

## **FLAGSHIP SUSTAINABLE ENERGY PROJECT REACHES LANDMARK BREAKTHROUGH**

**7 January 2008**

**Scottish and Southern Energy's (SSE) flagship sustainable energy project at Glendoe reached a groundbreaking milestone today. The 200 metre-long tunnel boring machine (TBM) nicknamed 'Eliza Jane' by local schoolchildren emerged ahead of schedule, breaking through the ground on site at Scotland's first conventional large-scale hydro-electric power station for 50 years.**

This remarkable event signifies the completion of the tunnelling phase of the £140m project, which began in September 2006 when this enormous machine broke into the hillside near Loch Ness for the first time. In the 16 months of almost non-stop tunnelling 'Eliza Jane' has created a staggering eight kilometres of tunnels, and climbed over 600m in height.

Development of the tunnels will allow water from a new reservoir, which will be built over 600m above Loch Ness, to reach an underground power station near the south east corner of the loch before being discharged into the loch itself.

Chief Executive of SSE, Ian Marchant said: "The completion of this phase of the Glendoe development is significant. It is a unique, large and complex project and I am delighted with the progress that is being made. Effective delivery of major projects is of growing importance to SSE especially in the light of our agreement to acquire Airtricity, and the success so far of Glendoe bodes well for other investment projects. There is, however, still much work to do at Glendoe and the priority is to get it done safely and efficiently."

The power station is expected to be generating electricity commercially from the winter of 2008/09 with an installed capacity of around 100MW (megawatts) enough to power almost quarter of a million homes when operating at full capacity.

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**Notes to Editors:**

**For more information on Scottish and Southern Energy plc log on to [www.scottish-southern.co.uk](http://www.scottish-southern.co.uk) For specific updates on the project log on to [www.glendoe.co.uk](http://www.glendoe.co.uk)**

SSE is the leading generator of renewable energy in the UK and the second largest energy company in the UK. It is involved in the generation, transmission, distribution and supply of electricity, energy trading, the storage, distribution and supply of gas, electrical and utility contracting and telecoms.

SSE supplies more than 8 million customers through its retail brands, Scottish Hydro Electric, SWALEC, Southern Electric, and Atlantic. It transmits and distributes electricity to over 3.6million customers in the north of Scotland and the south of England. SSE is the largest non-nuclear electricity generator with over 10,000 megawatts of capacity from the most diverse portfolio of power stations. It is also the leading generator of electricity from renewable resources.

The contractor for the construction of the hydro electric scheme at Glendoe is Hochtief AG. The safety record achieved during the tunnelling phase of the project has been exemplary.

The new hydro-electric scheme is at Glendoe in the western end of the Monadhliath mountains, to the east of Fort Augustus in Inverness-shire. With an installed capacity of around 100MW (megawatts), Glendoe will be Scotland's second largest conventional hydro-electric station and the first large-scale station to be built since 1957, when the Errochty station in Perthshire was opened. Scottish Ministers gave their consent in July 2005 for the development of the scheme under Section 36 of the Electricity Act 1989. The power station will produce around 180 million units of electricity in a year of average rainfall and when synchronised will be able to start generating electricity at full capacity in 30 seconds.

The system will be served by over Glendoe's network of tunnels is extensive - the system will be served by over 16 kilometres of these passageways. An 8.6 kilometre tunnel 4.6 metres in diameter will collect water and bring it to the reservoir while 8 kilometres of tunnels 5 metres in diameter will channel water from the reservoir to the underground power station, and out into Loch Ness. In addition, a 1250m long Access Tunnel, 7 metres in diameter, will lead to the power station cavern.

The power station will produce around 180million units for green electricity in a year of average rainfall and will be very flexible and able to meet major fluctuations in demand for power. When synchronised, it will be able to start generating electricity at full capacity in 30 seconds.

The scheme involves collecting water from around 75 square kilometres – either directly or via 8km of underground tunnels – in a new reservoir over 600 metres above Loch Ness. The drop from the reservoir to the turbine at the side of the loch – the 'head' – is at over 600 metres, the biggest of any hydro station in the UK. The efficiency of a hydro station increases with the size of the head, making Glendoe the most efficient scheme in the country. The new reservoir will be situated at the head of Glen Tarff and will be impounded by a dam approximately 1km long, making it the longest dam in SSE's portfolio. The dam will be shaped to suit the topography and geology of the area and will be 35m at its highest point.