Progress on PEP-II Magnet Power Conversion System*, P. BELLOMO, SLAC; L. GENOVA, SLAC; T. JACKSON, LBNL; D. SHIMER, LLNL - The various power systems for supplying the PEP-II DC magnets rely exclusively on switchmode conversion, utilizing a variety of means depending on the requirements. All of the larger power supplies, ranging from 10 to 200 kW, are powered from DC sources utilizing rectified 480 V AC. Choppers can be used for the series-connected strings, but for smaller groups and individual magnets, inverters driving high-frequency transformers with secondary rectifiers comprise the best approach. All of the various systems use a "building block" approach of multiple standard-size units connected in series or parallel to most cost-effectively deal with a great range of voltage and current requirements. Utilization of existing infrastructure from PEP-I has been a cost-effective determinant. Equipment is being purchased either off the-shelf, through performance specification, or by hardware purchase based on design-through-prototype. The corrector magnet power system, utilizing inexpensive, off-the-shelf, four-quadrant switching motor-controllers, has already proven very reliable: 120 of the total of 900 units have been running on the injection system for four months with no failures.

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