The Committee will meet at 10.00 am in Committee Room 6.

1. **Item in private:** The Committee will consider whether to take item 4 in private.

2. **Inquiry into developments in the biomass industry:** The Committee will take evidence from—

   **Panel 1**
   Elaine Hanton, Senior Renewable Energy Manager, Highlands and Inlands Enterprise;
   Ken MacDonald, Head of Economic Development, Perth and Kinross Council;
   Audrey Martin, Senior Development/Planning Officer, Argyll and Bute Council;

   **Panel 2**
   Dr James Pendlebury, Business Policy Adviser;
   Rebecca Carr, Wood Fuel Project Officer;
   Richard Earle, Business Units Sustainability Project Officer, Forestry Commission Scotland;

   **Panel 3**
   Rhona Brankin MSP, Deputy Minister for Environment and Rural Development;
   Dr Bob McIntosh, Director, Forestry Commission Scotland; and
   Christine McKie, Renewables and Consents Policy Unit, Scottish Executive.

3. **Subordinate legislation:** The Committee will consider the following negative instruments—

   the Foot-and-Mouth Disease (Slaughter and Vaccination) (Scotland) Regulations 2006, (SSI 2006/45);

   the TSE (Scotland) Amendment Regulations 2006, (SSI 2006/46); and

   the Sea Fish (Prohibited Methods of Fishing) (Firth of Clyde) Order 2006, (SSI 2006/51).
4. **Crofting Reform etc. Bill:** The Committee will consider its approach to the Bill at Stage 1 should it be designated as lead committee.

Mark Brough
Clerk to the Committee
Direct Tel: 0131-348-5240
The following papers are attached:

**Agenda Item 2**

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**Agenda Item 3**

| The Foot-and-Mouth Disease (Slaughter and Vaccination) (Scotland) Regulations 2006, (SSI 2006/45) | ERD/S2/06/8/3a |
| The TSE (Scotland) Amendment Regulations 2006, (SSI 2006/46) | ERD/S2/06/8/3b |
| Extract from the Subordinate Legislation Committee’s 11th Report, 2006 | ERD/S2/06/8/3c |
| The Sea Fish (Prohibited Methods of Fishing) (Firth of Clyde) Order 2006, (SSI 2006/51) | ERD/S2/06/8/3d |

**Agenda Item 4**

| Paper from the Convener [Members only] | ERD/S2/06/8/4a |
SUBMISSION FROM HIGHLANDS AND ISLANDS ENTERPRISE

Highlands and Islands Enterprise (HIE), as the Government’s agency responsible for economic and community development across the northern half of Scotland, has a significant interest in the issues arising from this inquiry. The Network is committed to supporting the area’s agriculture and forestry sectors, and to developing the area’s substantial renewable energy resources. Its interest in, and support for, biomass is driven by the downstream economic and employment impacts growth of this sector will bring, particularly to rural areas. It also recognises the opportunity to use renewable heat in areas off the gas grid which have historically suffered high energy prices and where biomass substitution could have a positive effect on fuel poverty.

HIE welcomes the opportunity to respond to the above inquiry. The inquiry is timely in that both the Scottish Forestry Strategy (SFS) and the Forward Strategy for Scottish Agriculture (FSSA) are currently in the process of revision. At the EU level, a recently published Strategy for Biofuels (COM(2006) 34 final), identified opportunities for cultivated biomass crops in the context of producing liquid fuels to help combat the estimated 21% contribution to greenhouse gas emissions caused by transport. In Scotland, the most appropriate use of biomass is in direct heating or in combined heat and power (CHP)/electricity applications. This paper offers some general comments in relation to biomass development and goes on to look at the strategic and policy implications of that approach focusing on the forestry and agriculture sectors. It also looks briefly at the wider application of the definition of biomass in terms of arisings from the food and construction industries.

General Comments

HIE’s involvement in stimulating use of biomass has to date primarily been through the following:–

- Highland Wood Fuel Programme – this programme is jointly delivered with the Forestry Commission and is supported by European Regional Development Funds. A wood fuel officer, directly employed by the Forestry Commission, delivers the programme across the Highlands and Islands. It is the only programme in Scotland which can support both supply chain and end user. To date it has provided support in the region of £250k towards projects with a value of close to £500k. Further information on this Programme is attached at Annex A.

- Scottish Community and Household Renewables Initiative (SCHRI) - the community element of this programme is delivered by the recently
established Highlands and Islands Community Energy Company (HICEC). A substantial number of community scale biomass projects have been supported. This scheme not only supports initial installation of kit but also post installation works to improve operation and efficiency. A list of projects supported is attached at Annex B.

- Support to commercial scale projects – the Network is working with a small number of project developers and has offered financial support for costs associated with feasibility and pre planning costs. This assistance is offered on a discretionary basis but has supported projects in Argyll and Moray.

HIE was also involved in the work of the Scottish Executive’s biomass group convened at the request of the Forum for Renewable Energy Development in Scotland. That group considered how biomass could make a contribution to Scotland’s renewable energy mix and deliver both environmental and economic benefits. It concluded that with appropriate support it could supply up to 450MW of electricity in Scotland and create up to 2,000 jobs. The group focused on the use of forestry products as the main biomass fuel source and recognised that as a result its estimates for production and employment were conservative. The report also concentrated on the use of biomass for the generation of electricity and combined heat and power (CHP) but did note that biomass for heat production could make a significant contribution to climate change targets. It did not consider this further as at that point there was wider work being undertaken on a UK wide basis looking at support required for biomass heat production. We are pleased to note that the Scottish Executive has now announced its intention to develop a renewable heat strategy as part of its Climate Change Programme – we believe this will be an important step forward in ensuring biomass plays an important role in the future energy mix (this is covered further below).

The FREDs biomass report was published during January 2005. It considered a number of issues, including resource, location of projects, transport, supply chain, information provision, economic impact, grid and regulatory issues and made a number of recommendations. HIE fully supports those recommendations. Some of these are discussed further below in light of experience gained through operation of the Highland Wood Fuel Programme.

The FREDs report noted the importance of clear and comprehensive guidance being available and the need for increased public awareness. There are a number of different agencies at local and national levels involved in the development of renewable energy and, in particular, biomass. Close co-operation between these is important to ensure unified messaging and to demonstrate, particularly to users of biomass, that there is strong support for the development of the sector. This approach is exemplified through the Highlands & Islands Woodfuel Group and the co-operation between the various projects involved in developing wood energy in the north of Scotland, including the Woodfuel Development Programme, HICEC, and the projects managed by organisations
such as Highland Birchwoods. This group serves to bring together those wish to install kit with fuel suppliers and supports them to jointly develop viable projects, while also supporting increased communication within and across the sector. We believe that it provides a useful model which could be replicated elsewhere in Scotland.

HIE agrees with the importance others, including FREDS and the Sustainable Development Commission, have placed on development of a fuel supply chain not least because of the employment opportunities it offers. A number of studies, including by the DTI and FREDS, show that employment creation could be in the region of 6 jobs per MW (other reports suggest that the figure could be higher) which compares favourably with other renewable technologies. This makes biomass development attractive particularly given that these jobs are likely to be located in rural areas.

For small scale projects issues such as quality control and robustness of the supply chain are important. The infrastructure for monitoring and certification of supply is not yet in place and will need to be sensitively applied so as not to place too heavy a burden on local markets. Working with the industry to help build market confidence in the quality and reliability of the supply chain is likely to accelerate acceptance of wood fuel as a viable alternative fuel. HICEC is active in this area as is the Forestry Commission Scotland which supports private sector involvement in supply chain development e.g. through the Woodfuel Development Programme, the Scottish Forestry Grant Scheme S11 Pilot Scheme: Development Farm Woodland Energy and the role it has taken in facilitating discussions between users and producers of wood fuel.

Training initiatives, such as IGNITE, will assist the forest industry to develop a supply chain which understands the energy supply business and can meet its demands. There is also a need to raise awareness amongst those in the energy industry on using wood as a fuel and providing training in design, specification and installation of systems. This includes planners, architects, buildings services engineers, plumbers, etc to ensure that wood fuel is a straightforward, standard choice for users.

While programmes such as those mentioned above support a range of projects, there is still a need for further support to be made available to support a greater number of small scale and larger scale developments. The Community Energy Programme supported a number of projects but is now fully allocated. Likewise, the DTI’s capital grant scheme is fully committed. A decision on its future was postponed until such time as the DEFRA sponsored Biomass Taskforce led by Sir Ben Gill reviewed the needs of the industry and options for further support. That report, issued in October 2005, recommended greater focus on supporting biomass heat through a capital grant scheme. As mentioned above, HIE agrees that support for biomass heat is needed, but would also argue that capital support for some electricity producing projects should be made available given
the positive impact this would have on kick starting the supply chain. HIE is aware that the Scottish Executive is currently considering the establishment of a biomass support scheme. While the details of such a scheme are not yet published, HIE is aware that current thinking includes further support through SCHRI for off gas grid community projects, plus capital grants for medium scale commercial projects. Support for large scale projects is likely to be required through a refinanced DTI scheme. HIE would strongly support this approach.

**Biomass for Heat**

There is growing interest in using wood as a heating fuel across Scotland. Indeed there are a growing number of renewable heating installations across Scotland. Estimates by the Scottish Renewables Forum suggest that there are over 100 renewable heating installations for business/community use, with around 50 of these using biomass. These include a number of projects in the Highlands and Islands, including district heating in Lochgilphead, Campbeltown and Oban and the use of wood fuel to heat community facilities such as in Alness and Bettyhill. The SCHRI, delivered by the Highlands and Islands Community Energy Company, and the Highland Wood Fuel programme have supported a number of these projects and are currently working with a number of others. The SCHRI household scheme has also supported the installation of a number of biomass boilers (37 across Scotland, with 11 in the Highlands and Islands) – continued household support will further stimulate this end of the market.

Projects such as these suggest that the development of a Scottish heat market will be led by rural areas not connected to the mains gas network. Much of the Highlands and Islands is without access to mains gas and relies on more expensive forms of energy for heating. The Highlands and Islands also suffers some of the highest levels of fuel poverty in the UK. There is therefore a case for the growth of biomass heating as a means of reducing fuel poverty.

HIE has supported calls by the Scottish Renewables Forum, and Sustainable Development Commission, amongst others, for the establishment of a support mechanism for biomass heating. The Scottish Executive’s recent announcement that it would establish such a mechanism is a welcome step and HIE looks forward to work further with Government and others in supporting the development of this heat strategy.

**Forestry Strategy**

The draft Scottish Forestry Strategy 2006, issued for consultation in March, outlines a number of clearly defined Objectives and outcomes. In a policy which has clear aspirational aims to expand the area of woodland across Scotland, and to increase woodland diversity, the strategy goes on to elaborate on how the forest industry can contribute to combating climate change. There is also a clear
commitment to introduce a specific forestry carbon target in the Scottish Climate Change Plan. All of this is to be very much welcomed.

The practical implications of woodland expansion on “low-carbon” soils and increasing long term sequestration imply a general increase in rotation lengths – with ramifications for the processing sector – and more importantly, a need to move forest expansion onto more productive agricultural land (say at the interfaces of Grade 3 and 4 land). This will be difficult to achieve in practice as, whilst the afforestation incentives in terms of planting grants for timber crops and for Short Rotation Coppice (SRC) are significant, they do not appear to have significantly swayed the agricultural community to take land out of agriculture to plant under trees. This is an aspect of the current system of CAP support that we touch on later.

Forest residues are clearly an important source of feedstock for the biomass sector and as fuel prices continue to rise, the relative price positioning between industrial timber use and fuel use will change. However, it needs to be recognised that there is currently relatively little “waste” arising from the timber processing sector as most by-products find a use in the panel industry and horticultural sectors and significant volumes of chip and roundwood are currently being exported to support the Scandinavian pulp and paper industries.

Agriculture

The recently revised Forward Strategy for Scottish Agriculture – Next Steps (March 2006) identifies a number of climate change issues including reducing carbon loss in soils, reducing methane emissions and becoming more fuel efficient. It also mentions the potential for dedicated biomass crops and the conversion of by-products into energy. As yet though, it does not set specific targets in terms of the sectors contribution to carbon fixing under the Scottish Climate Change Plan, nor does it set specific targets for the expansion of SRC crops on agricultural land.

In our view, the degree to which farmers will move into some of these areas of potential importance will be very much dictated by their reaction to the new support payment systems under the CAP. With a Single Farm Payment (SFP) (based on a historic reference period), the incentive to change land use is masked by the level of continuing support.

From a practical perspective, HIDB/HIE carried out some very early willow biomass trials in the mid to late 1980’s. Whilst varieties have indeed developed in the intervening period, we were unable to achieve convincing yields (of the order of 10 dry tonnes per hectare per annum) on the sort of marginal land that farmers were willing to consider releasing from agriculture at that time (typically grades 4.2 and 5.1).
We have produced a map (attached at appendix C), showing the distribution of existing woodland cover in Scotland overlain by 2 zones. These are the Nitrate Vulnerable Zones (NVZ) and the approximate extent of the High Nature Value Farmland (HNV) areas. We are of the opinion that the introduction of extensive areas of SRC would be inappropriate in the HNV areas where coppice monocultures on a large scale would not fit within the environment but potentially SRC would be more appropriate in the NVZ areas given that willow coppice has a particular propensity to lock up pollutants from the soil and adjacent watercourses. However the NVZ areas are also the same areas that receive the highest levels of SFP in Scotland so are potentially less likely to make the necessary land use change.

In addition, we expect to see the farming community more actively pursuing opportunities in biofuel production using more conventional arable crops. This view seems to be supported in the EU's biofuel strategy which envisages opportunities in “second generation” biofuel technologies or ligno-cellulosic processing which already has pilot scale plants in Sweden, Spain and Denmark.

**Wider sources of Biomass Feedstock**

There are many potential sources of additional biomass feedstock which could come into play in any overall strategy, many of which would help to reduce those particular industries environmental footprint. In this context we are thinking of waste material produced by the food processing sector and would include oils and tallow from the meat rendering industry; fish processing waste and other processing and packaging waste from the food industry. In addition, the waste arising from the construction sector both in new build and demolition waste are all potential energy sources. Both of these sources of biofuel are currently receiving limited secondary processing to extract other useful products, with the majority being disposed of through landfill or other means. We believe, that this important additional potential fuel source should also be taken into consideration.
SUMMARY

Seven clusters are being supported by the Highland Woodfuel Development Programme. To date funding has been awarded for the installation of 8 heating systems in a range of premises including hotels, a nursing home, estate offices and workshops. Sawmills, estates and forestry contractors are now supplying woodfuel across the Highland & Islands.

DEVELOPMENT OF WOODFUEL CLUSTERS

Throughout the Programme, the need to address both supply and demand in a coordinated way has been demonstrated. On the supply side, local small-scale suppliers need support to tap into the potential market on a number of levels from demonstration that demand exists to sourcing the right equipment to manufacture good quality wood chip.

For potential woodfuel suppliers the key is to demonstrate that a reliable supply chain exists and that woodfuel heating systems are robust and easy to handle. A lot of businesses are interested in renewable energy for a variety of reasons, the main one being rising energy costs and a desire to develop sustainable, ‘green’ businesses. However, even with highly motivated businesses, capital costs are the biggest barrier and capital grants have proved essential in making woodfuel heating systems a economic option.

Seven clusters are developing with support from the Programme. The clusters are located across the Highlands & Islands with supply chains in place operated by small sawmills, estates, forestry contractors and in one case a former haulier.

With further support, the market can maintain the momentum that is building as more people become aware that woodfuel is a potentially attractive option.

WOODFUEL CLUSTERS IN THE HIGHLANDS & ISLANDS

Kintyre
- Supply chain: E G Johnstone & Co, Auchencorvie Sawmill
- Woodfuel heating: Balinakill Country House Hotel (installation in progress)
The supply chain in Kintyre also supports two Fyne Homes district heating schemes, the Mid-Argyll Swimming Pool and Aqualibrium, the new leisure centre in Campbeltown

**Islay**
- Supply chain: Dunlossit Estate
- Woodfuel heating: Dunlossit Estate Office (installation in progress)

Dunlossit Estate’s installation has been delayed due to other building works but there is still further interest on the island, notably with some of the distilleries in developing a woodfuel market. The neighbouring island of Jura is also exploring the potential for a woodfuel market on the island.

**Mull**
- Supply chain: Robin Sedgwick, Crannich Farm
- Woodfuel heating: Crannich Farm; Accommodation Tobermory (installations in progress)

With the development of the supply chain, a number of other potential projects are coming forward to discuss opportunities for funding including the Ptarmigan House Hotel and Torluisk Mill. The Mull & Iona Community Trust has also expressed its support for the development of a market on Mull.

**Ardnamurchan**
- Supply chain: Richard Livett
- Woodfuel heating: Ardnamurchan Charters (installation in progress)

The small-scale supply chain in Ardnamurchan is providing a basis on which to build a woodfuel cluster in the wider West Lochaber area. Estates in Morvern and Ardgour are considering woodfuel supply hubs using the skills developed by Richard, who will also be carrying out wood chipping for the cluster on Mull.

**Badenoch & Strathspey**
- Supply chain: Russwood
- Woodfuel heating: Russwood; Mains Care Home (installed); Boat Hotel (installation in progress)

The supply chain in this cluster area also delivers to SNH’s Aviemore office. Further interest is being generated in this developing market by Alvie Estates and Laggan Forestry Company, who are looking at their own woodfuel heating projects and extensions to the supply chain.

**Black Isle**
- Supply chain: Raddery Sawmill

Market development has been steady in the Black Isle area, with Raddery Sawmill are supplying two community projects and private houses. Forestry
Commission Scotland and Highland Council will also have woodfuel heating systems in the near future. Commercial installations have been slow but there are potential developments in the Inverness area which are well within reach of this woodfuel cluster.

One further cluster is being processed in Lochaber to support Woodtherm Fuels, Corpach and the Lovat Arms Hotel, Fort Augustus.
Appendix B

Highlands and Islands Community Energy Company – Delivery of SCHRI

Biomass Projects Supported to Date

Large Projects

Swimming pool, Campbeltown
Fynne Homes flats, Campbeltown
Whitegates district heating scheme, Fynne Homes, Lochgilphead
Glenshalloch district heating scheme, Oban
Averon community centre, Alness
Community office/Post Office, Acharacle, Lochaber

Small Improvements

Community hall, Kinlochleven
Community hall, Kentallan and Durror, Lochaber
Swimming Pool, Kyle of Lochalsh
Lynn Road District Heating Scheme, Orkney Housing Association, Kirkwall
Swimming pool, Bettyhill

Approved in construction

Wood fuel district heating scheme, North Albyn Homes, Aviemore
Wood fuel boiler and heating system, School of Forestry, Inverness
Wood fuel boiler, Dingwall Primary School

Current feasibility studies

Lochaber College, Fort William
Nevis Centre, Fort William
Sabhal Mor Ostaig, Skye
Borgie Forest, Sutherland
Nitrate Vulnerable Zones and Areas of Potential High Nature Value Farmland in Scotland

- Potential High Nature Value Farmland
- Nitrate Vulnerable Zones
- Woodland
SUBMISSION FROM PERTH AND KINROSS COUNCIL

Introduction

1. The Scottish Executive has recognised the need to diversify Scotland’s energy supply and has set a target to reduce carbon dioxide emissions by 60% by 2050. Although a target has also been set to achieve 40% of electricity from renewable energy by 2020, no target has yet been set for heat. As biomass is more efficient at providing heat rather than electricity, such a target would provide an impetus for the market.

2. In June 2005 the Executive launched its Green Jobs Strategy in which it states that it wishes to seize the initiative and take advantage of new business opportunities in sustainable development. It recognises the contribution that renewable energy and, in particular, biomass, can make to the creation of green jobs, improving efficiency and maximising resources.

3. Research and experience in other European countries such as Austria, Germany and Sweden, has verified that small-to-medium scale wood-fuel heating projects can make a significant contribution to sustainable development in rural areas by utilising an existing locally sourced product. Renewable energy from wood is particularly relevant to Perth and Kinross which has significant forestry throughout the area. The use of wood-fuel (either woodchips or wood pellets) is even more economical and environmentally viable given the high demand for heat, the fact that wood-fuel is an effective and efficient source of heat and the continuing high rise in the cost of fossil fuels. Wood-fuel heating systems can achieve significant reductions in total emissions of greenhouse gases. While the use of wood-fuel does produce CO₂ emissions, an equal amount will have been absorbed during the growth period of the trees, meaning therefore that the use of wood is totally carbon neutral. Carbon dioxide from fossil fuels cannot be recycled in this way. Burning wood The technology has been proven in countries such as Sweden and Austria over the last 3-4 decades but significant capital expenditure is needed if Scotland is to reap the benefits of their experience.

4. Perth and Kinross Council identified that a significant number of green jobs could be created by the use of wood-fuel, waste management and recycling and green tourism. The use of wood-fuel would therefore create (and sustain) jobs in rural areas throughout the industry supply chain. It should be noted that the use of wood-fuel would create between five and ten times more jobs than other renewable technologies.

Perth and Kinross Council - Procurement Policy - Investment in Learning Schools Project (PPP)

5. The Council propose to build 6 new community schools, under the Public Private Partnership (PPP) initiative. The Schools will be commissioned on a phased basis during the financial years 2007/08 and 2008/09.
6. The Council are very keen to proceed with the installation of heating systems, fuelled by woodchips, in all of the above schools and also to incorporate the leisure facilities at Aberfeldy. The total additional up front capital cost for all of the six schools is estimated to be £1.8m. This would cover the cost of the wood fuel boilers, additional supply systems and enlarging the size of the boiler-rooms. It was considered necessary to include a form of back up energy for the schools and, therefore, any costs for the installation of wood-fuelled heating are additional to the original project and must be met by the Council. There is also the possibility of linking the RC Campus with the proposed Biomass CHP and district heating scheme for the Muirton Regeneration project.

7. The Scottish Executive is funding the PPP up to a maximum of £7.15 million per annum over a thirty year period. It is accepted that the £7.15 million annual grant was finalised before biomass was considered and this is regrettable. However, the interest in biomass has only come to the fore in the last 2 years and the Council consider that this is an excellent opportunity to develop this resource and contribute to reduction of CO\textsubscript{2} emissions. The Council must find the funds to meet the additional cost of the project for the thirty year period.

8. The Council had approached the Scottish Executive and has held a meeting with the Depute First Minister to see if the Executive can provide capital grant funding towards the additional costs of installing wood-fuel heating systems in six schools. These costs amount to approximately £1.8 million. We are awaiting a response from the Minister.

9. The heating system at Pitlochry High School (outwith the PPP) is due for renewal and the Council has agreed that a woodfuel heating system should be installed. The boiler-room is being adapted to accommodate this and the system will be functional from August 2006. Negotiations are currently underway for the supply of the woodfuel.

**Developing/Integrating Agriculture and Forestry in Perth and Kinross**

10. In 2000 the Council, in partnership with the Forestry Commission Scotland, National Farmers Union Scotland, Scottish Agricultural College and a representative from the local farming community, initiated a Farm-Forestry Sub-Group of the Perth and Kinross Agriculture Forum. This led to the creation of the Breadalbane Initiative for Farm Forestry (BIFF). The aim of the Initiative is to deliver a comprehensive farm forestry initiative in the target area covered by the Breadalbane ESA, through a farmer-led public/private partnership. The broad aims are to:

- enhance the environmental and economic value of existing and new woodlands on farms
- add value to a wide range of woodland outputs
• increase the economic and social value of woodland by integration of management and activities within and between farms in co-operative measures.

11. This has led to the development of further projects which have added value to the cut timber and has created one full time post. Another project being developed by BIFF and which demonstrates the potential for integration between agricultural activity and forestry is a trial of the use of Woodchip corrals for sheep. It may be possible that the woodchips could be reused as fuel. There is also the opportunity to introduce the controlled grazing of livestock in woodlands which it is hoped will lead to the regeneration and self-perpetuation of the woodlands.

12. The Scottish Forestry Commission have recently launched several new Scottish Forestry Grant Schemes (SFGS) specifically to address the need for better integration of farming and forestry and BIFF have been heavily involved in developing one of these schemes in particular. BIFF are currently piloting a SFGS in the Breadalbane area which will add value to farm woodlands by providing capital grants for the purchase of sawmills, wood finishing equipment and kiln drying; the purchase of large chain saws to cut down broadleaves is also eligible under the scheme.

13. A forestry grant scheme has been developed specifically to encourage farmers to become part of the supply chain for the woodfuel industry. 60% capital grants are available for the setting up of supply chains, storage facilities and building conversion. Perth and Kinross Council is working with the Scottish Enterprise Forestry Cluster Group to develop biomass supply chains in Perth and Kinross. Projects being developed by the Partnership include:

• Development of a joint biomass project with Sweden. An initial visit will be undertaken to Sweden in March which will comprise of local farmers and businesses who wish to become part of the supply chain.

• A Wood Energy event as part of the highly successful Scottish WOODfair 2006 in Perth.

14. The Scottish Executive has recently circulated the Rural Development Programme for Scotland 2007-2013 for consultation. There is an opportunity to support the development of biomass projects under this programme.

Conclusion

15. The Council is committed to developing the biomass sector in Perth and Kinross and will continue to work in partnership with others to this end. This approach would lead to a more sustainable rural economy with the creation of green jobs, with the establishment of wood-fuel projects creating between five and ten times more jobs than other renewable technologies. The creation of wood-fuel supply chains would also utilise a plentiful resource which, at present, has no prospective markets.

16. The establishment of a high profile, flagship project (ie, the PPP initiative) would, stimulate demand and lead to many other such projects which would in turn make a significant contribution to the Executive’s carbon emission reduction targets. It is regrettable that these additional costs were not
included in the original project costs but the Investment in Learning Project has developed considerably since then. It is the Council’s view that the case for the use of wood-fuel has been justified by the positive findings of the two studies undertaken and by the aims and objectives as stated in the Executive’s Green Jobs Strategy. The provision of capital grants by the Scottish Executive would support the implementation of a significant flagship project and allow the Executive to begin to deliver its quote from its Green Jobs Strategy – ‘Small opportunities are often the beginning of great enterprises.” (Demosthenes).

18. Integrating farming and forestry is essential for the development of the rural economy. Progress has been made by the Breadalbane Farm Forestry Initiative (BIFF) and it is important for public sector agencies to support the development of local initiatives such as this. There is clearly an opportunity to incorporate biomass proposals in the Rural Development Programme for Scotland 2007-2013.
SUBMISSION FROM ARGYLL AND BUTE COUNCIL

1. INTRODUCTION

Argyll and Bute Council welcomes the opportunity to contribute to the Environment and Rural Development Committee’s inquiry into Developments in the Biomass Industry and to comment in particular on how the Council is addressing renewable energy issues in relation to the economic development of its rural areas and is adapting to the use of biomass through its procurement policies. The Council’s submission seeks to highlight current biomass developments at a local level, future opportunities and obstacles to meeting these opportunities.

Argyll and Bute is a net exporter of renewable energy and the Council is well aware of the role it has to play in assisting both the UK Government and the Scottish Executive in meeting their renewable energy targets and in reducing carbon dioxide emissions in line with the Governments target of 60% by 2050. The Council recognises the importance of maintaining the reliability of energy supplies in light of fluctuating world markets and rising oil and gas prices. We recognise the importance of harnessing our abundant local natural resources in order to contribute to a diverse, secure and substantial energy supply for the UK.

Moreover the Council also critically recognises the importance of harnessing and managing sustainably our untapped renewable resource in order to secure a sustainable local energy supply matched to our local energy needs. This will go towards offsetting many of the problems faced within our remote and fragile areas such as higher costs of living thereby creating economically and socially sustainable communities.

We are particularly aware of the downstream economic benefits of renewable energy through the existence of VESTAS Celtic in Campbeltown and the crucial role that it has played in supporting the fragile economy of South Kintyre. There is a growing realisation that similar benefits could be gained from other emerging technologies and sectors such as wave, tidal and solar, hydrogen and potentially our most significant sector, biomass.

Argyll and Bute Council recognises that whilst the use of biomass to reduce UK Carbon Dioxide emissions is significant, biomass can also assist in achieving a secure energy supply at a local level and reduce our dependence on energy sources outwith Scotland as well as assisting the Scottish Executive and the Council in delivering their rural objectives.

Argyll and Bute has a unique contribution to make to the future provision of renewable energy and has in fact had a long tradition of generating electricity from renewable resources, principally through our long established hydro
schemes and more recently through our on shore wind and biomass developments. Argyll and Bute would wish to be at the forefront of the development of an expanding biomass sector and to be seen as a centre for excellence for Scotland as regards the development of this sector.

2. ARGYLL AND BUTE CONTEXT

Argyll and Bute faces many challenges in relation to its geographical diversity. Our population of 91,306, which accounts for fewer than 2% of the Scottish total, is spread over the second largest council area in Scotland and encompasses a diverse mix of remote rural, fragile island and urban environments. The area has six main towns, 25 inhabited islands and over 4,500km of coastline within which a large proportion of our population live and work and within which most of the economic activity of the area takes place. Since the 1991 Census, the population of Argyll and Bute has declined by 0.9%. It is estimated that the population of the area will continue to fall over the next 15 years. This declining population is more evident in some of our more remote and fragile mainland areas and islands and will present many challenges to the Council and our communities in the future.

The experience of different groups within Argyll and Bute are as diverse as the area’s geography. For example, the issues and challenges facing those living and working on the island of Colonsay, a three hour ferry trip from the town of Oban, are vastly different from the experiences of someone living in Helensburgh, our largest urban centre within commuting distance from Glasgow, yet no less important. The cost of living for those residents on our islands and rural mainland is much higher than in the rest of the area although even here the costs are still higher than in the urban centres of Scotland. High fuel costs are a significant contributory factor to the high cost of living and this has a significant impact on the viability of many of our more remote and fragile communities and businesses within them. The fact that it is impossible to access natural gas or oil grids within much of our rural mainland and on all of our islands means that the cost of fuel is even higher due to transport costs. There is no doubt that our diverse geographies impact on the people and their lives, the services that they enjoy and the social and economic fabric of their communities and the businesses and individuals who make up these communities.

Given the diversity of our area and the socio economic issues facing many of the communities within Argyll and Bute we have to look at the role that renewable energy can play in helping to address these issues and in helping to secure rural development and in making Argyll and Bute a better place to live (a key aim of the Councils Corporate Plan).

The Council recognises that there are clear economic and environmental benefits to businesses, individual householders and the Council itself in reducing their energy consumption and associated energy bills and that
similar benefits can be achieved through the generation and consumption of renewable sources of energy such as biomass.

3. BIOMASS

Argyll and Bute has approximately 10% of the total UK coniferous plantation and hence high volumes of uneconomic brash and small round woods. Biomass is a particularly beneficial form of renewable energy because of the numerous economic and environmental benefits, which it generates within the immediate area. It utilises a local resource, reduces the export of that resource out with the area, reduces the impact on our road network, increases local employment and business opportunities through harvesting, storage, delivery, and system management, has minimal environmental impact and reduces Carbon Dioxide emissions.

Already in Argyll and Bute we have a wide range of communities and household developments benefiting from this sector. More recently we have seen the rapid development of the Biomass sector through the installation of wood fuel heating systems throughout the area. We have the award winning automated woodfuel installation at Whitegates, Lochgilphead, a housing association (Fyne Homes) development consisting of 52 homes, and the Mid Argyll Swimming Pool heated by a 200kw woodfuel boiler. There is the 100KW woodfuel community energy heating installations at the new Fyne Homes Housing development in Campbeltown heating 14 flats. We also have the soon to be completed £7 million Campbeltown Community Facility known as Aqualibrium which will be heated by a 350KW woodfuel boiler. Phase I of the Glenshellach West Highland Housing Association development in Oban was recently completed and visited by the Minister Ross Finnie. This scheme incorporated a woodfuel district heating system serving a total of 44 houses. Phase II, consisting of a further 46 houses, has received planning consent however there is an issue as regards capital funding support in relation to the cost of installing the pipe work to allow connection to the existing woodfuel boiler constructed as part of Phase 1. Without capital grant support for Phase II it may not be feasible to connect to the existing woodfuel boiler.

The Argyll Lomond and the Islands Energy Agency (ALIenergy) have been the catalyst for many of these biomass developments. The Council through its Energy Strategy (1999) recognised the need to promote the generation and consumption of renewable energy in Argyll and Bute and it was from this that the Agency was born. The Agency is a prime example of best practice in energy efficiency and the promotion and development of renewable technologies within Argyll and Bute. The Agency is dedicated to both increasing energy efficiency in the domestic, public and business sectors, and increasing the energy that is derived from renewable sources. The Agency performs a critical role in increasing public awareness and improving public knowledge through education which is a key component in securing the future development of the biomass industry. The sustainability of the Agency is key to achieving this. Argyll and Bute Council would therefore encourage the Scottish Executive to direct funding which will support this innovative partnership and energy management agency. This could involve redirecting funding which goes to existing agencies such as the Energy Saving Trust.
Argyll and Bute’s existing biomass developments make a significant contribution to delivering working installations on the ground within Argyll and Bute and act as a means of stimulating further similar developments both within our area as well as other Council areas in Scotland. The Scottish Community Household Renewables Initiative (SCHRI) has played and continues to play a significant role in assisting with the funding of a number of these biomass projects. The Council was delighted that the Scheme, which was set up in 2002 and provides grants and expert advice on small-scale renewable projects, was extended for a further 3 year period at the end of 2004. This scheme is crucial in securing the development of community, household and public sector small-scale renewable projects. It is imperative that this scheme is extended again at the end of 2007.

In addition to the SCHRI, the Community Energy Programme (CEP) was pivotal in the development of a number of the existing larger scale woodfuel district heating schemes in operation in Argyll and Bute. This Programme provided support to public sector district heating schemes through the provision of capital grants and applied to the whole of the UK. The fund was run jointly by the Energy Saving Trust and the Carbon Trust and has now come to an end. DEFRA recently announced a £10 million extension to the Programme however as yet we are still awaiting confirmation as to the eligibility criteria that will apply as well as the area to be covered. This lack of any current funding for larger scale renewable district heating schemes has left a large gap in the support mechanism. It is imperative that the £10 million extension will cover Scotland and the Council would urge the Executive to ensure that this will be the case. The extension of this Programme in Scotland would greatly assist in securing the future delivery of these larger scaled renewable schemes which will further encourage the development of larger scale biomass heating schemes. This will in turn help to make the biomass industry more sustainable. It should also be applicable to both new as well as existing developments thereby providing assistance with the additional costs associated with retrofit. This would play a pivotal role in assisting the Council to investigate replacing the often inefficient and costly oil heating systems within their own buildings with renewable systems such as biomass. This would not be feasible without the necessary financial assistance as the initial capital costs of installation are so high despite the lower running costs. The pay back of these retrofit schemes would not meet the 5 year pay back attached to the recently launched Public Sector Energy Scheme.

The Scottish Executive Public Sector Energy Scheme represents an investment of £20 million in energy efficiency targeted at schools, health and other public sector services across Scotland. The scheme is seen as a classic spend to save scenario the aim of which is to enable the public sector to save more on energy bills and to re-invest that money in front line services. It is seen as allowing the public sector to lead by example. The revolving fund is worth £20 million over 2 years. Argyll and Bute receive £180,000 per annum and with this fund have employed its first energy manager. The aim of the fund is to improve energy efficiency and make savings through a number of measures including improving lighting and heating control systems, changing
to energy saving light bulbs, installing more energy efficient boilers and loft cavity insulation. The scheme has a 5 year pay back on any measures undertaken. The primary aim of the Council at this point in time is to look at how to reduce our energy bills in the immediate term through energy efficiency measures. The 5 year pay back often does not make it financially feasible to look at replacing existing heating systems with renewable energy systems such as biomass as the retrofit costs are often very high unless additional match funding sources can be added in to the pot such as CEP funding. The necessary appropriate fiscal support must be put in place if the Council is to be encouraged to install new renewable heating systems within their existing buildings.

In regard to new public sector development the Council has recently been involved in the Non Profit Distributing Organisations (NPDO’s) in relation to the new school building programme. A total of 10 new schools are being constructed within Argyll and Bute. At this point in time it is not proposed that any of these new buildings will have a renewable heating source. The contractor, on the basis of cost and reliability, took the decision as to the type of heating systems installed within the schools. On this basis the decision was taken to use oil boilers. This would seem to indicate that despite rising oil costs there is still uncertainty about the use of biomass and other renewable technologies as reliable heating sources. This may be due to lack of knowledge, concerns over supply chain and issues relating to servicing and the maintenance of these new heating systems. It is hoped that this will change in the future however it will need fiscal support and direction from the Scottish Executive actively encouraging the use of biomass or other renewable heating systems in any future NPDO’s. The review of the National Planning Guidance 6 offers an opportunity to recognise the importance of biomass and could be a means of ensuring that any future public sector buildings utilise renewable technologies.

With regard to future biomass developments, the largest biomass development so far planned for Argyll and Bute is at Barcaldine by MRC Energy. This combined heat and power plant, will export 4.2 MW of electricity to the grid and use the 12 MW of heat produced on the site for a wide range of economic opportunities. These will involve attracting a range of industries with large heat requirements e.g. horticulture, aquaculture, yacht storage and maintenance as well as the potential to use the heat to dry woodchips to a level whereby they can be made into pellets and exported from the area. This main project is projected to create 3 direct jobs on site and 20 induced jobs in infrastructure, the wood supply chain, and the wider forestry sector. Funding for the project is being investigated.

The development and expansion of local woodfuel supply chains and a local network of boiler installations as a cluster will be critical to the future of the biomass sector and as such the Executive and the Government, Scottish Executive and Enterprise Networks must provide the necessary grant assistance to allow this sector to expand. The strenuous efforts of ALIenergy and the strong commitment of the local Housing Associations to the biomass sector has resulted in a local Argyll and Bute supply chain being developed
however this has not been without problems and there are still some areas in Argyll and Bute lacking a direct supply. The biomass developments within Oban currently receive their woodchip from Fort William. It is hoped that this will be addressed in the future, as security of supply is a key component in ensuring that the future of biomass is sustainable. For those developments in Mid Argyll and Kintyre there is a local supply chain in operation provided by the local sawmill at Aucencorvie in Kintyre who have expanded their operations into this area. Whilst this may not always result in the creation of additional jobs it goes along way towards helping to sustain existing businesses which were only marginal beforehand. Linked to the issue of supply chain the Argyll and Bute Structure Plan 2002 identifies the potential for a major timber processing inward investment opportunity within the Oban-Dalmally corridor. This has yet to be realised.

The growth of the wood fuel sector is giving the vital but fragile timber industry in Argyll and Bute a significant boost by creating a new market for its less profitable co-products and waste namely small round wood and brash. This is particularly applicable on our more remote mainland areas and on our islands such as Mull, Jura and Islay. On many of our islands we have timber crops which are not commercially viable due to problems of extraction associated with transport issues. However these woodlands can play a significant part in supporting woodfuel development for these islands providing them with a secure supply chain and assisting in making the communities more sustainable.

In addition to the above the launch of Forestry Commission Scotland’s Woodfuel Energy from Agricultural Holdings scheme is seems as an vehicle for provide further secure woodfuel supply chains. The Council would encourage the Scottish Executive to extend this scheme beyond its initial pilot period. This scheme seeks to encourage farmers on agricultural holdings with a timber resource to develop that resource as part of a local woodfuel supply chain. This scheme could play a significant part in providing security of supply as regards the biomass industry as well as assisting our agricultural industry to remain sustainable in light of changes to the Common Agricultural Policy and the new Rural Development Regulation. The scheme also supported one of the key objectives identified in the recently publicised Agricultural Strategy for the Argyll Area the aim of which is to secure the long-term sustainability of the agricultural and crofting industry. The Council as well as Forestry Commission Scotland and the local enterprise network are key partners on the Argyll and Bute Agricultural Forum.

Following on from the issues concerning the supply chain are those of securing a local skills base in respect of installation, servicing and maintenance of biomass installations. ALIenergy is currently involved in a pilot to run training courses on woodfuel boiler installation and maintenance. This will help towards the sustainability of the biomass sector in Argyll and Bute however there also needs to be a role for the local enterprise company in relation to this and funding made available to secure further training.
5. CONCLUSION

In conclusion the biomass sector is growing in Argyll and Bute and is delivering local jobs and local benefits to the energy bills of the households and communities affected. However it is important not to rest on our laurels. We need to see investment in the area to continue the growth of infrastructure required to meet the needs of these biomass systems. The development of this sector on any significant scale will only happen if the Government and the Scottish Executive provides the correct fiscal incentives many of which has been highlighted above. The device of Renewable Obligation Certificates (ROCs), which has been critical to the development of the renewable energy electricity market, should be widened from its current support purely for electricity, to include support for heat generated from renewable sources. The Energy Efficiency Commitment of the Energy Utilities should be expanded to embrace a renewable heat commitment that would give grant funding to woodchip and wood pellet heating, solar panels and ground source heat pumps. The current imbalance between increased support for renewable electricity and declining support for biomass cannot continue if we wish to see the biomass industry expand.

Argyll and Bute would wish to be at the forefront of the development of an expanding biomass sector and to be seen as a centre for excellence for Scotland as regards the development of this sector.
SUBMISSION FROM FORESTRY COMMISSION SCOTLAND

THE PRACTICALITIES OF DEVELOPING THE BIOMASS INDUSTRY AND USING BIOFUELS

Summary

The Forestry Commission Scotland welcomes the opportunity to present its experience on the practicalities of developing the biomass industry and using biofuels. Some of the work we have achieved to date is highlighted and the issues and our experience of the barriers & issues faced in developing biomass and biofuels on the ground are discussed.

Progress & ongoing work on biomass & bioenergy

Whilst not comprehensive the following information provides a brief overview of our existing work programme and highlights the spectrum of activity needed to help develop this new market. This ranges from: provision of the right policy framework to resource information; development of an informed advice network; support for the development of actual supply & use clusters and bespoke training.

FREDS

The Forestry Commission Scotland (FCS) sits on the Forum for Renewable Energy Development in Scotland (FREDS) Biomass Energy Group and has taken forward some of the key recommendations such as developing European funding proposals to appoint two more wood fuel officers based in Hamilton and Perth. Through their participation in the Scottish Renewables Forum’s Biomass Working Group FCS has also supported the establishment of the Bioenergy Network and appointment of the network development officer. FCS has also worked in conjunction with Executive colleagues in the SEPA Sponsorship & Waste Division to address the waste definitions issues raised by FREDS and SEPA has now issued clear guidance entitled ‘Is it waste – understanding the definition of waste’ (www.sepa.org.uk).

Highland Wood Fuel Programme

Highland Wood Fuel Programme – this programme is jointly delivered by FCS in partnership with Highlands & Islands Enterprise (HIE) and is supported by European Regional Development Funds. Rebecca Carr is directly employed by FCS and delivers the programme across the Highlands and Islands. It is the only programme in Scotland that can support both the supply chain and end user and is targeted at small-medium sized enterprises (SMEs). To date it has provided
support in the region of £250k towards projects with a value close to £500k. Seven clusters are being supported across the Highlands & Islands and these are in Kintyre, Islay, Mull, Ardnamurchan, Badenoch & Strathspey, Lochaber and the Black Isle.

**Nation-wide wood fuel usage study**

FC undertook a nation-wide wood fuel usage study in 2005 that detailed the current amount of wood fuel being used in Scotland in both the domestic and commercial sectors. This study also recorded all the known projects proposed or under development and an estimate as to their potential demand. While this report will be published later this spring FCS is continuing to update the information and the preliminary findings of this year’s update are mentioned in the Minister's written evidence.

**Wood fuel availability in Scotland**

Forest Research has produced a report on the available wood fuel resource across the UK and this can be found on ([www.woodfuelresource.org.uk](http://www.woodfuelresource.org.uk))

**Bioenergy Infrastructure scheme**

FCS is administering this scheme in Scotland on behalf of DEFRA and has offered four applicants a total of £416,800 for a range of capital investment ranging from purchase of a baling machine to construction of a bespoke chip drying and storage facility.

**Ignite**

FCS in co-operation with a number of other partners including HIE, Scottish Enterprise, European Regional Development Funds is supporting two projects called Ignite: HI and Ignite: Scotland. These pan-Scotland projects will provide an innovative training programme of practical seminars and workshops with a focus on wood fuel. They are based on a successful programme already operating in the North of England and are designed for those wanting to know more about wood fuel, and to equip new and existing wood fuel business with the skills and knowledge required to meet increased demand in the future.

**Interreg Northern WoodHeat projects**

This international project, supported by FCS and managed by Highland Birchwoods, is aimed at developing small-scale supply chains and involves over eleven Scottish partners from Abriachan & Dunnet Forest Trusts to Highland Wood Energy, Woodtherm Fuels and DWP (Tomintoul). It is well on the way to achieving its objectives and is undertaking work ranging from harvesting and drying trials in the Highlands to, whole tree chipping and designing and adapting a lorry for woodchip delivery in Lochaber.
Wood fuel information officers

The three wood fuel information officers, two of whom were only appointed last autumn, have so far dealt with over 300 business, individual or community contacts; organised 6 seminars; made over 60 presentations & supported the development of 7 operational clusters. They are currently finalising a one-stop shop web-site for wood fuel (www.usewoodfuel.co.uk) and working on the development of at least another 7 clusters across Scotland.

Supply information

FCS regularly provides production forecast, volume availability and transport solutions for larger scale electricity, CHP and electricity generation projects. To date FCS has handled over 15 larger scale developer enquiries and well over 50 smaller scale supply information requests.

Progress & ongoing work on biofuels

FCS, through the mechanism of a recently established interdepartmental group, is working with Executive colleagues to look into the issues around the production and use of energy crops and biofuels. Consequently FCS & ETLLD are now jointly taking forward the development of a National Biomass Action plan.

FCS are also in close discussion with the National Farmers Union of Scotland (NFUS) about the development of this plan and are working on a joint seminar for farmers on what the options and issue are around growing bioenergy & biofuel crops and how to establish supply chains. FCS is also now represented on the NFUS Scottish Biofuels Committee.

FCS operates 639 ‘business vehicles’ (cars and vans), plus a fleet of HGV's and other equipment ranging from chainsaws and mowers through to complex tree harvesters and forwarders, forest management and road building machinery. For many years we have developed a policy to encourage 'best environmental practice' such as introducing bio degradable, vegetable based chainsaw oil in 1994, bio degradable hydraulic oil in 1995, and we started using 5% bio diesel in 2002.

In respect of our vehicle fleet, our initial focus was on introducing more fuel-efficient vehicles and alternative carbon neutral fuels such as bio diesel, which was first used by us in Scotland in February 2005. In Scotland, about 8% of our total road fuel purchased is now bio diesel (supplied by RIX Petroleum), 78% is DERV, 7% is LPG and 7% is unleaded petrol and we now have about 110 vehicles in Scotland (17% of the fleet) using bio diesel.
Most of the vehicles using biodiesel are running on 5% biodiesel blended with 95% ULSD. However we are trialing one vehicle at Moray on 100% biodiesel, a further 23 at Inver on 25% biodiesel, 14 vehicles at Huntly are using 10% biodiesel and we have one van at Fochabers which legally runs on waste cooking oil. We have also encouraged Citroen to extend their engine warranty to allow us to use biodiesel blends up to 30%.

Further expansion of the use of biodiesel is being limited by the fact that it is not economically viable to send a delivery tanker to many of our outlying locations. We have overcome this on a number of sites by taking delivery of 100% biodiesel, and blending our own fuel in bulk tanks with local ULSD. Consequently, we now have our own bulk tanks in six locations in Scotland; Aberfoyle, Ae, Inver, Newton, Huntly and Newton Stewart and plans to expand to further sites in the future. We are also trying to encourage a number of Local Authorities to move on to biodiesel, in the hope that increasing demand in an area will encourage large suppliers to deliver, and so improve the supply chain to ourselves.

**Issues & barriers to the development of biomass & bioenergy**

Based on our developing experience, the following issues would seem to constitute the main practical barriers to developing the bioenergy industry in Scotland:

**Cost of equipment**

Bioenergy equipment, whether for use on a domestic, or commercial, scale is more expensive than its conventional fossil fuel counterparts. Whilst in an ideal world this differential would disappear it is felt that some cost difference is likely to remain in certain market segments due to the size of the equipment, feed mechanisms and storage, and the associated civil and structural works. Therefore there may always be a need to level the playing field for certain sectors of the market through incentives to encourage end users, or developers, to choose the bioenergy option. Mechanisms such as ROCs are obviously important for large-scale electricity generators, but even small-scale heat only projects (e.g. <1MW) will need incentivising. The Scottish Community & Householder Renewables Initiative (SCHRI) has been very successful in securing community projects and few if any of the 49 heat only installations so far operational would have happened without capital grant support from SCHRI or the Woodfuel Development Programme. There is therefore a strong case to continue this support ideally broadened to include SMEs as eligible applicants.

**Supply chain development**

This is an issue for all scales of development. Firstly, for many large scale electricity, or CHP developers, securing long term supply contracts is often a prerequisite for projects to secure the necessary investment capital, or even board
approval for off balance sheet investment. The need to secure this so-called “bankable volume” is one reason why every developer has approached FCS for direct supply contracts or supply underwrites.

However, this demand should be set against the fact that the total production from Scotland’s forests is now estimated to be around six million cubic metres of timber per annum of which over half is from the private sector. Whilst private sector production has the capacity to grow in the future, state production is actually set to remain reasonably static at c. 3 million cubic metres per annum. Importantly 69% of FCS’s production of 3 million cubic metres is committed to existing processors under long-term contracts and thus FCS has a limited capacity to satisfy this new demand from the bioenergy sector. Therefore, the private sector is taking up this challenge and there are some examples of private forest management companies successfully taking on the role of procurement & supply chain managers for bioenergy projects. However our experience has shown that projects which have seriously addressed their supply issues early in the development process have the best prospect of succeeding.

Secondly, at the smaller local scale, sourcing biomass may not be so much of a problem as the volume requirements are generally quite small (ranging from tens to hundreds of oven dried tonnes per annum). However there are issues relating to market confidence and scale. Suppliers need the confidence that there will be enough end user demand to make it worth their while to invest in the necessary supply infrastructure and end users need the confidence that the supply they need will be there at the right time, price and quality. Hence our focus on developing clusters of users and suppliers. However it should be recognised that this sector requires considerable support in terms of advice, awareness raising and market development, as well as capital investment.

Thirdly there is the issue of raw material price. In simple terms growers will not sell at any price, as like any business, they justifiably want a return. Thus end users should make realistic assumptions on the price they will have to pay for the resource. For example, chipwood currently has an average price in Scotland of between £18.50 -£19.00 per green tonne delivered in to the mill. Of this price, haulage costs approximately £6.00 and harvesting £10.00 to £13.00 per green tonne. Therefore it is apparent that growers are currently operating on tight margins and unless the bioenergy industry can offer comparable prices to existing chipwood buyers then private sector growers will have little incentive to sell to such new markets. To put this in the context of the bioenergy industry, which generally uses the term oven dried tonnes, and where 1 oven dried tonne (odt) equates to roughly 2 green tonnes, this price of £19.00 per green tonne equates to a theoretical minimum of £38.00 per odt for unprocessed dried roundwood. Obviously, few modern wood fuel boilers are designed to use 2 metre long logs as their main fuel and therefore this roundwood would require further processing (e.g. chipping) into a usable fuel. This additional processing will add further to the cost of production and thus the final wood fuel should
attract a price considerably in excess of £38.00 per oven dried tonne. That said, many growers are extremely interested in the opportunity that a developing bioenergy market presents and the prospects it might offer for them to start viably thinning crops again.

The information gap & expertise in installations

The information gap is being addressed through the various networks being established, however this provision needs to continue to inform decision making on equipment selection or project design. Clearly poor design and project management can lead to installation and maintenance issues, which can affect confidence in the sector. In addition, the lack of Clear Skies accredited installers in Scotland and considerable delays in getting some approved is a constraint, which needs to be addressed. Broadening the skills base beyond the current specialised companies would also help bring the sector into the mainstream.

Historic focus on electricity

Too much emphasis on using biomass for electricity generation could not only skew the supply chain due to the potential wood fuel paying capacity of the co-firing sector, but could also be perceived as an inefficient use of the resource. As the committee will have heard, converting wood to electricity is only about 30-35% efficient whereas converting it to both heat and power can be over 80% efficient. Thus logic suggests that using biomass for both heat and power generation is the best option. The Executive’s recent commitment to develop a renewable heat strategy for Scotland will inform this area and biomass will clearly have a critical role to play in any such strategy.

Issues & barriers to expanding the use of biofuels

Based on our developing experience FCS would suggest that the following issues constitute some of the key practical barriers to developing the biofuel sector in Scotland:

Uncertainty over what to grow

There is considerable willingness and interest in the land use sector in growing biofuel crops such as oil seed rape. For example the farming industry in the North East of Scotland are still looking into the options for establishing a medium scale crushing & biodiesel production facility in the region.

Biofuel supply & supply network

The supply network in Scotland is developing, but there are only 25 filling stations with biodiesel in the whole of Scotland, all supplied by RIX Petroleum. It is difficult to get deliveries of bio diesel to new locations, because it is not economically viable for the tanker. In FCS we are now taking delivery of 100%
bio diesel, and blending in our own bulk tanks with locally supplied ULSD (mineral diesel).

**Current demand**

The easiest way is to encourage more demand and thus build the supply network for public sector bodies with large vehicle fleets and bulk fuel storage facilities (such as Councils) and to move on to using at least a 5% blend of bio diesel immediately. Once a tanker is routinely in the area, deliveries can be expanded to new locations. Fortunately several councils are currently considering trials with 5% bio diesel and FCS is working with a number of councils to share its experiences to date.

**Competition from other bio fuels**

The other main bio fuel is bio ethanol, most of which is currently produced in Brazil, and some in Spain. It can either be blended at 5% with petrol, and run in standard engines, or run as an 85% blend with 15% petrol in modified engines (Ford and SAAB in Sweden). Bio ethanol is mainly produced from sugar cane, but there are plants being built in England to produce it from grain and from sugar beet. It is widely used in Sweden, where there are plans to produce it from timber residues, although it is currently being imported mainly from Brazil.
BRIEFING PAPER FROM THE SCOTTISH EXECUTIVE

PROMOTING THE DEVELOPMENT OF THE BIOMASS SECTOR

Summary

The Executive, with the help of Parliament, is developing a robust and dynamic framework of policies and measures to support the development of a bioenergy sector in Scotland. The policies are spread across many portfolios and are supported by a range of mechanisms, from grants for the growing of biomass crops to renewable obligation certificates for renewable electricity generation. In some key areas, changes are in train to reflect emerging needs as in the promotion and uptake of biomass for renewable heat. The actions taken by the Executive in this area contribute to our commitment to mitigate climate change, and are shaped by the policy context, the sources of biomass, and the development of support measures.

1. POLICY CONTEXT

Climate change and promoting the Scottish Economy

The Executive’s commitment to renewable energy is driven both by environmental imperatives and by the potential for new economic development

Climate change

At the close of 2005 the Executive published Choosing Our Future: Scotland's Sustainable Development Strategy, in which we set out the action we will take to turn the shared priorities set out in the UK Framework for sustainable development into action in Scotland. This included a shared set of principles agreed across the UK to underpin policy development and take into account the UK’s commitments to international treaties such as the Kyoto protocol. In our Scottish Climate Change Programme – published in 2000 – we committed the Executive to making an equitable contribution to the UK’s commitments on climate change. We will report progress on the extent to which we have met this commitment and our plans for further action in our new Programme, to be published in spring 2006.

The agriculture, forestry & land use sector can play a major part in delivering emissions savings (emissions from agriculture fell by 15% between 1990 and 2003, whilst land use change emissions fell by 3% over the same period). For example, forestry makes a contribution to mitigation (through reducing emissions
by either substituting wood fuel for fossil fuels and/or by substituting timber and wood products for energy-intensive materials such as concrete and steel. It also plays an important role as a carbon sink, soaking up carbon emissions and storing them. Indeed, the carbon emissions removed by Scotland’s carbon sink (our soils and trees) – increased by 20% between 1990 and 2003. As I announced, in my recent ministerial statement on forestry made to Parliament on the 26th January 2006, the new Scottish Climate Change Programme will include a commitment to develop a biomass action plan for Scotland and will set an ambitious emissions savings target for the whole of the forestry, as a sector on its own.

**Promoting the Scottish Economy**

Growing the economy is the Executive’s top priority. In the context of the biomass industry, the Executive sees this as providing opportunities for rural regeneration, job creation and the development of sustainable communities.

**Bioenergy & biomass**

The Executive has devolved responsibility, among other things, for the promotion of renewable energy generation and energy efficiency. Therefore, although overall energy policy is reserved to the UK government, renewable energy targets (including those for energy from biomass) rest with the Executive, which has set targets for generating electricity by renewable means within Scotland in *Securing a Renewable Future: Scotland’s Renewable Energy* published in 2003.

The Renewables Obligation (Scotland) Order (2005) requires electricity suppliers to obtain and then sell on electricity generated from renewable resources or incur financial penalties. This can be achieved through bespoke biomass fuelled generating plants or by including biomass as a proportion of the fuel used in coal-fired facilities (co-firing). A system of trading in Renewable Obligation Certificates (ROCs) allows suppliers exceeding their renewables obligation to sell ‘credits’ to companies under-achieving. The Renewable Obligation (Scotland) Order (2005) currently requires an increasing proportion of the biomass used in co-firing to be derived from energy crops. This is important because energy crops are defined as ‘crops planted after December 1989 and grown primarily for the purposes of being used as a fuel’, rather than forestry derived material or sawmill products. The Order applies only to electricity generation and there is no provision for similar arrangements in the case of heat production.

The Executive’s Enterprise, Transport & Lifelong Learning Department sponsor the Forum for Renewable Energy Development in Scotland (FREDS) whose report *Promoting & Accelerating the Market Penetration of Biomass Technology in Scotland*, published in January 2005, raised the game for the biomass sector in Scotland. Many of its key recommendations have already been implemented.
The Executive announced recently its commitment to developing a renewable heat strategy for Scotland as part of the forthcoming Scottish Climate Change Programme. This is particularly timely given the recent publication of a number of reports highlighting the opportunities for wood fuel heating such as the report published this year and commissioned by Scottish Enterprise, *The Commercial Opportunities for Wood Fuel Heating in Scotland*. Other important recent reports include: the Sustainable Development Commission report *Wood fuel for Warmth* (2005), the *Biomass Task Force: report to Government* (2005) and the *Renewable heat and heat from combined heat & power plants – study & analysis* report (2005) for DTI & DEFRA.

The Executive is also participating fully in the current UK Energy Review – to ensure that the Scottish perspective is taken on board in relation to ensuring security of supply; the development of lower carbon energy sources; energy prices; fuel poverty; constraining growth in demand for energy; and development of the Scottish energy industry.

Our *Going for Green Growth: a green jobs strategy for Scotland* (2005) also highlighted the potential importance of biomass and biofuels to the rural economy and launched the new green jobs fund of £22 million. From this fund, administered by the Executive’s Enterprise, Transport & Lifelong Learning Department, support has been given to the work of FREDS and the fund also supports two of the three wood fuel information officers now working across Scotland, whose roles are to bring suppliers and customers together in local clusters to develop a sustainable market for wood.

The draft revised *Forests for Scotland: The Scottish Forestry Strategy*, which is about to be issued for consultation, will reflect our need to continue to encourage the production and use of biomass for bioenergy. In addition, *The Forward strategy for Scottish Agriculture: Next Steps*, is expected to set out the contribution agriculture can make to the mitigation of climate change through: making more effective use of renewable resources; managing land to minimise carbon loss; managing methane emissions (which can be a potential resource as well as a problem) and reducing other greenhouse gases such as nitrous oxide. The strategy is expected to highlight the farm business opportunities that will develop, for example, in the production of energy crops and conversion of by-products into energy.

**Biofuels**

The EU Directive on Biofuels (2003/30/EC) sets ‘indicative targets’ for biofuel sales in 2005 and 2010, with regard to the ‘reference values’ set out in the Directive across the EU and introduces specific labelling requirements for biofuels blends in excess of 5%. Although the setting of the sales target under the EU Biofuels Directive is a devolved matter we have decided to adopt a UK
approach given that the Scottish biofuels market is not significantly different from that of the UK as a whole.

As regards the 2005 target we have agreed at the UK level that 0.3% of the total fuel sales should be biofuels. However, we have opted for a more ambitious target for 2010 through the introduction of the proposed Renewable Transport Fuel Obligation (RTFO). This initiative which was announced by Alistair Darling at the end of last year, will place an obligation onto transport fuel suppliers to ensure that 5% of all fuel sold on UK forecourts are biofuels by 2010.

The RTFO is a reserved matter, given the express reservation under Schedule 5 of the Scotland Act 1998. However, Executive Transport officials are members of the RTFO Implementation Board, which is a cross-department group led by the Department of Transport and are closely following the development of this initiative and the possible implications for Scotland.

That said, agriculture will have a significant role to play in either the growing of crops, or the processing of animal bio-products, to be converted into biofuels.

The Executive is currently reviewing the recently published EU Strategy for Biofuels and some of the issues raised will be covered by the Executive’s proposed national Biomass Action Plan, and other additional measures may be considered necessary in the light of that review.

The main types of biofuel are biodiesel and bioethanol. A twenty pence per litre duty incentive on biodiesel has been in place in the UK since July 2002. Current production of biodiesel was forecast to rise significantly in the UK during 2005 to a level of around 12 million litres/month by the end of the year. A twenty pence per litre reduction in duty for bioethanol was also introduced in January 2005 and whilst no bioethanol is currently being produced in the UK a number of large plants are at the planning and development stage.

For example, in February 2004, Argent Energy Ltd accepted a Regional Selective Assistance (RSA) offer of £1.2m to assist with the building of a highly specialised plant to produce bio-diesel from raw materials, including used cooking oil and animal fats – material previously considered to be waste. The plant became operational in 2005 and will produce 50 million litres of biodiesel per year from tallow and recycled cooking oil.

Following the welcome report by the Scottish Agricultural College Economic Evaluation of Biodiesel Production from Oilseed Rape grown in North and East Scotland (2005), ERAD and Forestry Commission Scotland are now working with the National Farmers Union Scotland to evaluate the economic opportunities available to farmers for both biofuel and bionergy crops. This work is being underpinned by the interdepartmental group on energy crops and biofuels, which
we established to ensure full co-ordination of the work across the Executive in developing this important sector.

2. SOURCES OF BIOMASS & BIOFUELS

The FREDS report envisages that forestry derived materials and sawmilling products will form the backbone of the biomass industry in Scotland. The increasing production of Scottish forests was recognised as a great opportunity in *Forests for Scotland: the Scottish Forestry Strategy*.

Given the swelling interest in developing biomass and the potential use of wood from Scotland's forests, it is helpful that the forestry industry itself has commissioned a study to which Forestry Commission Scotland will be contributing information.

Production from Scotland's forests is set to increase by over 60% over the next 15-20 years. The more valuable part of the tree is always likely to be used for sawn timber production. However, the upper-part of the tree currently used for pulp and paper production or in the manufacture of wood panels (such as chipboard and Medium Density Fibreboard, MDF) could also be chipped and burned to generate electricity and/or heat. The total production from Scotland’s forests is now estimated to be over 6 million m³ of timber per annum with over half of this production coming from private sector growers. This timber production from Scotland’s forests has the potential to rise from this current level to over 10 million m³ per annum by 2020. Thereafter, the production is forecast to fall back to current levels by 2050 due to the significantly reduced levels of planting in recent years. However, discussions between the Forestry Commission Scotland and the private sector have indicated that a strategic ‘supply smoothing’ exercise could ensure that Scotland’s sustainable level of timber production is in the region of 8-9 million m³ of timber per annum. It is extremely important to note that this increase in timber production over current levels has plenty of potential end users not just the biomass sector.

There are though many potential sources of biomass and biofuels. Biomass can comprise: wood from forests; harvesting residues from forests; sawmill secondary products; energy crops (e.g. Miscanthus grass or Short Rotation Coppice (SRC)); agricultural by-products and agricultural waste. Biofuels are divided into two groups: biodiesel & bioethanol. (Further details are given in the Annex).

3. SUPPORT MECHANISMS

Work to promote the development of renewable energy from biomass is spread widely across the Executive. The briefing prepared by SPICe has already pointed to a range of support measures in place, but I draw to the attention of Committee
Members the following as indicative of the depth and breadth of support provided by the Executive.

**Forestry grants (administered by FCS)**

Following the launch of the Scottish Forestry Strategy (in 2000) the Woodland Grant Scheme was replaced by the Scottish Forestry Grants Scheme (SFGS). SFGS increased the focus on promoting restructuring and increasing the quality of management of existing woodlands. Land Management Contracts (LMCs) will supersede SFGS in 2007, in which forestry options will be available alongside other generic land management and agricultural measures.

Between 2001 and 2005, 38,000 hectares of new planting has been achieved. However, annual rates are declining due to CAP/RDR uncertainties with just 5,600 hectares planted in 2004-2005 and an estimated 4,300 hectares is expected in 2005-2006. We are looking at ways to boost planting rates (particularly in relation to the target which is to be included in the forthcoming Scottish Climate Change Programme).

I also announced on 12 September 2005 that the Scottish Executive's grant aid for farmers to establish short rotation coppice willow, or poplar, as an energy crop was to be increased, bringing this into line with the equivalent grant in England. The new grant now pays an all-inclusive, flat rate of £1,000 a hectare. Payments will be made to farmers who have a supply contract with an end user, such as a power generating company.

FCS are also piloting a new stewardship grant (number 11) to support farm woodland energy, which will provide grants to farmers, and farm businesses, to help to develop the biomass supply chain required by energy end-users.

**Renewable Obligation (Scotland) Order (2005) (administered by ETLLD)**

This is the Executive’s key policy mechanism for encouraging the increase in renewable electricity production needed by Scotland to meet its renewable energy targets. It requires all licensed electricity suppliers to supply a specific portion of their electricity from renewables and provides a number of paths to compliance. It runs until the end of March 2027 and encourages the use of energy crops whilst reducing by stages the amount of renewable obligation certificates an individual supplier can produce from co-firing.

**DEFRA Bioenergy Infrastructure Scheme (administered by FCS)**

FCS administers this scheme in Scotland on behalf of DEFRA. The scheme closed in February 2005, and seven Scottish applications to the fund have been received and offers of support have been made to four of these projects. The total value of support offered to these projects under the scheme is £416,800.
Scottish Strategic Timber Transport Fund (administered by FCS)

Timber haulage is often the single biggest cost in getting timber to market and can impact significantly on communities and damage weak, minor public roads. The Executive has committed £13m to help solve timber transport problems and FCS is administering this, with guidance and help from the Scottish Timber Transport Forum.

DTI Bio-Energy Capital Grants Scheme (administered by DTI with input from the Big Lottery Fund)

This scheme, which closed in 2005, aimed to provide investment support for biomass schemes that found it difficult to compete in the Renewables Obligation arena because of the high cost of feedstocks and the lack of maturity in the industry. It was particularly geared to energy crop based schemes and provided considerable support for the new E.ON UK plc £90 million 44MW wood-fired electricity generation plant near Lockerbie.

Scottish Community & Householder Renewables Initiative (administered by ETLLD)

This scheme is jointly run by the Energy Savings Trust and Highlands & Islands Community Energy Company and aims to assist the development of new community and household renewable schemes in Scotland. This scheme offers help through a one-stop shop for community groups across Scotland through a local support network of development officers. Following an independent review of SCHRI, the Executive is considering the nature of potential changes needed to ensure it remains effectively focussed.

Highland & Islands Wood fuel Development Programme (administered by FCS)

The Highlands & Islands wood fuel group using funds from both SCHRI and EU transition funds set up this programme which aims to provide help, advice and support to develop local clusters of wood fuel suppliers and end users across the region. To date it has supported the development of 7 clusters from Islay to the Black Isle.

Aid for Energy Crops (administered by ERAD)

Aid is available to farmers for areas sown under energy crops at a flat rate of €45 per hectare. Any agricultural raw materials (except sugar beet) may be grown on areas qualifying for aid provided that they are intended primarily for use in the manufacture of either biofuels or electric and thermal energy produced from
biomass. The current position in Scotland is that the crop grown is exclusively Oil Seed Rape destined for biofuel manufacture.

Regional Selective Assistance

Larger scale biofuels projects may be eligible for Regional Selective Assistance (RSA) grants. RSA, administered by ETLLD, is the Scottish Executive’s main form of financial assistance to businesses implementing investment proposals in the Assisted Areas of Scotland and its aim is to create and safeguard employment in these areas. Businesses of all sizes and across a wide range of sectors, including those involved in biofuels, can benefit from an RSA grant provided their projects meet the scheme criteria.

4. FUTURE

As I mentioned, the policy and support framework is dynamic given the developing knowledge base, developments in technology and the response of society. We are developing work in many areas, but the following examples help show how we intend to take forward our work in helping to promote the development of the biomass sector to play its full part in contributing to renewable energy targets and mitigating the effects of climate change:

FCS and ETLLD are jointly leading on the development of a Biomass Action Plan for Scotland.

FCS will continue to run its network of wood fuel information officers across Scotland and the one stop shop website (www.usewoodfuel.co.uk).

ETLLD is developing a Scottish support scheme under the Green Jobs Fund for several medium-sized biomass projects to stimulate the supply chain.

ETLLD is working with Scottish partners, and building on the existing adviser resources, to promote and support biomass conversion to large-scale users.

FCS will publish a Scottish guide to growing short rotation coppice and undertake further research into short rotation forestry.

ETLLD working with FCS, DTI & DEFRA to ensure Scottish interests are met by the Biomass Steering Group and by any remaining funds from UK support schemes.

ETLLD, working with other Executive Departments, will develop a renewable heat strategy for Scotland.
ERAD will be promoting research into the commercial viability of bioenergy crops, from an agricultural perspective, as part of the implementation of ‘A Forward Strategy for Scottish Agriculture: Next Steps’ once published.
PROMOTING THE DEVELOPMENT OF THE BIOMASS INDUSTRY

SOURCES OF BIOMASS & BIOFUELS

Biomass

Wood from forests. Production from Scotland’s forests is set to increase by over 60% over the next 15-20 years. The more valuable part of the tree is always likely to be used for sawn timber production. However, the upper-part of the tree, which is currently used for pulp and paper production, or in the manufacture of wood panels (such as chipboard and MDF) could also be chipped and burned to generate electricity and/or heat. The total production from Scotland’s forests is now estimated to be over 6 million m³ of timber per annum with over half of this production coming from private sector growers. This timber production from Scotland’s forests has the potential to rise from this current level to over 10 million m³ per annum by 2020. Thereafter, the production is forecast to fall back to current levels by 2050 due to the significantly reduced levels of planting in recent years. However, discussions between the Forestry Commission Scotland and the private sector have indicated that a strategic ‘supply smoothing’ exercise could ensure that Scotland’s sustainable level of timber production is in the region of 8-9 million m³ of timber per annum. It is extremely important to note that this increase in timber production over current levels has plenty of potential end users not just the biomass sector.

Harvesting residues from forests. The branch material and tree tops removed during the harvesting operation are currently left on-site. Collection and baling of this material is feasible and might, depending on economics and environmental considerations, provide an additional source of material, but it is likely that only a small proportion of the available material will be utilised.

Sawmill secondary products. Only some 55% of the volume of a sawlog is converted to sawn timber for use in construction, fencing, etc. The remainder is chipped and is used in pulp/paper and panel board production. This material could be used to fuel biomass energy production.

Energy crops. A number of species are suitable for cultivation as energy crops, but current interest in the UK centres around two possibilities:

- Miscanthus grass. These are perennial, rhizomatous grasses which can be harvested annually and which can yield 10-13 dry? tonnes/ha. They may be suitable for the south of England, but are unlikely to be of widespread usefulness in Scotland because of climatic limitations.

- Short Rotation Coppice (SRC) consists of densely planted high yielding varieties of willow or poplar species which are coppiced to
produce multiple stems. The stems are harvested on a 3-5 year cycle, the rootstock remaining in the ground to produce new shoots the following spring. Yields of 10-15 oven dry tonnes/ha are possible.

**Agricultural by-products.** Straw is the most widely available material and there is some interest in its use. However, there is a significant market in Scotland for straw as animal bedding and feed and it seems unlikely at present that straw would be a competitive material for combustion to produce energy.

**Agricultural waste.** There is some limited potential to make use of methane and materials such as the waste litter from intensive chicken production, but supplies are limited and these sources are unlikely to play a major part. There is currently a small (10MW) electricity generating plant in Fife which runs on chicken litter.

The FREDS report envisages that forestry derived materials and sawmilling products will form the backbone of the biomass industry in Scotland.

**Biofuels**

The main types of biofuel are biodiesel and bioethanol.

**Biodiesel.** Biodiesel can be produced from a number of sources, including waste cooking oil, animal fats, palm oil, soya bean oil and rapeseed oil. It is currently available at around 150 filling stations in the UK, including about 20 in Scotland, and is normally used in a 5% blend with conventional diesel. It is more expensive to produce than conventional diesel, but the Government has reduced the duty payable on biodiesel and bioethanol by some 20p/litre to reduce their cost differential at the pump. As well as the CO$_2$ benefits associated with biodiesel, there are likely to be improvements in air quality (fewer fine particulates) and its biodegradability should reduce the potential for pollution.

Oilseed rape (OSR) is the crop likely to be most appropriate for biodiesel production in Scotland. It is already widely grown and yields are good. A total area of c. 35,000 ha of OSR was planted in Scotland in 2005 of which 9,000 ha was planted as non-food set aside and energy crop. However, it is a relatively expensive feedstock for biodiesel production. Waste vegetable oil is the cheapest feedstock at present, but supplies are limited. As a consequence, little OSR is currently used to produce biodiesel in the UK, but small quantities are exported annually to countries like Germany.

**Bioethanol.** Bioethanol can be used directly, or blended with petrol. Unlike biodiesel, bioethanol cannot be used in its pure state without the need for vehicle engine modification. However, whether it is used by itself or as a blend with
petrol, bioethanol does offer air quality benefits as well as CO$_2$ benefits. Bioethanol can be produced from a number of crops including sugar beet, wheat and barley but bioethanol production is unlikely to be important in Scotland because of issues such as feedstock availability and the cheapness of imported bioethanol from countries such as Brazil. Advanced biofuels technology could allow the conversion to bioethanol of cheaper feedstocks such as straw, grass and wood waste in the future, but the technology is still at the developmental stage.
## SSI DESIGNATION FORM

### SSI Title & No:
The Foot-and-Mouth Disease (Slaughter and Vaccination) (Scotland) Regulations 2006, (SSI 2006/45)

### Responsible Minister
Ross Finnie, Minister for Environment and Rural Development

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### Lead Committee
- Environment and Rural Development
- Other Committee

### Purpose of Instrument
These Regulations implement Council Directive 2003/85/EC in relation to control measures for foot-and-mouth disease. The Regulations provide powers to vaccinate susceptible animals and sets the framework for how the powers would be used.

### Laid Date
7th February 2006

### 1st SLC Meeting
21st February 2006

### Lead Committee Report Due
20th March 2006

### SE Contact
Debbie King, ext. 46453

### Committee Contact
Mark Brough, 85240

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<td>Purpose of Instrument</td>
<td>These Regulations amend SSI 2002/255 to provide for the implementation of Commission Regulation EC 1492/2004 in relation to eradication measures for transmissible spongiform encephalopathies in bovine, ovine and caprine animals.</td>
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| SE Contact | Anna Murray, ext. 46413 |
| Committee Contact | Mark Brough, 85240 |

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| Additional Information | |
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Subordinate Legislation Committee

Extract from the 11th Report, 2006 (Session 2)

Subordinate Legislation

The Committee reports to the Parliament as follows—

Instruments subject to annulment

The Foot-and-Mouth Disease (Slaughter and Vaccination) (Scotland) Regulations 2006, (SSI 2006/45)

1. The Committee noted that in regulation 7(b) “the 1978 Order” is not defined and asked the Executive to clarify whether this is intended to refer to the Order cited in subparagraph (a) (the Diseases of Animals (Approved Disinfectants) Order 1978). The Executive, in its response printed at Appendix 2 confirmed that this is the intention of the reference.

2. The Committee considers that whilst regulation 7(b) would probably be interpreted in this way, it would have been clearer had the words “that Order” been used as in the English Regulations (the Foot-and-Mouth Disease (Control of Vaccination) (England) Regulations 2006).

3. The Committee draws the attention of the lead Committee and Parliament to the Regulations on the grounds of defective drafting.

4. The Committee was not clear about the intended meaning of “in exercise of their powers under Schedule 3 paragraph 3(1) to the Act” in regulation 8(2)(a). This paragraph permits Ministers to slaughter animals in certain circumstances and it was unclear whether the intention of the Regulations is to extend these circumstances. A similar point arises in relation to regulation 9(1)(a)(i). The Committee sought clarification of the position.

5. In its response printed at Appendix 2, the Executive has explained the purpose of regulations 8(2)(a) and 9(1)(a)(i) and it appears that the intention is to create new powers of slaughter and not to apply the powers in Schedule 3, paragraph 3(1) of the 1981 Act. On this basis, the Committee considers that the words “in exercise of the powers in Schedule 3 paragraph 3(1)” do not seem to reflect the policy intention.

6. The Committee therefore draws the attention of the lead Committee and Parliament to the Regulations on the grounds of defective drafting.
7. The Committee asked the Executive why regulation 9, which imposes a duty on Ministers to slaughter animals in certain circumstances, should be subject to regulation 8, which confers power on Ministers to slaughter animals to implement a preventive eradication programme.

8. In its response printed at Appendix 2, the Executive accepted that Regulation 9 should be expressed as being subject to regulation 10 (exemption from slaughter), and that there had been a drafting error. It considers that the error will not lead to any practical difficulties in interpretation, and that an amendment will be brought forward at the next convenient opportunity.

9. The Committee therefore draws the attention of the lead Committee and Parliament to the Regulations on the grounds of defective drafting.

10. The Committee sought an explanation from the Executive of why in regulation 10(3) the definition of “separate production units” contained in article 12(1) of the order is applied, as that definition does not apply to infected premises. It was not clear to the Committee therefore, how sub-paragraph (d) of that article will apply.

11. In its response printed at Appendix 2, the Executive explained that regulation 10 provides for exemption from slaughter under regulation 9, and under regulation 8 insofar as animals on the separate production units will not come into categories listed in regulation 8(2)(a), (b) and (c).

12. The Executive added that the definition in article 12(1) of the Order seeks to address the situation where a premises is made up of more than one operational unit (farm) as defined in article 12 (1) (a)-(d).

13. The Committee accepts the reasons given by the Executive for the separation of units but has some difficulty with the drafting of regulation 10(3) and the definition of separate production units for the purpose of regulation 10. The difficulty stems from the fact that article 12 of the order does not apply to infected premises (whereas regulations 8 and 9 apply to premises where disease has been discovered) and depends on the fulfilment of certain preconditions. Once disease had been confirmed on premises it does not seem possible for the declaration to be made under article 12(1). Regulation 10(3) could therefore only apply where a declaration had already been made at a time when the whole premises were disease free.

14. The Committee considers that as drafted, regulation 10(3) will fulfil the stated policy intention only to a limited degree and draws the attention of the lead Committee and Parliament to the Regulations on the grounds of defective drafting.

The TSE (Scotland) Amendment Regulations 2006, (SSI 2006/46)

15. The Committee noted that this instrument is the 6th substantive amendment to the TSE (Scotland) Regulations 2002. The Committee asked whether the
Executive had any plans to consolidate the 2002 Regulations (as has been done in England and Wales).

16. In its response printed at Appendix 3, the Executive explained that in the light of the need to prioritise other legislative commitments, it has not been possible to match the timetable for consolidation set for England and Wales. The Executive intends to undertake a consolidation exercise in the course of 2006.

17. The Committee welcomes the Executive’s commitment to consolidate the TSE (Scotland) Regulations 2002 this year.

18. The Committee noted that at regulation 5(3) which inserts a new paragraph 7 into Schedule 6A to the 2002 Regulations, the words “proceed with a notice” are used. The Committee was unclear whether it is the service of the notice to which reference is intended or action under the notice (that is the slaughter or killing of animals). The Committee sought clarification on this point from the Executive.

19. In its response printed at Appendix 3, the Executive confirmed that the phrase “proceed with a notice” is intended to refer to proceeding with the action proposed in the notice. The Executive acknowledged the possible ambiguity in the regulation and confirmed that the position will be clarified in the next set of TSE Regulations.

20. The Committee welcomes the Executive’s commitment to make an appropriate amendment in due course and draws the attention of the lead Committee and Parliament to the Regulations on the grounds of defective drafting as acknowledged by the Executive.

21. The Committee noted that, unlike the English Regulations, paragraph (c) of regulation 5(3) does not allow for the possibility of the withdrawal of an application for review. The Committee asked the Executive for an explanation.

22. In its response printed at Appendix 3, the Executive considers that “does not intend to proceed with a review” in sub-paragraph (a) of the new regulation 7 covers the withdrawal of a request for review as well as a stated intention not to proceed with a review.

23. The Committee accepts the explanation given by the Executive which it draws to the attention of the lead Committee and Parliament.

24. The Committee noted that regulation 5(7) substitutes a new Part IV in Schedule 6A. In paragraphs (2) and (3) of the Notes it was not clear to the Committee what purpose is served by sub-paragraphs (b) standing the provisions of sub-paragraph (c) of each paragraph. Both sub-paragraph (b) and sub-paragraph (c) appeared to do the same thing but in different words. The Committee asked the Executive for an explanation.

25. In its response printed at Appendix 3, the Executive has explained the purpose and effect of paragraphs (2)(b) and (3)(b) of the Notes but agrees that
there is an element of duplication and that the reference to expense in subparagraphs (2)(b) and (3)(b) is unnecessary.

26. The Committee considers that whilst the duplication is confusing, the error in drafting is not likely to cause any serious difficulties in interpreting the Regulations.

27. The Committee draws the attention of the lead Committee and Parliament to the Regulations on the grounds of defective drafting as acknowledged by the Executive.

APPENDIX 2

The Foot-and-Mouth Disease (Slaughter and Vaccination) (Scotland) Regulations 2006 (SSI 2006/45)

1. On 21 February 2006, the Subordinate Legislation Committee, having considered the above instrument, sought an explanation of the following matters:-

   1. confirmation that in regulation 7(b) “the 1978 Order” which is not defined is intended to refer to the Order cited in subparagraph (a);
   2. clarification of the purpose of regulations 8(2)(a) and 9(1)(a)(i), particularly where they state “in exercise of their powers under Schedule 3, paragraph 3(1) of the Act”;
   3. clarification as to why regulation 9, which imposes a duty on Ministers to slaughter animals in certain circumstances, should be subject to regulation 8, which confers power on Ministers to slaughter animals to implement a preventive eradication programme;
   4. an explanation as to why the definition of “separate production units” contained in article 12(1) of the Order is applied as that definition does not apply to infected premises and it is not clear how sub-paragraph (d) of that article will apply in context.

The Scottish Executive responds as follows:-

2. The Executive welcomes the opportunity to provide clarification in relation to the matters raised in the Committee’s letter.

First question

3. The Executive confirms that in regulation 7(b) “the 1978 Order” which is not defined refers to the Order cited in subparagraph (a).

Second question

4. Regulations 8(2)(a) and 9(1)(a)(i) make provision as to slaughter of animals as part of a programme of preventive eradication, and in response to confirmed cases, respectively. The Animal Health Act 1981, Schedule 3, paragraph 3(1) gives the Scottish Ministers power to slaughter certain animals in certain circumstances.
5. Whilst it is recognised that a different approach could have been followed, it was intended not to duplicate the powers in Schedule 3, paragraph 3(1) in the Regulations. Instead, the Regulations provide a sign-post to the existing powers of slaughter contained in Schedule 3, paragraph 3(1) of the 1981 Act. In addition, regulation 8(2)(b) and (c) provide power to slaughter those other animals for which a power of slaughter is needed but not provided by Schedule 3, paragraph 3(1); and regulation 9(1)(a) imposes a duty to slaughter both animals which can be slaughtered under Schedule 3, paragraph 3(1) and those other animals for which a duty to slaughter is needed.

Third question

6. Regulation 9 (duty to slaughter animals in certain circumstances) should be expressed as being subject to regulation 10 (exemption from slaughter) – it appears that an error has crept in during the drafting process. The Executive is grateful to the Committee for drawing this matter to its attention. It is not considered that the error will lead to any practical difficulties in interpretation in the meantime, and the Executive will bring forward an amendment at the next convenient opportunity.

Fourth question

7. Regulation 10 provides for exemption from slaughter under regulation 9, and under regulation 8 insofar as animals on the separate production units will not come into the categories listed in regulation 8(2)(a), (b) and (c).

8. The definition in Article 12 (1) of the Order seeks to address the situation where a premises (typically owned or managed by one individual, recorded at one address) is physically made up of one or more operational units (farms), as defined in Article 12 (1)(a)-(d). These units may be so effectively separated (geographically and/or by management practices) that, in disease control terms, it is safe to regard them as separate premises. The premises can then be said to consist of one or more units where disease is actually present, and one or more “free” units where the disease is not present and unlikely to be transmitted. The determination of “free” units would be made on advice from the Chief Veterinary Officer (Scotland). Slaughter must take place on the units where the disease is present but the free units are eligible for exemption from slaughter.

9. In the context of a disease outbreak these separate production units will be subject to significant veterinary investigation and consideration before the Chief Veterinary Officer (Scotland) is satisfied that it is safe to allow the exemption. It is therefore considered that in practice no confusion will arise in the operation of this article.
APPENDIX 3

The TSE (Scotland) Amendment Regulations 2006, (SSI 2006/46)

1. On 21 February 2006, the Subordinate Legislation Committee, having considered the above instrument sought further information on the following matters:-

1. Firstly, the Committee noted that this instrument is the 6th substantive amendment to the 2002 Regulations, but the Executive has decided not to consolidate the Regulations. The Committee therefore asks whether the Executive has any plans to consolidate the 2002 Regulations (as has been done in England and Wales).
2. The Committee noted that at regulation 5(3), inserting a new paragraph 7 into Schedule 6A to the 2002 Regulations, the words “proceed with a notice” are used. The Committee was unclear as to whether it is the service of the notice to which reference is intended or action under the notice (that is slaughter or killing animals), and asked the Executive to clarify.
3. The Committee noted that, unlike the English Regulations, paragraph (c) of regulation 5(3) does not allow for the possibility of the withdrawal of an application for review and asked the Executive for an explanation.
4. The Committee noted that regulation 5(7) substitutes a new Part IV in Schedule 6A. In paragraphs (2) and (3) of the Notes it was not clear to the Committee what purpose is served by sub-paragraphs (b) standing the provisions of sub-paragraph (c) of each paragraph. Both sub-paragraph (b) and sub-paragraph (c) seemed to do the same thing but in different words. The Committee therefore asked the Executive for an explanation.

The Scottish Executive responds as follows:-

2. The Executive welcomes the opportunity to provide an explanation of the matters raised in the Committee’s letter.

The first question

3. The provisions of the TSE (Scotland) Regulations 2002 cover areas which are within the remit of both SEERAD and the Food Standards Agency. Consolidation of the 2002 Regulations was considered earlier this year. When considering consolidation, the need to change the provisions regarding compensation in scrapie cases was taken into account, as was the fact that the Regulations had been amended on a number of occasions. Whilst, in light of the need to prioritise other legislative commitments, it has not been possible to match the timetable for consolidation set in England and Wales, it is intended that a consolidation exercise will be undertaken in the course of 2006.

The second question

4. The phrase “proceed with a notice” in the new regulation 7 is intended to refer to proceeding with the action proposed in the notice. The Executive thanks the
Committee for pointing out this possible ambiguity, which will be clarified in the next set of TSE Regulations.

The third question

5. The Executive considers that “does not intend to proceed with a review” in sub-paragraph (a) of the new regulation 7 covers the withdrawal of a request for review as well as a stated intention not to proceed with a review. This is because a person who has initiated the review process, but subsequently withdraws from the process, does not intend to proceed with a review.

The fourth question

6. Sub-paragraphs (2)(b) and (3)(b) give a right to obtain a valuation because they provide that a valuation may be obtained by the owner of an animal, if that person believes the fixed rate of compensation to be unreasonable, or the Scottish Ministers, if they believe it to be excessive. Sub-paragraphs (2)(c) and (3)(c) allocate responsibility for meeting the costs of valuation. Obtaining a valuation gives rise to 2 separate fees; one payable to the President of the Institute of Auctioneers and Appraisers in Scotland for nominating a valuer and one payable to the valuer for the valuation itself. Sub-paragraphs (2)(c) and (3)(c) make it clear that the person obtaining the valuation shall be responsible for meeting both fees. The Executive notes that there is an element of duplication and that the reference to expense in sub-paragraphs (2)(b) and (3)(b) is unnecessary.
### SSI DESIGNATION FORM

**SSI Title & No:** The Sea Fish (Prohibited Methods of Fishing) (Firth of Clyde) Order 2006, (SSI 2006/51)

**Responsible Minister:** Ross Finnie, Minister for Environment and Rural Development

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**Lead Committee:** Environment and Rural Development

**Other Committee:**

**Purpose of Instrument:** The purpose of the instrument is to protect cod stocks in the Firth of Clyde by prohibiting fishing effort during the pawning season.

**Laid Date:** 9\(^{th}\) February 2006

**40 day date:** 29\(^{th}\) March 2006

**1\(^{st}\) SLC Meeting:** 21\(^{st}\) February 2006

**20 day date:** 10\(^{th}\) March 2006

**Lead Committee Report Due:** 20\(^{th}\) March 2006

**Other Committee Report Due:**

**SE Contact:** Sara Stewart, ext. 44756

**Committee Contact:** Mark Brough, 85240

**For SLC use:**

- **Article 10 Compliance**: Breaks 10(1) rule
- **PO Letter dated**: 8\(^{th}\) February 2006
- **PO Letter received**: ✓

- **Revocations**: Revokes
- **Partially Revokes**:

- **Executive Note**: Regulatory Impact Assessment

**Additional Information**