



## **Market Message on test power for NorNed**

**The completion of the NorNed cable laying process and the building of the new converter stations in Norway and the Netherlands are expected mid October 2007. After this completion, the NorNed high voltage direct current (HVDC) link will be tested to ensure a reliable infrastructure to the market, currently foreseen to become available in the second half of November 2007.**

The test program comprises a low power (LP) test sequence to validate the base functionality of the NorNed HVDC link and a high power (HP) test sequence to ensure a reliable infrastructure able to take a stable and controlled 700 MW transmission.

The LP tests typically take in between 30 MW and 100MW in both directions. These LP tests will last at minimum 125 hours of actual power transmission. Taking into account the inevitable start up failures, experience indicates a potential for more hours of actual LP testing.

The HP tests will be at cable load up to full capacity of 700MW. An expected scenario indicates HP testing at 700 MW for approximately 50-60 hours, where both directions are tested. Ensuring a reliable NorNed HVDC link might require more hours of HP testing.

Where the LP tests are characterised by high failure rates and therefore planning uncertainty the required test power will be secured via the balancing markets. For the HP tests the program will be placed on the day-ahead markets. To minimise cost for test power the southbound HP tests will be executed in daytime where the northbound HP tests will be executed at night, thus taking into account price levels in Norway and the Netherlands.

The day ahead test program during HP testing will be made public the day ahead in due time before gate closure at the power exchanges.

Costs for/revenues from all test power will be allocated to the NorNed project.