## FAQ's

1. **What are the goals of rural energy systems?**
    a. Must be instruments of sustainable rural development.
    b. Must advance rural economic growth that is economically efficient, need-oriented and equitable, self-reliant and empowering, and environmentally sound.
    c. For an energy system to be in the interests of the rural poor,it must qualify from three points of view.
    - It must increase the access of the rural poor to affordable,reliable,safe and high quality energy.
    - It must strengthen their self-reliance and empower them.
    - It must improve the quality of their environment(starting with their immediate environment in their households).
2. **How is vermin composting differ from composting?**

    Composting is a biological process in which the organic matter present in waste is converted into enriched inorganic nutrients. Vermi composting is a process whereby food materials, kitchen wastes – including vegetable and fruit peelings – papers, and so on, can be converted into compost by the action of earthworms. An aerobic condition is created due to the exposure of organic waste to air.
3. **What are differences in aerobic and anaerobic digestion?**

    Aerobic composting is decomposition of organic matter using microorganisms that require oxygen. Carbon-di-oxide released from the composting is not counted in emissions. Heat produced in composting is harmful enough to kill bacteria and pathogens only. No leachate is produced as surplus moisture is extracted as water vapour.

    Anaerobic composting is decomposition that occurs using microorganisms that do not require oxygen to survive. The process is characterised by very strong odours. Only a small amount of heat is generated not enough to kill plant pathogens. It creates a sludege like material that is even more difficult to break down.

4. **What are the benefits of converting waste to energy?**

By converting waste to energy it possible to reduce greenhouse gases, reduce the dependencies on fossil fuel and increase production of renewable energy, provides clean energy, Complements recycling and reduces landfilling, Reduces truck traffic and associated emissions, Recovers and recycles metals thus reducing mining operations.

5. **List the factors affecting energy recovery from waste.**

The two main factors which determine the potential of recovery of energy from wastes are the quantity and quality (physico-chemical characteristics) of the waste. Some of the important physico-chemical parameters requiring consideration include:

- Size of constituents
- Density
- Moisture content
- Volatile solids / Organic matter
- Fixed carbon
- Total inerts
- Calorific value

Often, an analysis of waste to determine the proportion of carbon, hydrogen, oxygen, nitrogen and sulfur (ultimate analysis) is done to make mass balance calculations, for both thermochemical and biochemical processes. In case of anaerobic digestion, the parameters C/N ratio (a measure of nutrient concentration available for bacterial growth) and toxicity (representing the presence of hazardous materials which inhibit bacterial growth), also require consideration.