High voltage direct current hybrid circuit breaker composed of a main branch, an energy absorbing branch, and auxiliary branches. The main branch has a fast mechanical switch S2. The auxiliary branches include a capacitor C, a resistor R, a fast mechanical switch S3, two inductors (L1 and L2), and five thyristors (T1a, T1b, T2a, T2b, and T3). The T1a, T1b, T2a, and T2b are used for breaking the bidirectional fault current, whereas the T3 is employed to reverse the polarity of capacitor voltage. The absorbing branch is composed of series-parallel metal oxide varistors MOVs to protect the overvoltage of the capacitor. In addition, a residual DC current disconnector S1 is used to completely isolate the DC circuit. The mechanical switches S1, S2, and S3 consist of the vacuum interrupter to extinguish the electrical arc.