

FROM COAL TO ENERGY

Like any coal-fired thermal power plant, Sual Power Station generates electricity through the simple principle of energy conversion from one form to another.

Our entire process of producing electrical energy can be simplified into four main components:

Combustion (From Potential Energy to Heat Energy)

Fuel is burned to create heat. By using finely pulverized high-grade coal, efficient combustion is assured and high temperature is achieved.

Boiling (Heat Energy)

The heat produced is transferred to the demineralized water in the boiler, converting the demineralized water into steam. Superheated, this steam is directed to the turbines.

Turbine Rotation (From Heat Energy to Mechanical Energy)

The turbine is made up of several stages of stationary and non-stationary turbine blades. When the steam passes through the turbine blades, potential energy is converted to kinetic energy causing the turbine shaft to rotate. A coupling connects the turbine shaft to the generator.

Generation (From Mechanical Energy to Electrical Energy)

The rotation of the turbine shaft causes the rotor of the generator to rotate. The rotor of the generator becomes a huge electromagnet when supplied with direct current from an external source. Electricity is produced as the lines of magnetic flux generated by the rotor is cut by a fixed conductor or stator coils.

