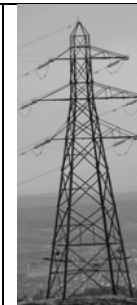


STIRLING BEFORE PYLONS

LESSONS FROM UNDERGROUNDING IN EUROPE : 2

November 2009



Introduction

The undergrounding of 400kV power lines, has moved on quickly over the last twelve months, with XPLE cable, rather than the old oil filled cables, now being the norm. With the decision on Beaulieu to Denny imminent we have just received the following update on the position via Europacable, the European Confederation for such technology. These developments are important, as they set a European context in which to make decisions on undergrounding for the Beaulieu to Denny line. We are supporting proposals by Scottish Natural Heritage that most of the Stirling section (23km) should be undergrounded for a variety of historical, heritage, landscape and health reasons which we have outlined elsewhere.

Germany

In Germany legislation was introduced this summer that undergrounding should be considered if a 400kV line is within 200m of individual houses or 400m of housing developments. At the time the legislation was being drawn up it was anticipated that up to half of the proposed 500km of 400kV lines in Lower Saxony could be undergrounded in 'sensitive' areas. There are now 4 pilot projects being prepared under this Enlag legislation.

Last week, 16th November, Amprion, one of the developers, gave a presentation on their proposals at a conference in Berlin. Amprion are to construct 87km of a 130km new line from Diele to Neiderhein in Lower Saxony. The other 50km will be built by Transpower and their details are currently being developed. Amprion have decided to put 14.5km underground, about 17%, this will be in 3 separate sections of 4.5, 5 and 5km. There are some interesting contrasts between this live project and the applicants for estimates for Beaulieu Denny presented at the Public Inquiry.

In Germany there will be 12 cables in two trenches containing 6 cables each. The total swathe of land required will be 16m wide. This contrasts, with the applicants for Beaulieu Denny, who stated that a 30m swathe of land would be required.

The German cable will cost 7 times more than the overhead line and 1km will cost Euro 7m. The applicants for Beaulieu Denny claimed undergrounding would be £11-14m/km or 15 times the cost.

There will be undergrounding on all 3 lines proposed in the Lower Saxony region. On the latest plans available there would be 7 separate underground sections included on the Ganderksee-St Hulfe line alone.

Clearly, undergrounding is currently seen as a justifiable and necessary solution in Germany to minimise the impacts of 400kV overhead lines.

Elsewhere

There are other examples of completed, in progress or planned underground projects :

Completed :

Copenhagen : 22km and 12km : buried in ground

Madrid Airport : 13km

England : Elstree – St Johns Wood 20km, Olympic Park 13km, Beddington 10km.

The Madrid and London cables are in tunnels due to their urban situation. In a recent document on underground technical issues the National Grid have said they would consider burial of future XLPE cable projects, which is the norm elsewhere in rural areas.

In Progress :

Conneticut : 25km

Planned :

Ranstad, Netherlands : 20km

Maasstroom, Netherlands : 13km

France/Spain Interconnector : 25km in France and 37km in Spain

Stirling

Europacable recommend selective undergrounding along a route such as Beaully Denny in the most sensitive sections. They have confirmed that it is feasible to underground the 23km as proposed in Stirling, and this was agreed by the applicants undergrounding consultants at the Public Inquiry. Such lengths require 're-active compensation', but this would be done from the sub-stations at either end of the underground section and is not a major technical issue. In their opinion, other sections of the route could technically be undergrounded if that was the desired solution of Scottish Ministers

The Scottish Government has quite rightly set out to be a world leader in renewable energy, by approving the undergrounding of the Stirling section of Beaully Denny, they could equally claim to be leaders in the transmission of that energy.

Such a solution would have the following benefits :

1. Remove the line from the most populous section of the route and in particular the the ex-mining Eastern Villages of Fallin, Plean and Cowie. Thus removing the potential health impacts and also aid the regeneration of those communities.
2. Remove the visual impacts on the National Wallace Monument and on the iconic views of it from Stirling Castle.
3. Remove the impacts on 6km of the Ochils Area of Great Landscape Value, the only such designation which the route passes through.
4. The remove the impacts on the Sheriffmuir battlesite, the turning point in the Jacobite 1715 Uprising. This is likely to become a Listed Battlefield, when such designations are introduced in 2011.
5. The existing smaller overhead line would be removed with consequent environmental and landscape benefits.

The proposed underground route to the west of Stirling would broadly follow a route along a pipeline corridor identified in the approved Structure Plan, which already contains a gas and oil pipeline, and which could accommodate the proposed line.

This approach is unanimously supported by Stirling and Clackmannanshire Councils, Local and List MSPs, MEPs, 10 local Community Councils, as well as Scottish Natural Heritage.

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