



Making Scotland a Leader for Green Energy
Unite – the Union (Scotland) Response

December 2008

INTRODUCTION

Unite - the Union represents around 200,000 working people and their families throughout Scotland. We are the UK and Ireland's largest trade union with 2 million members in a range of industries including transport, construction, financial services, manufacturing, print and media, the voluntary and non-profit sectors, local government and the NHS.

As a Union with a significant membership in the wider energy sector - including workers in electricity, gas and nuclear power stations, offshore oil and gas production and opencast coal sites - we have a wide-ranging stake in the energy debate. Unite has continually articulated our belief that more needs to be done in a number of areas including renewable energy, energy efficiency and the key role that our members can perform in the transition to a low carbon economy.

We also believe that existing low carbon-emitting energy sources including clean coal, nuclear power and carbon capture have a vital role to play in sustaining our energy demands and meeting our carbon emissions targets.

UNITE – THE UNION RESPONSE

Unite - the Union believes a *balanced energy strategy* (incorporating clean coal, nuclear, oil, gas, and renewable sources) is vital to ensuring security of supply, greater price stability and the transition towards a low carbon economy.

We are concerned that in the future the energy requirements of the whole of the UK will continue to increasingly rely on imported energy unless steps are taken to increase the diversity of supply. While Scotland exports 20% of the electricity it generates, the Department of Business, Enterprise, and Regulatory Reform highlight that in 2006 overall primary fuel consumption in the UK was not met by indigenous production. This continues the trend since 2004 when the UK became a net importer of fuel. A paper by the former Department of Trade and Industry

titled '*The Energy Challenge*' speculates that the UK could be importing as much as 90% of our gas needs by 2020 compared with around 10% now.

The indigenous production of energy was 5.6 per cent lower in 2007 than in 2006, which followed a 9.1 per cent reduction in 2006 compared with 2005. This continues a year on year decline for each year since 2000. The latest figures show that total energy production was 4 per cent lower in the second quarter of 2008 than in the second quarter of 2007.

While the whole of the UK must continue to have access to reliable sources of energy – as issues regarding the reliability of supply are not exclusive to imported energy – Unite believes that we must become less dependent on energy from abroad. The issue of security of supply and price stability which is becoming increasingly important in a volatile political world particularly as the largest global reserves of finite resources in oil and gas are concentrated in Russia, Central Asia, the Middle East, and African countries.

Consequently, if we are to address the energy challenge then it must entail an integrated and interdependent strategy for all potential indigenous sources in the UK. *This must be at the heart of the transition to a low carbon economy.* We believe this challenge must be viewed and addressed in a UK and EU context. It is for this reason Unite welcomes recent reports that the UK and Scottish Governments are in discussions regarding a significant expansion in off-shore windfarms.

Unite supports the development of a wide range of renewable energy technologies throughout Scotland and the UK, and the objective of the Renewables Obligations which is designed to drive increases in renewable capacity. However, without a balanced, diverse and secure electricity supply, the ability to tackle volatile oil and energy commodity prices is minimised.

Unite has been highly critical of the Scottish Government's energy policy which in our opinion has placed ideology above the national interest. This contention is based on our belief that by rejecting at the outset a proven, reliable and low

carbon technology in the form of nuclear power it not only prohibits a full appraisal of the options available but it more fundamentally does a disservice to the national discourse on this vitally important subject.

The position of Unite is further strengthened by comments made by the Minister for Finance and Sustainable Growth, John Swinney, at a STUC organised event on Energy and Climate Change in February 2008 when he predicted that the emerging renewables sector in particular wave and tidal power would not be mature nor commercially viable technologies for up to ten years.

Therefore, Unite challenges the underlying assumption by the Scottish Government, and indeed the faith placed by the current administration, in the capacity and the reliability of the emerging renewables sector to replace the void left by the electricity generated by nuclear power stations in the medium term.

RENEWABLES

Unite believes that if the Scottish Government's targets for renewable energy (50% by 2020 with an interim target of 31 per cent by 2011) and carbon emission cuts (80% by 2050) are to be met then it is essential that more support is directed towards established and emerging renewable technologies. This support must include incentivising companies and also in skills, training and retaining people in the sector.

According to BERR, 'Energy Trends' (September 2008) in capacity terms Scotland had the ability to generate 20 per cent more electricity from renewable sources than England. This was because of Scotland's considerable hydro resources (88 per cent of the UK's total hydro capacity). Hydro accounted for 57 per cent of generation from renewables in Scotland.

Hydropower has therefore provided Scotland with a comparative advantage in the UK to meeting international obligations and domestic renewable targets. We also recognise that Scottish Government Ministers have recently approved a new hydro station in Perthshire capable of powering 1300 homes. However, these

previous statistics in relation to hydro demonstrate the reason for Unite's increasing focus on the generating output of the emerging renewables sector.

A report by the Carbon Trust (2006), for example, illustrates the massive potential for **tidal** and **wave power** for supplying a significant amount of power to the electricity grid. The Trust estimate that marine energy could provide up to 20% of the UK's current electricity needs and become cost competitive with conventional and other renewables in the long term.

Marine energy has massive potential but there is still little operational capacity currently installed. At present there are two wave power devices in the UK – the Limpet unit of Islay and Pelamis on Orkney. Unite, therefore, is primarily concerned with the available capacity of various energy sources and not necessarily installed capacity. In 2006, the consultation document highlights that the total electricity generated from wind, wave, solar power and thermal renewables was at 5.1%, which is in contrast with 10.1% of electricity generated from hydro in the same year of analysis.

If Scotland, and the UK, is to realise the potential of marine technology then this will be dependent upon the right level of investment and support. We recognise that the consultation paper acknowledges this fact when it stipulates that, *“the sector needs to prove that its technologies will work efficiently and effectively at scale for prolonged periods and in real sea conditions.”*

Unite believes that **wind power** is a potential major contributor to the energy sector. We have therefore welcomed in principle the steps being taken to speed up the planning process, i.e. setting a target of nine months for new energy applications to be determined where there is no public inquiry.

We also welcomed the recent announcements to build a further nine turbines alongside the 77 already approved at the Crystal Rig wind farm, near Dunbar in East Lothian. The extra 27MW capacity provided by the £22 million extension

could power more than 13,000 homes. This is in addition to the 152-turbine Clyde windfarm project in South Lanarkshire which is projected to have a total capacity of 548MW and capable of powering up to 320,000 homes. However, we retain concerns about the inconsistency in approach towards planning applications in this sector. We note in particular the consent given to these proposals in contrast with the decision to refuse consent to Lewis Windpower for a wind farm at Barvas Moor in Lewis.

Uncertainty also remains over Scotland's only wind turbine tower factory, Vestas, which employs about 100 staff near Campbeltown. The planned closure of the plant has been put on hold while attempts are made to find a buyer for the plant. The announcement to originally close the plant came despite the fact that the company is experiencing huge demand for wind turbines and orders were up 67% on last year. Unite, who represents many of the employees, believes that a positive solution must be found not only for the highly skilled employees involved but also due to the importance of the factory being the only manufacturer of wind turbines in Scotland.

Unite also recognises that a number of technical challenges remain in relation to the transmission of energy from wind farms, which tend to be in remote locations, away from areas of consumption and existing transmission networks. Building new transmission lines is often expensive and raises planning and land use issues which require resolution.

The European Commission's 'Science for Environmental Policy' (May 8, 2008) journal highlighted a number of problems relating to wind power. In an article titled, 'Integrating wind power into existing power systems', wind power output remains "*variable and difficult to predict.*" Another concern highlighted was that poor power quality can cause voltage dips and frequency fluctuations.

A case study highlighted in the article stated that a large existing power system, where 10 per cent of the energy is provided by wind, would require an increase in

the reserve generating capacity by between 2 and 10 per cent of the wind power capacity to balance the variability.

Furthermore, we note the comments by E.On in August 2008 who stated that due to the unreliability of wind energy particularly during the season of winter other forms of energy would be required to provide stability and the security of supply. This factor was also emphasised by J L Gray in a paper titled 'Electric Power in the New Scotland' who stated that, "*wind speeds below 15mph and above 45mph are not useable.*"

Consequently, while we welcome the ambition for growth in the renewables sector, Unite, does not share the certainty that the interim target of 31 per cent by 2011 will be achieved nor the comments made by the Energy Minister, Jim Mather, when he stated that: "*Even allowing for refusals we are well on the way to meeting our ambitious target to generate 50 per cent of Scotland's electricity demand from renewables by 2020*".¹

Renewables do have an increasingly important role to play in providing clean electricity and combating climate change but they cannot in the foreseeable future replace nuclear as the largest source of low carbon emitting energy. This is factor which takes on greater significance in light of projected population increases for Scotland which is estimated to rise to 5,374,000 people in 2031 up from 5,117,000 in 2006. Without nuclear energy Scotland, and the UK, would find it exceptionally difficult to meet its emissions targets as part of the Kyoto agreement. We shall, therefore, expand upon this belief in the following section.

LOW CARBON EMISSION TECHNOLOGIES

Unite believes that **nuclear power** has a key role to play in the delivery of a low carbon economy and achieving our carbon emission targets. The UK Nuclear Industry is an important sector in manufacturing and in science and technology.

¹ Scottish Government Press Release, 'Decision on Lewis Windfarm' (21/04/08)
<http://www.scotland.gov.uk/News/Releases/2008/04/21102611>

Nuclear energy helps Scotland, and the UK, to achieve both energy diversity and security of supply.

Nuclear energy currently supplies a quarter of the UK's electricity without producing greenhouse gases. In Scotland, between 2000 and 2006 electricity generated from nuclear power ranged between 26% and 38%. In 2006, nuclear power contributed 26.4% of electricity generated according to the Scottish Government.² This is in contrast to the 5.1% contributed by emerging renewables (i.e. wind, wave, solar power and thermal renewables) highlighted in the previous section.

Unite shares the concerns of other organisations including the Scottish Trade Union Congress and the Scottish Chambers of Commerce that nuclear power is not even being considered as an option to assist in strengthening energy security and meeting our climate change obligations. Additionally, we also note the comments made by the Brookings Institution in a paper titled 'The Geopolitics of Energy: From Security to Survival' (2008) by Carlos Pascual, the Vice President and Director for Foreign Policy, who stated that "*For economic, environmental and security reasons, we should expect more and more countries to incorporate nuclear power into the mix of their power generation capabilities.*"

It is our belief that there is a staggering degree of complacency of Scottish Ministers who are determined to preside over the rundown of a major Scottish industry - one which provides very low carbon, stable baseload generating capacity and a substantial amount of skilled employment. Therefore, Unite wishes to reaffirm our position that we are supportive of a balanced energy policy with nuclear power as a component and indeed of new nuclear build on existing sites.

Unite also supports the use of **clean coal** technology as a contributor to the reduction of CO2 emissions by the use of capture and storage technologies. By

² <http://www.scotland.gov.uk/Topics/Statistics/Browse/Environment/seso/sesoSubSearch/Q/SID/98>

improving the efficiency of coal-fired generation for example, emissions can be reduced by up to 40%, and if biomass co-firing, and the capture and storage technologies are factored into the equation this would trap 90% of CO₂ emissions.³ In Scotland, coal is the largest energy source of any sector totalling 32.7% of all electricity generated with an estimated 30 million tonnes of consented reserves at Scottish opencast sites.

There are also additional developments that include coal preparation, which involves coal washing which removes mineral content to make the coal burn more efficiently. Another development is gasification and Integrated Gasification Combined Cycle (IGCC) systems; coal is not combusted directly but reacts with oxygen and steam to form a syngas. After being cleaned, it is burned in a gas turbine to generate electricity and to produce steam to power a steam turbine. These developments indicate that the future use of coal can be part of an overall strategy for reducing emissions.

The tragic run down of the British coal industry is well documented. The security of supply issues now put into sharp context the role and potential of coal. The majority of 2,800 jobs in the opencast industry are highly skilled, and the industry is also involved in reclaiming derelict land and brownfield sites by improving it through exit strategies when sites reach completion. It is, therefore, important that the forward planning process allows for sound commercial planning and a suitable balance between managing a fixed resource, the economic benefits to the community, and any potential environmental considerations.

There is a need for the Government at all levels to give clear support for the development of clean coal and provide incentives for investment in this industry for without that the opencast industry will not be able to take its place in a meaningful way in a balanced energy framework. It is also can be an important element of a safe, secure, and diverse portfolio of fuels.

³ BBC article by Mike Farley, director of Technology Policy Liaison at the energy services company Mitsui Babcock, and chairman of the TUC/DTI/Defra Clean Coal Task Group, ' *Clean Coal can plug UK's energy gap*' (10 August 2006)
<http://news.bbc.co.uk/1/hi/sci/tech/4781257.stm>

Therefore, Unite welcomed the announcement by the Scottish Government which detailed the refitting of Longannet and Cockenzie power stations with clean coal technology in 2007 which is estimated to increase in excess of 100 new jobs in the Scottish coal industry. Longannet is the second largest coal-fired station in the UK and generates the equivalent of over 25% of Scotland's annual electricity demand. This will help to reduce our dependence on imports from Russia, South Africa and Colombia, where volatile energy markets are making supplies less reliable.

Unite has been supportive of calls for owners of Britain's existing coal plants to adopt more environmentally friendly technologies and practices. However, we also strongly believe that the debate surrounding coal should not be restricted to the domestic arena. Global warming is exactly as it's defined – global. Countries such as China, India and the US produce around thirty times more carbon emissions than the UK, and our Government must be encouraging these nations to adopt clean coal technologies in coal powered plants.

We also believe that there are significant opportunities particularly through the co-firing of **biomass** material with coal which has already been referred to. Biomass can offer stable supply whilst contributing to Co2 reduction. It is therefore important that the relevant regulatory authorities, Government and agencies work to provide an environment that allows the industry to develop and prosper.

TRANSPORT

As a union which represents thousands of transport workers, we recognise the need to promote the use of public transport to alleviate congestion, reduce air pollution and energy consumption. The Department of Business, Enterprise and Regulatory Reform's *Energy Trends Brief* (March 2008) highlights that the transport sector accounted for 24% of CO2 emissions in 2007 - 92% was from road transport. Transport emissions are 11.5% higher than during 1990.

The total number of vehicles licensed in Scotland was almost 2.6 million in 2006 which is 32% higher than in 1996 with road traffic forecasted to grow by between 22% and 34% over the period 2002-2011 according to Scottish Transport Statistics (no.26 -2007 edition). Therefore, encouraging a shift from the private car to bus and rail services will play a central part in reducing carbon emissions and energy consumption.

Unite in principle is also supportive of **biofuels** as an energy source in this transitional process, which can cut carbon emissions of carbon dioxide by 50% to 60% compared to fossil fuels. Supporting the expansion of biofuels will also assist in generating and retaining both agricultural and production jobs.

We note that a committee of the European Parliament in September 2008 recently voted to limit biofuels to 6% of the 10% target for all road transport fuels coming from renewables by 2020 as a percentage of total road fuel sales. At least 4% of the total will have to be achieved using electricity or hydrogen from renewable sources, or from second-generation biofuels from waste or non-food crops. This latest decision comes in addition to the Renewable Transport Fuel Obligation (RTFO) effective from April 2008 which obliges suppliers of fossil fuels to ensure that by 2010, 5% of all sales by volume are from biofuels.

Companies such as British Sugar are investing in the biofuels sector. Investment will also broaden the jobs mix in rural areas, both agricultural and industrial. Biomass has the potential for significant employment growth – up to five farming jobs for each 1000 tonnes of biofuel produced. A 100,000 tonne processing plant could lead to 60-80 jobs directly and as many as 550 jobs in agriculture.⁴ Further employment opportunities could also be developed in the petrochemical industry for conversion and mixing processes. These are potentially significant sources of sustainable employment.

⁴ Trade Union Sustainable Development Advisory Committee, 'Greening the Workplace' (June 2005)

If Scotland, and the UK, is to fulfil domestic EU targets for biofuels in the medium term then it is also worthwhile looking at international developments in biofuels technologies and related industries. In Brazil, where sugarcane thrives, the country produces 19 billion litres (five billion gallons) of the total 52 billion litres of ethanol generated each year, and it emits between 80%-90% less carbon than petrol. The industry employs over 1 million people and Brazil has introduced a tax incentive scheme to help small-scale rural farmers and ensure the profits from the ethanol sector are not concentrated.

Just 48,200 flex-fuel cars were sold in Brazil in 2003, but the total had reached 1.2 million by the end of 2005 and had since topped two million, the Brazilian motor manufacturers' association Anfavea declared.⁵ This constitutes around 40% of the country's petrol consumption. During the past three years, across Brazil 90% of new cars are built using biofuels with several manufacturers that this will rise to 100% by the end of the year.

Unite is also supportive of an example of public sector use of biofuels in the Forestry Commission Scotland (FCS). The FCS currently has 120 vehicles running on bio-diesel blends of 5% and upwards, including 25 vehicles which run on a 25% blend, and two which run on a 100% blend (Department for Transport 2007). We believe that further opportunities in the public sector should be given further consideration and support.

Unite also notes the comments by the UN Food and Agriculture Organisation (FAO) who stated that biofuels were of "limited use" for solving the planet's energy needs, and that using crops such as sugar, maize and oilseeds as liquid biofuels has contributed to food price increases. We also fully appreciate that depending on the type and source of biofuel, the benefits and environmental impacts can vary considerably.

⁵ BBC, 'Brazil's Alcohol Cars Hit 2 Million' (18 August, 2006)
<http://news.bbc.co.uk/go/em/fr/-/1/hi/business/5263384.stm>

In the European Commission's 'Science for Environmental Policy' (29 February, 2008) an article titled '*How environmentally friendly are biofuels?*' highlighted research by the Swiss Federal Institute for Materials Science and Technology which provided an analysis of the environmental costs and benefits of 26 different biofuels. The study published results which found that most (21 out of 26) biofuels reduce greenhouse emissions by 30 per cent compared with fossil fuels.

However, the study found that nearly half of the biofuels have greater environmental costs than petrol. The fuels which showed the greatest reductions in greenhouse gases (over 50 per cent) when compared with fossil fuels were biodiesel made from waste cooking oil and methanol and methane derived from wood. These fuels plus bioethanol performed "*very well*" when taking into account their full environmental impact. Unite recognises that there are opportunities and risks associated with various biofuels and we strongly support further investment in biofuel technology research to ensure that such risks are minimised.

Furthermore, we also note the recent research highlighted in the European Commission's 'Science for Environmental Policy' (8 May, 2008) journal. In an article titled '*Tackling CO2 emissions from transport*' six case studies were highlighted which had been successful in reducing greenhouse gas emissions in the road transport sector.

Three of the six case studies investigated refer to UK:

- London Congestion Charging Zone – the scheme has achieved an estimated reduction in CO₂ emissions of 16.4 per cent in 2003.
- Freight Consolidation Centre - reduces the number of larger or partly empty freight vehicles servicing construction sites in London and has achieved an estimated reduction in CO₂ emissions from these vehicles of 75 per cent.
- Teleconferencing - use of teleconferencing facilities reduced the amount of British Telecom's business related travel, both nationally and

internationally and led to an estimated reduction in CO₂ emissions of just under 100,000 tonnes in 2006.

The case studies highlighted above also raise the issue of energy efficiency which the following section will now address.

ENERGY EFFICIENCY

Across the UK Unite members have worked with employers on energy efficiency projects. Unite drivers at Wincanton for example have been trained to use their vehicles to reduce fuel consumption and demonstrated that this could be done in a way that also made a significant financial saving for the company. The pilot involved detailed training of drivers without which fuel reduction would not have been achieved despite the introduction of sophisticated technology.

Other examples of Unite members' role in improving energy efficiency include:

- **CUMMINS** - Workers at this company have helped to establish an environmental committee to reflect the eco-credentials of the employer. The company manufactures wind turbines and aims to recycle all waste produced in the manufacturing process.
- **PANASONIC** - Unite members have argued the case for flexible working as a means of reducing the environmental impact of their workplace. A petition was submitted to the company to make starting and finishing times flexible in order to reduce traffic congestion.
- **FUJITSU** - At Fujitsu, our members participate in the company's 'Green Team' initiative and have introduced environmental training for employees. Unite has also campaigned for CRT monitors to be replaced by flat screens to reduce electricity consumption, and, increasing video/teleconferencing usage.

The Energy Saving Trust for example predicts that by 2020, 45% of domestic electricity will be consumed by IT and electronics products. In Unite's recently published report '*How Green is Your Workplace*', a number of measures and technologies are highlighted which, if adopted, could improve energy efficiency.

Briefly, here are some examples:

- Smart buildings technologies, which monitor and adjust lighting, heating and energy use.
- Broadband, which facilitates communications through email, video and teleconferencing, and VOIP (Voice over internet protocol).
- Multifunctional devices such as the i-phone, all in one printers with inbuilt fax and scanner and blackberries help reduce the proliferation of electronic devices and can cut the use of paper.

Unite is optimistic about what workers can contribute to the preservation of the environment and to reducing energy consumption. Incremental and, in some cases, innovative and dynamic changes in workplaces are occurring because our members are raising awareness of climate change and energy issues.

SKILLS AND EMPLOYMENT

Unite believes that more government support is necessary because while the UK has a history of developing prototypes the manufacture of these take place elsewhere due to greater government support overseas. We are keen to see the Scottish Government, UK Government and enterprise agencies adopting a strategy that integrates the need for domestic production and provides support for this. Without this, it is already clear that production will just move elsewhere where greater support will be provided.

We want government support for *green manufacturing* champions in order to help secure the future security of our nation's energy supply. Countries that have invested and led the way in 'green manufacturing' have also created jobs. In Denmark, 29,000 people work in the renewables sector. A DTI study has shown that with the right level of investment up to 35,000 jobs could be created by 2020 in the renewables sector (*DTI Renewable Supply Chain Gap Analysis, 2004*). The MEG (2004) has also stated that 7000 direct jobs could be created in a diverse marine industry in Scotland by 2020.

Unite is clear that if we are to meet the Scottish Government's, UK Government and EU carbon emissions targets, it will be critical to attract and retain high quality staff in the energy sector. With a shortfall in the number of newly qualified entrants to disciplines of importance to the energy sectors, it is essential that strategies are adopted to ensure the success of these new technologies if we are to realise potential job growth. The Bank of Scotland Labour Market Report continually highlights that Engineering & Construction workers are one of the most sought-after groups of workers in both the permanent and temporary sectors.

We welcome the recognition in the consultation document that significantly more opportunities have to be created in the sector and that support will be given to the Sector Skills Councils to underwrite major new research on the future skills needs of the renewables sector. However, we remain extremely concerned by the lack of attention paid to this skills facet in the energy sector. In the Scottish Government's recently published '*Skills for Scotland: A Lifelong Skills Strategy*' (September 2007) the necessity of supplying skilled workers in the energy sector is referred to only once. This is insufficient attention for such a crucial matter.

Therefore, it comes as no surprise to Unite that the consultation document highlights that Scotland may have to "*actively target overseas people to fill the required skills gaps*". While we have no objection to migrant workers coming to the UK to help address the skills gap and the skills shortages in the energy

sector - an issue which we have consistently pointed out - Unite would also wish to emphasise that we believe the eventual levels of migrant labour required would be larger than originally predicted due to the negligence of the Scottish Government to effectively and systematically address the issue of skills with the requisite resources.

Furthermore, and most crucially, any decision maker in Government or elsewhere who thinks that industry shortfalls can be reliably filled by the involvement of firms and operatives from Eastern Europe is seriously misinformed. We need only to consider current developments in the Polish construction industry. For several years now salaries have been increasing by nearly 10% year on year, whilst in the last year most major contractors have increased the size of their workforces by around 15%.

Subsequently, even the most casual observer will eventually come to the realisation that, in the long run, over reliance on migrant or posted workers is unsustainable. The UK and Scottish Governments need to invest in and nurture a skilled, sustainable indigenous workforce that can meet the major industrial challenges of the 21st century.

In recognition of this, the UK Government has recently introduced a comprehensive package of investment for lifelong learning and skills for England and Wales which will provide: a total spend on learning and skills of £12.3BN a year by 2011; an increase in Modern Apprenticeship places to 400,000 by 2011; and 7 million training places over the 3 year period from 2008/09. The Scottish Government has recently announced the creation of Skills Development Scotland to oversee the skills agenda in Scotland but to date, in our opinion, has not articulated a clear vision on how they intend to equip the next generation of workers in Scotland with the necessary opportunities and skills. As a result, Scotland is being left behind in the skills race.

It is for this reason that we have strongly supported measures such as the Apprenticeship (Scotland) Private Members Bill by John Park MSP. The issue of skills in the wider economy, but in particular in the energy sector, is one which the Scottish Government must address with urgency and with the same fervour as they apply to other areas of the energy sector.

CONCLUSION

Unite – the Union retains a number of major concerns relating to the ability of Scotland to deliver its future energy needs including: the inconsistency in approach to renewables applications in particular wind-power projects; the rejection of the future role of the nuclear industry by the current Scottish Government, the lack of current investment in skills and training in key energy sectors, and, the present low levels of operation capacity in emerging renewables industries in particular marine technology.

Addressing these issues will be vital if Scotland is to fulfil its ambitious renewables and carbon emission targets. If required, we would be happy to substantiate or expand upon any comments in this document with the appropriate civil servants, Ministers or Parliamentary Committees.

Unite – the Union has welcomed the opportunity to articulate our policy relating to the renewables sector, and indeed the wider energy debate. We believe there are a number of key challenges facing the future energy needs of Scotland, and the whole of the UK, not least the necessary investment in education, skills and training. This is vital if Scotland is to produce the required level of graduates in disciplines of importance to the energy and environment sector, engineers, construction workers and other skilled staff who will be pivotal to developing, operating and maintaining emerging renewable technologies - and to ensuring the Scottish Government's new targets are achieved. Therefore, as a key stakeholder in the energy sector we look forward to our points in this consultation

response being addressed and to playing a key role in future consultations of importance to our members.

For further information, please contact:

*Andrew Brady or Peter Welsh
Campaigns, Policy & Research Unit
Unite – the Union Scotland
290 Bath Street
Glasgow
G2 4LD*

Tel: 0845 345 0141

*E-mail: peter.welsh@unitetheunion.com
andrew.brady@unitetheunion.com*