SUBMISSION FROM AES WIND GENERATION

Introduction
The AES Corporation is a global power company with generation and distribution businesses. Through our diverse portfolio of thermal and renewable fuel sources, we provide affordable and sustainable energy in 27 countries. Our workforce of 27,000 people is committed to operational excellence and meeting the world's changing power needs.

AES Wind Generation leverages AES' more than 25 years experience in originating, financing, developing and managing power projects all over the world. Today AES Wind Generation operates more than 1,700 MW of wind capacity in the U.S., China and Europe. AES operates the 22MW North Rhins Wind Farm project in Dumfries & Galloway and is constructing the 28.6MW Drone Hill Wind Farm near Coldingham in the Scottish Borders.

AES Wind Generation is currently involved in the development of over 300MW of wind farm projects in Scotland and employs 8 staff at our office near Edinburgh and around 80 in Richmond, Surrey. We are happy to take this opportunity to provide evidence to the Economy, Energy and Tourism Committee in relation to its inquiry into the Scottish Government’s renewable energy targets.

Renewables Targets
AES strongly supports the Scottish Government's ambitious targets for renewable electricity generation in 2020. There has been a strong tradition in Scotland to exploit the available natural resources, and renewable electricity generation is a logical and necessary extension of this. The renewables targets provide a strong and consistent investment signal to the international investment community. As wind farms often take seven years or longer to develop to the point of commercial operation, and typically operate for twenty-five years, a stable long-term demonstration of need is essential to attract investment.

The achievement of the renewables targets will make a significant contribution towards the CO₂ emissions target, but need to be supplemented by other actions. Fuel switching and energy efficiency measures in particular will also make significant contributions towards achieving the emissions target.

Challenges - Technology
Specifically in the case of onshore wind energy, technology exists to efficiently generate renewable energy in a cost-effective manner, however there are certain barriers to its adoption. There is great pressure on developers to limit the tip height of turbines to 125m in certain parts of the country, while turbines of up to 140m have been approved in other locations, with little reason behind the differences. Larger turbines produce considerably more renewable electricity for a modest increase in visual impact and can more easily be constructed in forested areas without wholesale felling. Clearly, larger equipment will not be suitable in all locations, but it is unclear why turbines of that size are yet to find significant adoption outside the Central Belt.
A number of reputable studies have concluded that until renewables account for 20% of our electricity generation, there will be no need for additional backup over and above that which is always required to support conventional generation. Beyond that level of renewables penetration, it has been estimated that only 5% additional backup will be sufficient, especially if the renewable generation comes from a wide mix of technologies.

AES is keen for the community benefit funds offered from our wind farm developments to actively support education and training opportunities in local communities to enable current and future generations to gain additional benefit from the development of wind farms in Scotland. Since the initial development of North Sea Oil & Gas, Scottish universities and research institutions have benefitted greatly from this demand for innovation and commercialisation. Hopefully the renewables industry will have an even greater effect on educational institutions, for the ultimate benefit of the Scottish economy.

**Challenges – Supply Chain & Infrastructure**

The supply chain in Scotland is slowly developing to meet the targets. In our developments, AES is glad to have the opportunity to use consultants and suppliers based in Scotland. The transformation of Scottish businesses from responding solely to domestic demand into organisations that compete internationally is a great opportunity. Some companies have already made that leap, but continued strong support for renewables is likely to deliver more of these success stories.

Grid infrastructure in Scotland and the rest of UK suffered as a result of the structures imposed by privatization and a focus from the UK Government and the industry regulator to drive down costs at the expense of flexibility and resilience in the transmission and distribution networks. Recent media attention on the costs of constraints in the electricity transmission system has focused on the payments to a few generators, while ignoring the fact that constraint costs have risen quickly because infrastructure investment has languished as the needs of our electricity transmission and distribution systems have changed.

There is no doubt that delivering the planned infrastructure improvements will pose a significant challenge to the Scottish transmission and distribution companies. Delivery of the current plans will be essential to ensure that renewable electricity generated in Scotland can be exported to the rest of the UK and the EU. These investments will provide a significant amount of employment in the design, construction and operation of the systems. There is a role for the Scottish Government in ensuring that obstacles to these investments are properly managed and in safeguarding the level playing field that is necessary for the economic competitiveness of electricity generated in Scotland within those export markets.

**Challenges – Planning & Consents**

In general, the planning system can struggle at times due to a lack of resources at a local government level and within statutory consultee organisations such as SEPA and SNH. The proper scrutiny of proposals relies heavily on adequate resourcing within local government, and a shortage of appropriately qualified staff can cause significant delays in the determination of applications. Organisations such as SEPA and SNH fulfill a valuable function, which is most effectively delivered when they are
able to engage fully with developers to ensure that applications contain appropriate information and have properly considered all the relevant issues.

A failure to reconcile national priorities with local interests is arguably at the root of the majority of public objections to wind farms. It is inherent in the nature of large infrastructure developments that the benefits of the schemes are usually felt at a regional or national level, whilst the impacts are felt locally. The Scottish Government has made good progress in promoting the case for the development of renewables, but more remains to be done in this regard.

There is a moral obligation on developers to engage in a meaningful way with local communities, although strangely there is no legal requirement to carry out community consultation as part of a Section 36 application under the Electricity Act. Extending the requirement for community consultation from the planning system into Electricity Act consenting would provide a strong signal that the Scottish Government is committed to the principle of consultation with local communities.

**Challenges - Access to finance**
Unfortunately, the current global economic climate is making access to funds more difficult than was previously the case. Lenders are becoming increasingly risk-averse and any uncertainty in the Scottish Government’s support for renewables could easily result in an investment hiatus.

**Challenges - Energy market reform & the subsidy regime**
The achievement of the Scottish Government's renewable targets depends absolutely on a stable and predictable support mechanism and regulatory framework. At the moment, there is considerable uncertainty regarding the eventual outcome of the EMR process. The consistent failure of UK Government to meet its self-imposed targets for issue of consultation documents has only exacerbated the situation and robbed industry of confidence in the ultimate timescales for implementation of the reforms. Additionally, lack of clarity from UK Government has prevented the Scottish Government from addressing how it will respond to the proposals in relation to the devolved matters impacted by the proposals

The GB energy market has undergone a series of restructuring exercises since 2004 and this latest exercise must result in an enduring solution, fit for the electricity systems needed by this country in the 21st century.

AES Wind Generation
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