WHAT IS CLAIMED IS:

1. A kinetic power generation unit, comprising an exciting coil winding of an electric motor and a field winding of a power generator installed alternately into a wire slot of a stator to constitute a same magnetic field; a rotor installed in the stator, shared by the electric motor and the power generator, and installed coaxially with respect to each other, so that the rotor of the electric motor and the rotor of the power generator rotate in the same direction, and the exciting winding and the field winding change phases and are electrically conducted by a DC brushless drive controller to drive the rotor to operate; the kinetic power generation unit uses a △ connection, and a connection point of the coil winding between phases is a three-phase alternating current output point; the center point of each coil winding is a phase voltage input point, so as to complete the configuration of a three-phase coil winding.

2. A kinetic power generation unit, comprising an exciting coil winding of an electric motor and a field winding of a power generator installed alternately into a wire slot of a stator to constitute a same magnetic field; a rotor installed in the stator, shared by the electric motor and the power generator, and installed coaxially with respect to each other, so that the rotor of the electric motor and the rotor of the power generator rotate in the same direction, and the exciting winding and the field winding change phases and are electrically conducted by a DC brushless drive controller to drive the rotor to operate; the kinetic power generation unit uses a Y connection, and an end point of the coil winding of each phase is a power output point; a neutral point of the coil winding uses a △ connection, and the center point of the △ connection is a phase voltage input point, so as to complete the configuration of a three-phase coil winding.

3. A kinetic power generation unit, comprising an exciting coil winding of an electric motor and a field winding of a power generator installed alternately into a wire slot of a stator to constitute a same magnetic field; a rotor installed in the stator, shared by the electric motor and the power generator, and installed coaxially with respect to each other, so that the rotor of the electric motor and the rotor of the power generator rotate in the same direction, and the exciting winding and the field winding change phases and are electrically conducted by a DC brushless drive controller to drive the rotor to operate; the kinetic power generation unit uses a combination of △&Y connections, and an end point of the Y connection in each phase is coupled to connection point between phases of the △ connection, and the connection point between phases of the △connection is a three-phase alternating current output point, and the center point of each coil winding of the △ connection is a phase voltage input point.

4. The kinetic power generation unit as claimed in claim 1 or 2 or 3, wherein the DC brushless drive controller has an input terminal coupled to a storage battery; a power output terminal of the kinetic power generation unit is coupled to a rectifier, and further coupled to the storage battery for charging the storage battery after an outputted alternating current is rectified, and an AC power passing through a voltage regulator and a transformer is outputted for use; and the after power is supplied for use after the rotor is rotated.

5. The kinetic power generation unit as claimed in claim 1 or 2 or 3, wherein the kinetic power generation unit comes with a plurality quantity, and the kinetic power generation units are shared by the rotor and coaxially installed with respect to each other.