September 05

£200M LONDON CONNECTION PROJECT IS COMMISSIONED

National Grid has completed its £200M London infrastructure tunnel project, from Elstree, Hertfordshire to St John's Wood, north London. This 20km long tunnel contains one of the longest 400kV XLPE cable circuits to be installed in Europe.

Jim Street, Senior Project Manager for National Grid, commented, "This new cable tunnel represents a major investment by National Grid to reinforce the transmission system. The new 400kV circuit will enable us to continue to meet London's demand for electricity. By constructing a tunnel, most of the works carried out underground, were invisible and inaudible at ground level and minimised traffic disruption. "

Since works started in March 2000, in addition to the 20km long tunnel, seven head house buildings and two new 400kV substations have been constructed at existing National Grid sites at Elstree and St John's Wood . Also five new transformers have been delivered and installed at the substations. The project used expertise from a number of companies including KBR, ABB, Murphy group and Siemens.

The new headhouse buildings have been designed to integrate in style with the local environment or to complement existing buildings in the vicinity. National Grid has undertaken this in discussion with local residents, businesses, special interest groups and local authorities.

National Grid's new asset will service the needs of Londoners well into the future with ability for a second 400kV circuit to be installed in the new tunnel in years to come.

National Grid's tunnelling expertise will again be used in London to construct the 10km long tunnel between Beddington and Rowdown, which is due to start in 2006, with tunnelling expected to be complete by 2008.

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National Grid plc [www.nationalgrid.com/uk]

National Grid Transco plc has been renamed National Grid plc. It is a leading international energy infrastructure business - the largest utility in the UK. It owns and operates over 132,000 kilometres of gas main, more than half of Britain's gas transportation network, delivering gas to over 10.5 million homes, offices and factories in Britain. Through National Grid Electricity Transmission, the group operates the high-voltage electricity transmission network across Great Britain, and owns the network in England and Wales.

It has a statutory duty under the Electricity Act 1989 to develop and maintain an efficient, co-ordinated and economical system of electricity transmission and to facilitate competition in the supply and generation of electricity. Local Distribution Network operators depend on National Grid to supply power on demand. It is vital that National Grid has the means to meet demand and transmit electricity safely and efficiently. The transmission network includes 7000 kms of overhead lines, over 600 kms of underground cables, and some 320 substations. It balances supply of electricity with demand on a minute-by-minute basis.

KBR [www.halliburton.com]

KBR has worked with National Grid since 1999 to develop the scheme design including alignments, site locations, Environmental Impact Assessments, geo-technical investigations and obtaining approval in Principles from relevant parties. In addition KBR has assisted in the procurement of the Tunnel Civil / Mechanical & Electrical and Cabling contracts and supervised the construction of the tunnel, associated M&E systems and 400 kV circuit installation on site.

ABB [www.abb.com]

A global leader in power and automation technologies, ABB manufactured, installed and commissioned the 20km underground power cable circuit that links Elstree substation to the new indoor substation at St John's Wood, which was also built by ABB. The cable is one of the longest 400kV underground cables to be installed in Europe and uses cross-linked polyethylene [XLPE].
The ABB Group of companies operates in more than 100 countries and employs about 139,000 people.

MURPHY [www.murphygroup.co.uk]

Murphy Group was responsible for the design, management and construction of the 20km long cable tunnel, six permanent shafts and access buildings at ground level. The scope also included the design, procurement and installation of all mechanical and electrical services. These include ventilation, communications, temperature sensing systems, gas and fire detection and a monorail mounted tunnel inspection vehicle. Murphy's specialist tunnelling division has a well established track record in large scale tunnelling projects, particularly in urban environments, supported by an experienced and skilled staff.

SIEMENS [www.siemens.co.uk]

Siemens Power Transmission and Distribution was awarded the contract for the design, manufacture, construction and testing of the new substation at Elstree. The new substation is housed inside a new building, constructed under this contract, and forms the interconnection between the new London Connection, and the National Grid Company's existing transmission system at Elstree.