

The Choice of Power Converter Systems for a 3 GeV Booster Synchrotron, N. MARKS and D.E. POOLE, CLRC Daresbury Laboratory, Warrington WA4 4AD, UK - The design for the proposed UK synchrotron light source DIAMOND includes a 3 GeV booster synchrotron for full energy injection. Studies have been carried out to determine the most suitable power converter systems for the single dipole circuit and the two separate quadrupole families. Particularly, the choice between a direct connection to the public supply system as opposed to an energy storage configuration, such as the "White Circuit", was examined. The paper will include details of this study and present the conclusions determined by technical and economic suitability.