups and support agencies of the help available; ■ We will ***complete the 2006 Fuel Poverty Action Research Project by end 2007*** which will improve energy efficiency in selected older houses and monitor and report on outcomes in terms of improved cost efficiency, household comfort and health levels. ***300 houses are involved – urban houses in the Cork area and rural houses in Donegal***. We will extend the initiative to other rural and urban areas in light of the results of the pilot project; ■ We will build on the results of the €2 million Waterford Fuel Poverty Research Project being undertaken by SEI; ■ We will ***ensure that all social housing refurbishment and new build schemes incorporate energy efficient heating to verified high quality standards***; ■ We will progress further measures to enhance the contribution of energy efficiency to alleviating fuel poverty as set out in the ***National Energy Efficiency Action Plan;*** ■ We will allocate a further ***€70 million to the scheme for the installation of central heating in local authority rented dwellings over the period 2007-2008***; ■ We will allocate significant amounts towards the Remedial Works Scheme to fund major refurbishment works to groups of local authority rented dwellings, in line with the review of local authority action plans, over €440 million having been spent since the introduction of the scheme in 1985.
3.21	**Strategic Goal 6: Creating Jobs, Growth and Innovation in the Energy Sector**
3.21.5	**Actions** ■ We will ask ***Enterprise Ireland and SEI to review and recommend*** on economic, employment and value added opportunities across the value chain for the Irish energy sector in light of EU and national energy policy developments. The ***review will be completed by early 2008, overseen by the Enterprise Advisory Group***; ■ We will encourage development of energy enterprise led networks to establish a strategic agenda for their areas of activity; ■ We will, ***through Enterprise Ireland, support appropriate investment opportunities in energy enterprises*** and research that have the potential to deliver new innovative products and services also to the international market, informed also by Enterprise Ireland's review in 2007 of the international market for greener technologies products and services.
Section 4	**INTEGRATED APPROACH TO DELIVERY**
4.1.8	The strategic goals for delivery of the energy policy framework are as follows: ■ Strengthening our national capabilities in the energy policy field ■ Ensuring a whole of Government approach to energy policy ■ Reaching out to stakeholders in implementing our strategic goals for energy ■ Ensuring accountability and transparency through regular progress reporting and review
4.2	**Strategic Goal 1: Strengthening our National Capabilities in the Energy Policy Field**
4.2.3	**Actions:** ■ We will review our analytical and forecasting capability needs in 2007 and identify immediate options for building on existing energy capabilities in the public sector; ■ We will ***commission a Strategic Review of Sustainable Energy Ireland*** which will make recommendations, in light of our energy policy goals, on ***its future remit, resources and structure***; ■ We will ***improve the linkages between Government Departments, State-sponsored bodies and regional and local organisations*** to enhance the delivery of energy policy and service delivery at all levels, and, ***in that context, review the remits, structures and funding arrangements associated with the local energy agencies, with the aim of enhancing their valuable role***, taking account of the need to balance efficiency, operational economies of scale and the benefits of local action; ■ We will continue initiatives to e***nhance significantly energy research capacity in third level institutions*** on the island and also encourage the Semi State Energy Enterprises to enhance their role in capacity building at undergraduate and graduate level;

	■ We will ***ensure the design and development of a wider range of energy related training and education courses*** in conjunction with providers in the public and private sector; ■ We will ***expand our funding support for energy policy research activities by the ESRI*** and other public research agencies beginning this year; ■ We will ***foster energy policy research projects***, policy and programme reviews and evaluations in Irish academic and third level institutions and in public policy research organisations.
4.3	**Strategic Goal 2: Ensuring a Whole of Government Approach to Energy Policy**
4.3.4	**Actions:** ■ We will continue to deliver the whole of Government approach to energy issues overseen by the Cabinet Committee on Infrastructure and other Cabinet Committees, including Social Inclusion and EU Affairs, as necessary, supported by the Senior Officials Groups; ■ We will establish, as required, Ministerial Task Forces to oversee and drive energy policy issues requiring particular cross Government attention, ***based on the model*** of the ***Ministerial Task Force on Bioenergy*** and ***Ministerial Task Force on Climate Change***; ■ We will establish senior cross department and inter agency Groups as required, to move specific energy challenges ahead; ■ We will oversee the collective delivery by Departments, the public sector and energy state enterprises of the ***€8.5 billion energy investment*** programmes in the National Development Plan; ■ We will continue to work with the Houses of the Oireachtas and its Committees to deliver quality scrutiny and accountability in relation to the formulation and performance of energy policy, and particularly on legislation.
4.4	**Strategic Goal 3: Reaching Out to Stakeholders in Implementing our Strategic Energy Goals**
4.4.2	**Actions:** ■ We will ***review existing mechanisms for engagement by Departments and Agencies with interest groups and stakeholders with a view to putting in place best practice structures for ongoing engagement on energy policy issues*** with all stakeholders; ■ We will ***invite CER to review its own consultation and communication processes*** and to develop proposals to enhance them; ■ We will put mechanisms in place to ensure high quality and frequency of consultation to inform energy policy making, in line with the objectives of the Government White Paper "Regulating Better" and the Guidelines on Consultation for Public Sector Bodies; ■ We will promote and support informed debate in the media on energy policy including looking at the possibility of sponsoring energy fellowships and awards for journalists and sponsoring informed energy-related content across the range of media outlets.
4.5	**Strategic Goal 4: Ensuring Accountability and Transparency Through Regular Progress Reporting and Review**
4.5.3	**Actions:** ■ Annual progress towards the energy policy aims will be reported and benchmarked in Departmental Annual Reports; ■ We will ensure that the energy investment programmes are subject to rolling expenditure review and value for money policy review; ■ We will ***undertake a review, in consultation with stakeholders, of the energy policy framework 2007-2020 every two years***, reporting on implementation and progress towards targets, as well as adjusting them in light of developments. ***The first such report will be due in 2009***; ■ The 2007-2020 energy policy framework will be ***fundamentally reviewed***, in consultation with stakeholders, ***every five years*** and adjusted to take account of energy developments at national, EU and international level as well as technological and macro economic trends. The first such comprehensive review will be due in 2012.

	WHITE PAPER ON ENERGY, 2007 **Summary of Actions & Targets**
Section 3	**THE POLICY FRAMEWORK**
3.1	***Actions to Ensure Security of Energy Supply***
3.2	**Strategic Goal 1: Ensuring that Electricity Supply Consistently Meets Demand**
3.2.3	▪ deliver the ***Single Electricity Market in 2007*** ▪ second North South electricity interconnector by 2011 which will more than double the existing cross border electricity transfer capacity to over 680 MW; ▪ East-West electricity interconnector no later than 2012 which will provide 500MW ▪ through EirGrid, publish a Grid Development Strategy in 2007 covering the period 2008-2025 ▪ three serviced ESB sites in 2007 under the CER/ESB divestment agreement. ▪ CER-ESB Agreement on planned divestment of 20% of the existing ESB conventional plant portfolio by 2010 ▪ new 430MW plant at Aghada (ESB) and 400MW plant at Whitegate (BGE) by 2009; ▪ landbank of ESB owned sites by 2008 to facilitate independent power generation investment up to 2020 ▪ cost benefit review in 2008 of the potential for distributed generation
3.3	**Strategic Goal 2: Ensuring the Security and Reliability of Gas Supplies**
	Business as usual projections indicate that more than 70% of our electricity would be generated from natural gas by 2020. Our alternative scenario, with renewables contributing 33% by 2020, will see greater diversity in the fuel mix with gas contributing just under 50% to power generation
3.4	**Strategic Goal 3: Enhancing the Diversity of Fuels for Power Generation**
	▪ maintain the statutory prohibition on nuclear generation ▪ pursue the scope in the medium term for additional coal fired generation ▪ set a target for ***biomass firing at Moneypoint generating station by 2010***, ▪ target of ***30% co-firing at the three State owned peat power generatio***n …by ***2015*** beginning with ***immediate development*** byBord na Móna of its pilot project at ***Edenderry Power Station***; ▪ extend the REFIT electricity support scheme to encompass co-firing and maintain the REFIT scheme in support of biomass electricity; ▪ limit ..***natural gas for power generation to approximately 50% by 2020***; ▪ ***15% of electricity consumption from renewable sources by 2010*** ▪ ***33% of electricity consumption from renewable sources by 2020***
3.5	**Strategic Goal 4: Delivering Electricity and Gas over Efficient Reliable and Secure Networks**
	We will keep the electricity and gas network infrastructure as strategic assets within State ownership. These assets will never be privatised;
3.6	**Strategic Goal 5: Creating a Stable Attractive Environment for Hydrocarbon Exploration and Production**
3.7	***Strategic Goal 6: Being Prepared for Energy Supply Disruptions***
	establish the National Oil Reserves Agency (NORA) as an independent statutory body in 2007;
3.8	***Actions to Promote the Sustainability of Energy Supply and Use***
3.9	**Strategic Goal 1: Addressing Climate Change by Reducing Energy Related Greenhouse Gas Emissions**
	▪ progressively achieve 33% of our electricity consumption from renewable sources by 2020 with 15% the target for 2010; ▪ implement the ***National Bioenergy Action*** Plan through a cohesive Government approach across the agriculture, environment, enterprise, transport and energy sectors; ▪ reduce demand for energy across the economy, guided by a strategy on energy efficiency. ▪ ***publish an Energy Efficiency Action Plan by June 2007***.
3.10	**Strategic Goal 2: Accelerating the Growth of Renewable Energy Sources**
	▪ 15% of electricity consumption on a national basis from renewable energy sources by 2010 and 33% by 2020; ▪ at ***least 400MW from Combined Heat and Power by 2010*** ….***particular emphasis on biomass fuelled CHP*** and will aim to achieve at ***least 800MW by 2020***; ▪ least ***500MW of installed ocean energy capacity by 2020*** ▪ pursue the potential for solar energy in Ireland in photovoltaic and solar thermal research, technology and manufacture…. by 2020;

	▪ ***minimum target of 5% market penetration of renewables in the heat market by 2010***, facilitated through the expanded Greener Homes and Bioheat grants programmes ▪ further ***target of 12% renewable heat market penetration by 2020***. This target reflects the available resource and is ambitious when coupled with the additional target for co-firing with biomass; ▪ ***achieve the EU target of 5.75% biofuels market penetration by 2010*** ▪ moving to ***a biofuels obligation on fuel suppliers by 2009***, this will be developed and put to industry and public consultation within the next 2 months. This will further underpin delivery of the 2010 target; ▪ a ***biofuels penetration target of at least 10% for 2020***
3.11	**Strategic Goal 3: Promoting the Sustainable Use of Energy in Transport**
	▪ Fiscal measures to reduce transport demand, including ***road pricing or congestion charges*** ▪ Support measures that aim to achieve greater energy efficiency from the transport sector and influence behavioural change, including car sharing schemes and workplace travel plans; ▪ ***Public awareness campaigns*** on issues such as eco-driving, which aims to ***achieve up to a 20% improvement in fuel efficiency*** among private transport users; ▪ EU-level agreements …***reduce CO2 emissions of new passenger cars*** to an average level of ***130 g/km by 2012;*** ▪ ***mandatory comparative labelling system for new cars*** based on CO2 emission ▪ Changes to both vehicle registration tax (VRT) and motor tax, …The extension beyond December 2007 of the preferential VRT …will be considered; ▪ ***national biofuels obligation on fuel suppliers of 5% by 2009,*** ▪ **100% pure plant oil (PPO) in captive fleets maintained by local authorities and public bodies**, ▪ ***measures to include the aviation and maritime sectors in the EU Emissions Trading Scheme*** (ETS), as part of a multilateral commitment by Member States.
3.12	**Strategic Goal 4: Delivering an Integrated Approach to the Sustainable Use of Bioenergy Resources**
	▪ implement (and report annually on) the strategies and targets in the National Bioenergy Action Plan ▪ roll-out, and review and expand as necessary, the fiscal and grant schemes ▪ Research and Development and Innovation Schemes for forestry, biofuels, crops and technologies ▪ ensure that the public sector leads the way as exemplar through the deployment of bioenergy heating, the use of renewable electricity and CHP in public buildings as well as the use of biofuels in the public transport fleets. ▪ Specifically, we are ***mandating*** with immediate effect ***that Dublin Bus and Bus Éireann*** move all their fleet to a ***5% biofuel blend and plan to achieve a 30% biofuel blend in all their new busses***, with the technical capability to achieve this to be incorporated into tenders for new fleet; ▪ support the delivery of targets for biomass in the heating sector; ▪ accelerate progress in developing a reliable supply chain in the wood energy sector for the private as well as the national forest estate; ▪ encourage progress in the timely implementation of non-hazardous ***Waste Management Plans by local authorities in providing optimised "waste to energy"*** solutions
3.13	**Strategic Goal 5: Maximising Energy Efficiency and Conservation**
	▪ ***20% savings in energy across the electricity, transport and heating sectors by 202***0, in line with EU target .. ▪ setting ***an indicative target of 30% for 2020*** to surpass the EU ambition; ▪ finalise the National Action Plan on Energy Efficiency by June 2007 which will be subject to annual review; ▪ Energy Efficiency ***Campaign "Power of One" over the next three years at national, regional and community level*** ….and make it an all-island campaign during 2007; ▪ promote the ***adoption of the Irish Standard for Energy Management in all workplaces and in particular, SMEs***; ▪ committed to ***updating <u>national building regulations</u>*** ….***next amendment*** which will come into effect in ***2008***. The aim is - provide for the systematic upgrading of energy performance standards, - ensure that Ireland's standards are among the best in Europe, - reflect relevant technological developments and - reduce energy demand by 40% relative to current standards. ▪ introduced Building Energy Rating (BER) of new dwellings from January 2007. ▪ under the National Development Plan and Regional Operational Programmes 2007-2013, continue

	to fund energy efficiency programmes and targeted initiatives at national and regional level; ▪ priority to ***expanded cost-effective demand side management*** initiatives for industry and consumers from 2008 under a …DSM Plan to be finalised by the end of 2007; ▪ real time energy displays for households which have demonstrable potential to reduce energy bills; ▪ oversee the ***introduction over the next five years of smart meters for all electricity customers***, (new and existing housing stock) ▪ support targeted R & D in energy efficiency and technology conversion under the Energy RTDI Programme 2007-2013; ▪ ***lead by example*** setting a target of 33***% for energy savings across the public sector***. This will be achieved by introducing comprehensive Energy Efficiency Programmes (targets and standards) for Government Departments, State Agencies, Local Authorities, the Health Service and the public sector overall. The Programmes which will be rolled out progressively from 2008 ▪ publish an action plan for ***Green Public Procurement, with the aim … by 2010***
3.14	**Strategic Goal 6: Delivering Energy Research Technology Development and Innovation Programmes in Support of Sustainable Energy Goals**
	▪ directly ***invest over € 150 million in Energy Research under the NDP 2007-2013*** which will also leverage additional funding under EU programmes; ▪ ***request ESB, BGE, Bord na Móna and EirGrid to enhance their contribution to energy RTDI*** as part of their corporate strategies from 2008 onwards; ▪ ***the Irish Energy Research Council, publish a comprehensive Energy Research Strategy*** 2008-2013 during 2007 ▪ progressively ***develop a strong national energy research capability*** across all disciplines through significant funding for capacity building ***under the Charles Parsons Awards***. This will complement other opportunities through IRCSET, Science Foundation Ireland and EU Programmes and have a strong all-island dimension; ▪ ensure a ***fully coordinated approach across Departments and Agencies*** (SEI, Enterprise Ireland, Teagasc and Marine Institute) to the commercialisation by the energy industry of Energy R & D through ***the establishment of a group representing Departments, Agencies, Industry and the Irish Energy Research Counci***l.
3.15	***Actions to Enhance the Competitiveness of Energy Supply***
3.16	**Strategic Goal 1: Delivering Competition and Consumer Choice in the Energy Market**
	▪ ***electricity and gas network infrastructures as strategic national assets in State ownership*** ▪ ***implement full market opening of the gas market in 2007***; ▪ complete the ***legal unbundling of BGE's transmission and distribution operations*** and establish the new BGE subsidiary as the Irish system operator in 2007; ▪ work with Northern Ireland to expedite an all-island Transmission System Operator for the all-island gas market; ▪ CER to drive the development of a regional gas market over the next 5 years for Ireland, Britain and France ▪ ensure ***full operational independence of the Distribution Systems Operator as an ESB subsidiary*** by completing the legal unbundling ***by mid-2007***; ▪ CER, take the necessary steps to ensure that ESB's distribution network business, ..is operated under a risk-related rate of return sufficient to remunerate debt and retain capital to finance network investment requirements up to 2013. ▪ ***establish EirGrid as the National Transmission Grid Company by end 2008, transferring to EirGrid ownership of the transmission asset***s. ▪ progress the scope for an all-island single Transmission System Operator, following the establishment of the SEM, ▪ ensure that energy consumer interests are systematically protected …resourcing the role of the National Consumer Agency as the statutory advocate for consumers in the regulated sectors. ▪ ensure the ***progressive reduction in ESB's market share in power generation to around 40% in an all-island market context by 2010*** through the CER-ESB Asset Strategy Agreement of November 2006; ▪ ***encourage BGE and Bord na Móna to develop their role in power generation*** and supply in competition with the ESB and Viridian and other Independent players ▪ EirGrid to work immediately .. with CER to develop the state owned landbank to facilitate new independent generation, ▪ support the continued development of ESBI as a successful international player with strategic and economic benefits for Ireland;

	▪ fence the ***output from the new Aghada power generation*** facility from the rest of ESB Power Generation in terms of licence and business separation conditions and ensure that the output ***is sold to suppliers other than ESB Public Electricity Su***pply in the interest of competition;
3.17	**Strategic Goal 2: Delivering the All-Island Energy Market Framework**
	▪ oversee the successful introduction of the Single Electricity Market in 2007 ▪ ensure the essential completion of the North South Electricity Interconnector by 2011
3.18	**Strategic Goal 3: Ensuring that the Regulatory Framework Meets the Evolving Energy Policy Challenges**
3.19	**Strategic Goal 4: Supporting a Sustainable Future for the Semi-State Energy Enterprises**
	▪ nothing
3.20	**Strategic Goal 5: Ensuring Affordable Energy for Everyone**
	▪ under the National Action Plan for Social Inclusion 2007-2016, …***systematically tackle fuel*** poverty through effective delivery of existing schemes and the introduction of new measures as required; ▪ establish in ***2007 a fully representative Inter Departmental/Inter Agency Group*** to oversee and drive coordinated ***delivery of all fuel poverty initiatives*** and programmes chaired by the Office of Social Inclusion. ▪ ensure the full involvement of all agencies and local authorities ▪ ask ***CER to work with all energy suppliers and support agencies to intensify existing measures*** and identify and implement additional actions in time for Winter 2007/2008 ▪ the ***SEI Warmer Homes Scheme, continue to deliver energy efficiency*** investment measures in low income housing ▪ ***publish this year***, and regularly update thereafter, ***a directory of all national and local schemes*** ▪ complete the 2006 Fuel Poverty Action Research Project by end 2007 ▪ build on the results of the €2 million Waterford Fuel Poverty Research Project ▪ ensure that all social housing refurbishment and new build schemes incorporate energy efficient heating to verified high quality standards; ▪ ***allocate a further €70 million to the scheme for the installation of central heating in local authority*** rented dwellings over the period ***2007-2008***;
3.21	**Strategic Goal 6: Creating Jobs, Growth and Innovation in the Energy Sector**
	▪ Enterprise Ireland and SEI to review and recommend on economic, employment and value added opportunities across the value chain for the Irish energy sector .. completed by early 2008, overseen by the Enterprise Advisory Group; ▪ ***through Enterprise Ireland, support appropriate investment opportunities in energy enterprises*** and research that have the potential to deliver new innovative products and services ..
Section 4	**INTEGRATED APPROACH TO DELIVERY**
4.2	**Strategic Goal 1: Strengthening our National Capabilities in the Energy Policy Field**
	▪ review our analytical and forecasting capability needs in 2007 and identify immediate options for building on existing energy capabilities in the public sector; ▪ ***commission a Strategic Review of Sustainable Energy Ireland*** which will make recommendations, in light of our energy policy goals, on its future remit, resources and structure; ▪ ***improve the linkages between Government Departments, State-sponsored bodies and regional and local organisations*** to enhance the delivery of energy policy and service delivery at all levels, and, ***in that context, review the remits, structures and funding arrangements associated with the local energy agencies, with the aim of enhancing their valuable role,*** taking account of the need to balance efficiency, operational economies of scale and the benefits of local action; ▪ ***enhance significantly energy research capacity in third level institutions*** on the island and also encourage the Semi State Energy Enterprises to enhance their role in capacity building at undergraduate and graduate level; ▪ ***ensure the design and development of a wider range of energy related training and education courses*** in conjunction with providers in the public and private sector; ▪ ***expand our funding support for energy policy research activities by the ESRI*** and other public research agencies beginning this year;