OUR SOLUTIONS

ROLLCE ENGINEERING

ROLLCE™ ENGINEERING PTE LTD
ROLLCE COMMITTED TO EXCELLENCE

Who We Are ?

As an agile-minded organisation, Rollce Engineering is always looking to improving our services and solutions as a multi-disciplinary engineering and construction company. With our integrated solutions on smart energy in the field of Energy & Environment Conservation, Rollce is creating a new statement on sustainability and conservation practices. Our innovative solutions and cutting-edge products help to create a New Tomorrow with our technology and partners.

Process Heating

In this scheme, fuel such as biomass/coal /biogas/oil is used to fire the Boiler / Heater to produce steam / hot water / thermal oil needed by the process.

Steam Boiler / Hot Water Boiler / Thermal Oil Heater

Fuels Used:

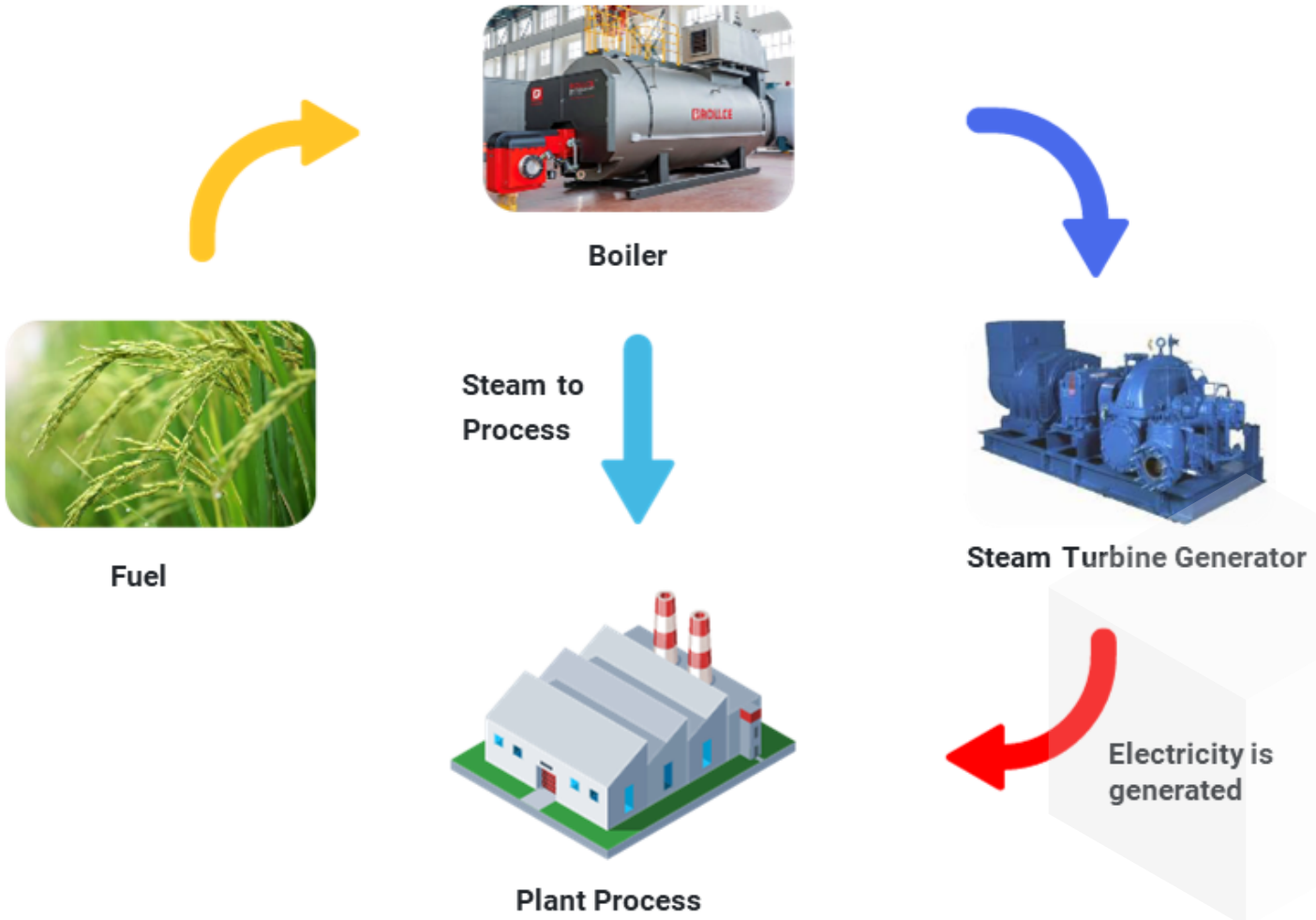
1. Biomass
2. Coal
3. Oil (Bunker Oil & Diesel)
4. Gas (LPG & Biogas)

Manufacturing Plant

Steam / Hot Water / Thermal Oil is generated and used in the plant for manufacturing of products

Incidental Power

In this scheme, biomass/ coal/biogas is used to fire the boiler to produce high-pressure and temperature steam to rotate the steam turbine coupled in an alternator to produce electricity while extracting steam from the main line at the same time passing through the PRDSH Station to produce required steam to process.



Process Cooling

In this scheme, the steam produced by the boiler was extracted to power the absorption chiller and serve as a refrigerant at a specific required temperature and pressure, letting the medium at the equipment vaporize at a specific low temperature and utilize this as chilled water for process, at the same time steam produced is used for process heating.

Boiler

Fuel

Steam to Process

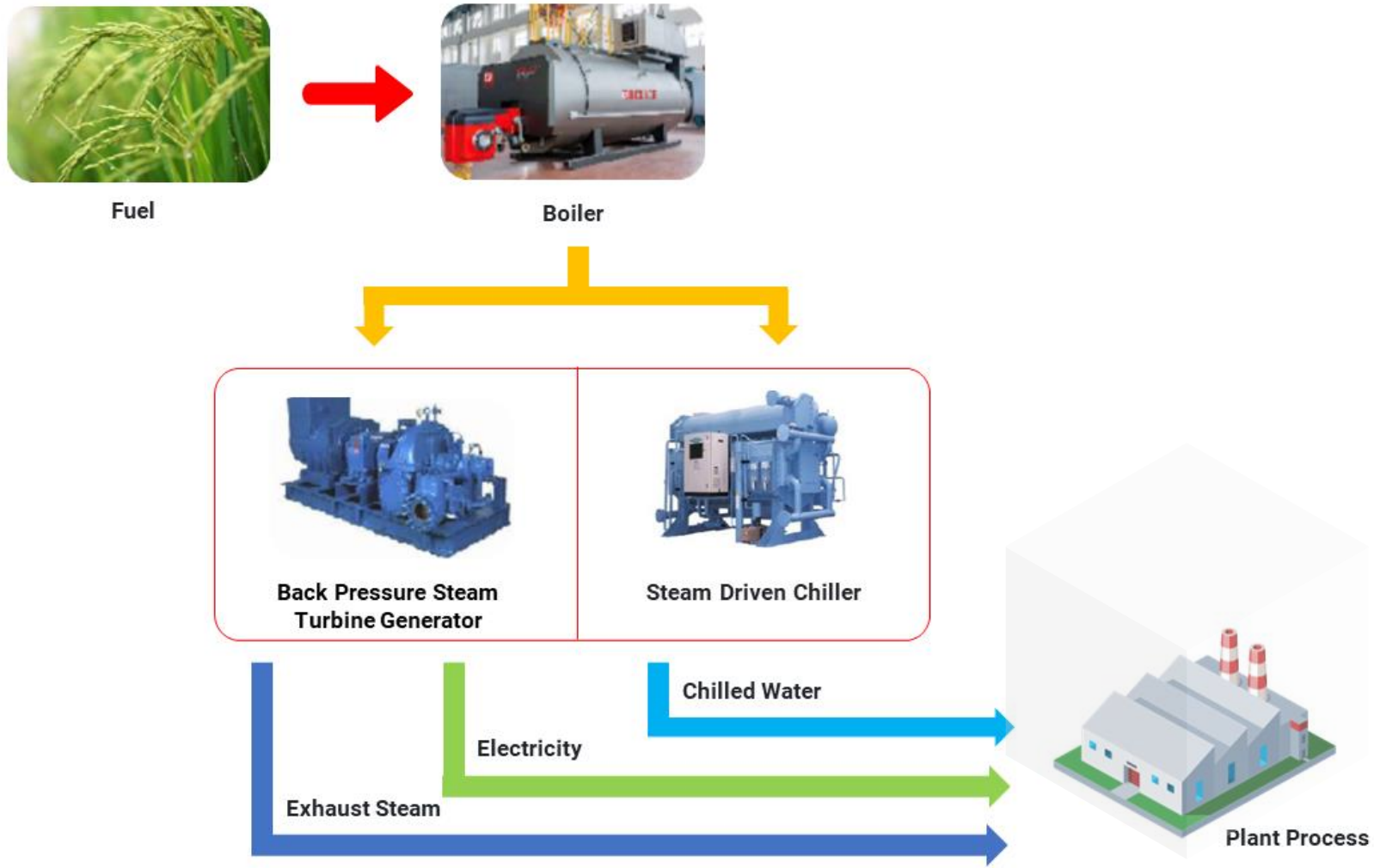
Steam Turbine Generator

Plant Process

Chilled Water For Process Cooling

Trigeneration Process

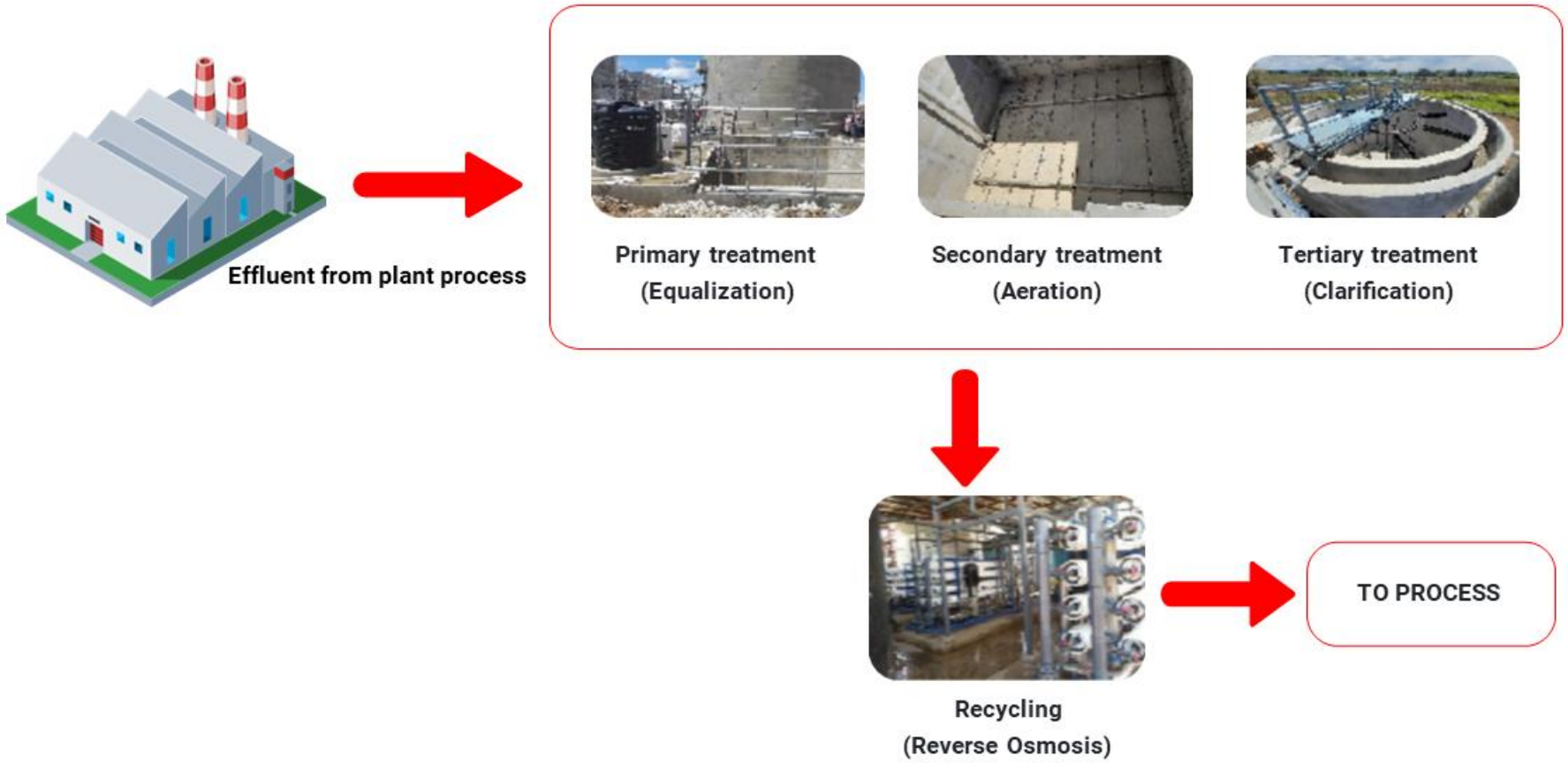
In this scheme, the steam produced by the boiler was primarily utilised to rotate the back pressure turbine to drive an alternator and then produce electricity while the exhaust steam from the turbine expansion process passed through the PRDSH Station to be utilized as a heating medium to the process, and a certain amount of steam will be extracted to drive the absorption chiller where product cooling or centralized air conditioning is required in the process.



Effluent Treatment Plant with Recycling

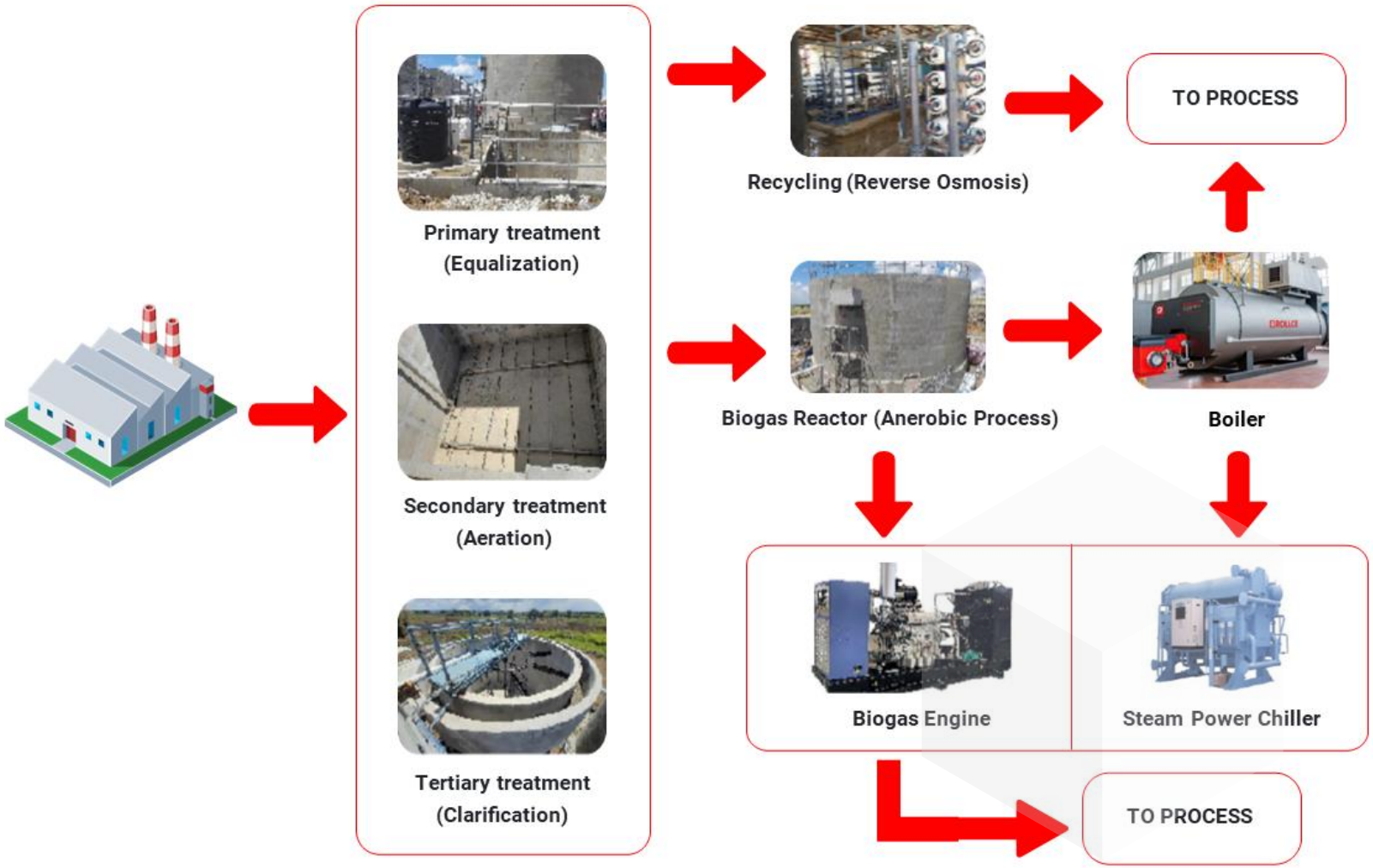
(Zero Liquid Discharged)

ETP with ZLD is now becoming the preferred waste water treatment system in response to the call for climate change. In this scheme, the effluent from the processing plant will undergo 3 stages of treatment, namely equalization, aeration and clarification. The clarified water is then sent for further treatment, and the final product is suitable for process application and or potable use.



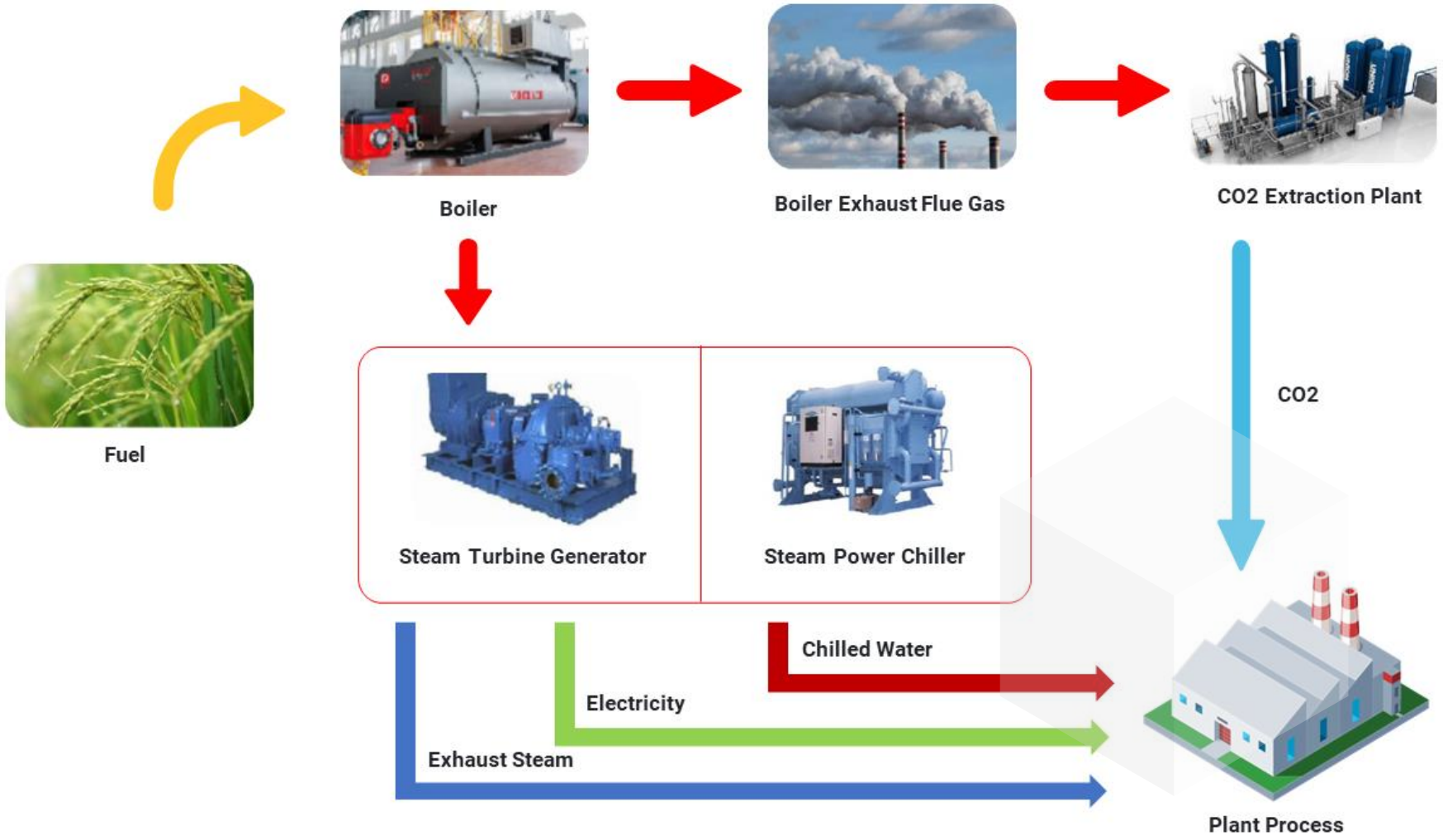
Waste to Energy

In this scheme, the primary objective of the plant is to treatment discharge liquid waste before it is disposed to the nearby body of water. Thanks to ROLLCE ENGINEERING PTE LTD's innovative approach not to treating the liquid waste but to recovering the clean water for reuse. The methane gas available was also captured and further utilized as fuel. The scheme has shown several potential applications of the 2 by-products of the effluent treatment plant. Water recycling gives substantial savings in extracting fresh water from the ground, and methane gas capture reduces GHG emissions. At the same time, it can also be used as a supplemental fuel to the heating or cooling system of the plant.



Quadrageneration Process

In this scheme, the steam produced by the boiler is utilized to rotate the: (1) back pressure steam turbine coupled in an alternator to generate electricity while the expanded steam on the exhaust will pass through the PRDSH Station to be used as (2) heating medium in the process, some amount of steam is utilized as a heat source to the (3) vapour absorption chiller to produce chilled water for process cooling. In the Flue gas emission (4) CO2 is recovered for further use in the process.



Get In Touch

We would love to hear from you, Drop a message and let our experts walk through any queries you have on our products and services.

LET'S CHAT

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Thank you