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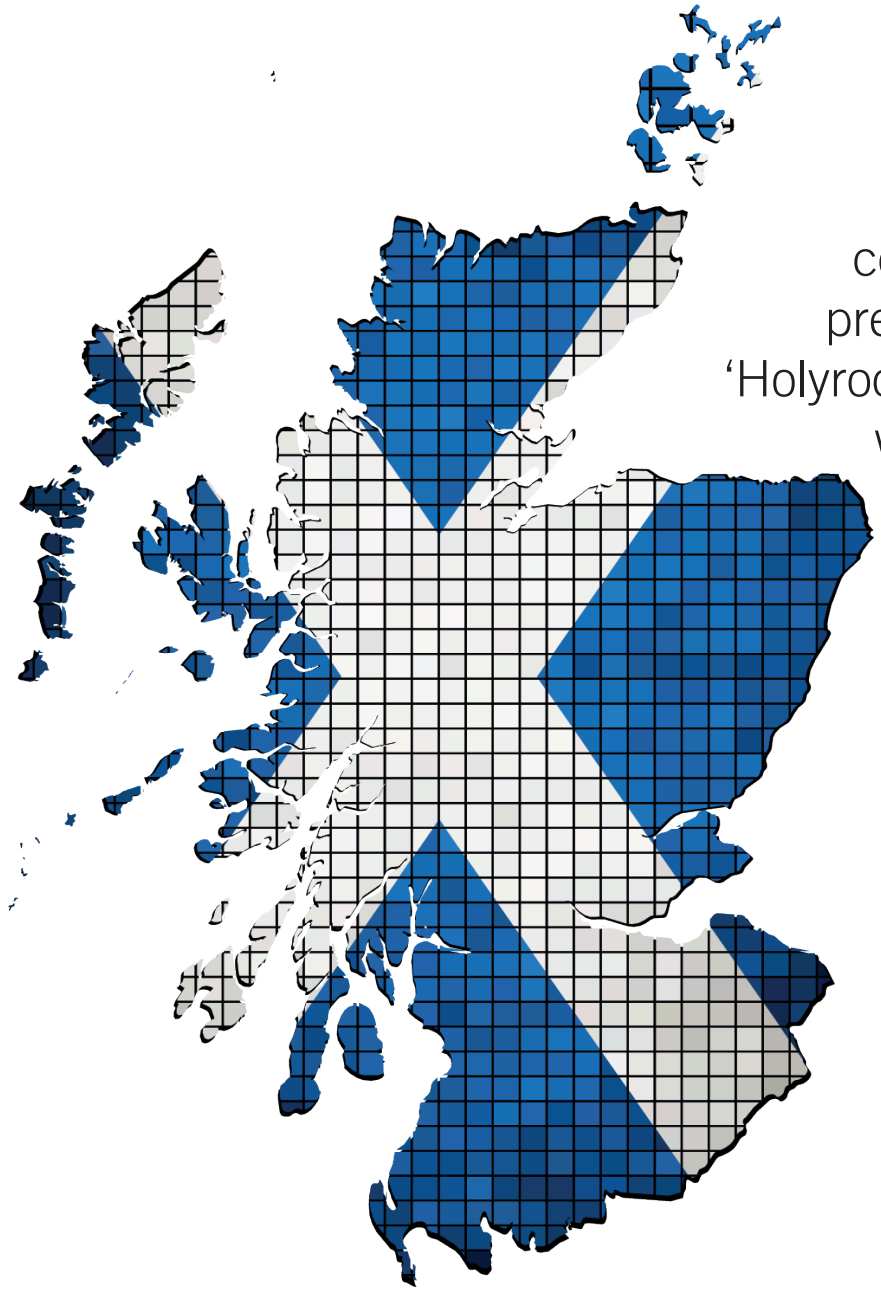
Securing Scotland's **energy future**



This document comprises material presented during an 'Holyrood Briefing' which was held in 2011.

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Securing Scotland's Energy Future

The Scottish Government must ensure that policies are based on the most accurate and trustworthy information. Professional Institutions with local connections and global reach can contribute to the process of government and aid the social environment through their specialised knowledge base.

The Challenges

The major challenges facing the energy sector globally are (a) securing energy supplies, and (b) reducing greenhouse gas emissions.

The Situation

There is no 'silver bullet'. The transition to a low carbon economy is a massive long term challenge that can only be tackled using a diverse portfolio of technologies.

On the supply side, the next 10-15 years in Scotland will be critical for the demonstration and deployment of large scale low-carbon technologies for power generation e.g. carbon capture and storage; and for renewable sources of energy such as wind and wave.

Mature, cost effective technologies already exist to reduce energy demand, but a more effective framework needs to be put in place to encourage adoption by businesses and individuals - for example, market mechanisms, better regulation, tax incentives.

Getting the public on board will be essential for large scale changes to take place in the energy sector. Social issues such as planning impact the deliverability of technical solutions.

Energy policy needs to take a more integrated view of the whole energy system - the power sector certainly, but more measures are needed to address transport and heating.

Infrastructure to move energy from source to customers is essential.

Nuclear fission is a proven and reliable power generation technology - there are no technical or safety arguments for excluding it from the energy mix, however a long term solution needs to be put in place urgently to manage legacy and potential future waste.

Improvement to Scotland's electrical energy efficiency, utilisation and distribution will come from so called 'smart grid' and 'smart metering' technologies. The final details of these technologies and their system application are yet to be determined.

SUSTAINABLE - Future

- Energy conservation - changing behaviour to reduce demand
- Energy efficiency - using technology to reduce demand
- Infrastructure to support new energy sources
- Renewable, sustainable energy sources - route to replace fossil fuel
- Conventional energy sources - using low/no-carbon technologies
- Exploitation of conventional energy sources as we do now

UNSUSTAINABLE - Now

Electrical science has transformed our society in every dimension. It has made: cars more reliable; aircraft safer; energy more efficient; homes more comfortable; entertainment more accessible; manufacturing processes more competitive; improved quality standards; oil and gas more available; healthcare more effective; communications more capable; information more available; data movement faster; knowledge sharing more practical.

Engagement

As a voluntary independent body, the Engineering Policy Group Scotland (EPGS) welcomes contact with organisations and politicians engaged in evidence based policy formulation on subjects within its competence.

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