

Koshcheev L. A., Kutuzova N. B.

To intelligent grid with DC objects development in the central part of Northwest IPS.

The prospects of direct current transmission technology used for asynchronous links with ENTSO-E, improving of stability, reliability and controllability of the power grids are discussed with the example of Northwest IPS. The advantages of multi-module back-to-back are shown as concerns with the problems of short-circuit currents reducing and centralized power flows control organization in St. Petersburg megapolis. The technical and economical characteristics of the proposed DC projects are given.

Key-words: Northwest IPS, controllability improving, HVDC transmission Leningradskaya NPP-2 – Vyborgskaya substation, multi-terminal HVDC transmission, multi-module back-to-back, technical and economical characteristics, transmission capacity increasing.

Koshcheev Lev Ananyevich, Dr. Sc., Professor, Deputy General Director – Scientific Director of the Scientific and Technical Center of Unified Power System (STC UPS).

E-mail: ntc@ntcees.ru

Kutuzova Natalia Borisovna, Researcher of Design and Development of Energy Systems of the Scientific and Technical Center of Unified Power System (STC UPS).

E-mail: kutuzova@ntcees.ru