



**Bio-fuels:
fueling
heritage trams**

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Renewable energy choices

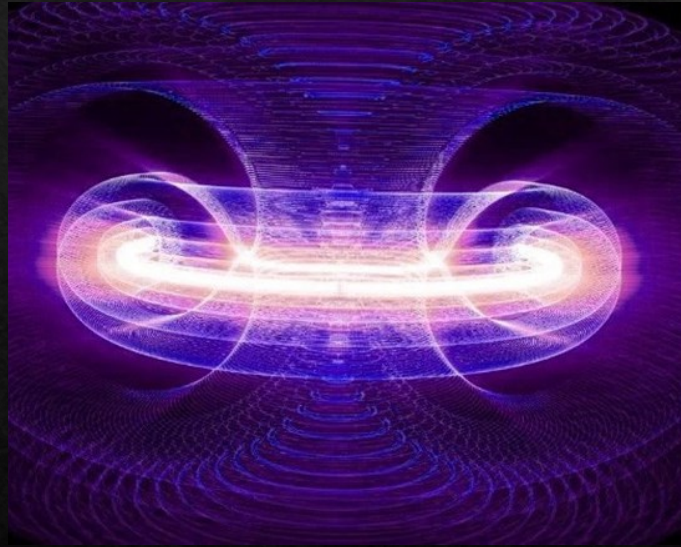




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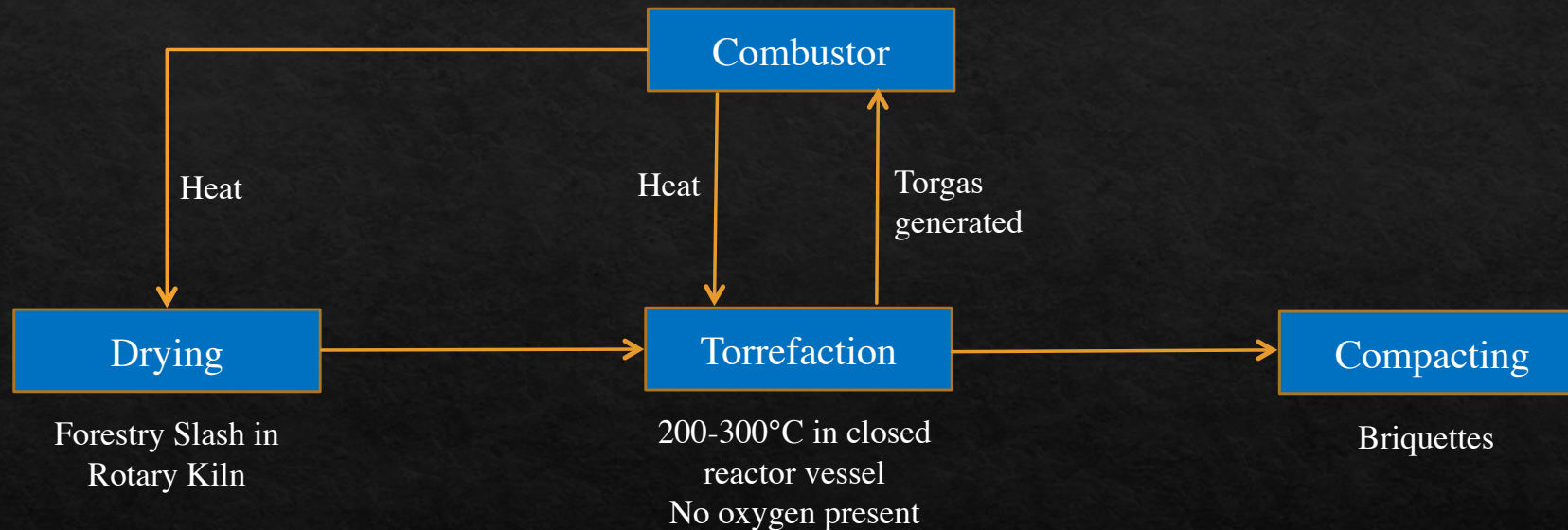
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Torrefaction Principle



- Process generates its own energy by producing Torgas (Methane, CO etc)
- Pyrolysis uses a similar principle but the reactor vessel works at 500-600°C. Liquid bio oils, ethanol, and gases driven off leaving a char (carbon) residue. Liquid bio fuels can be made from this process. The Germans used this process during WW2 to make fuel for their army and airforce.



Photo credit James Allison



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