



# Energizing Food Systems

## Electricity (Solar Photovoltaic)

## Thermal Systems

## Biomass Production

### Production

1. Pumps for **irrigation**, water distribution, lifting and oxygenation of fish ponds.

5. Sludge as by-product of **biodigestion** applied as **fertilizer** for agriculture  
6. Biogas from chicken manure **powers incubators** and lights for poultry farms

10. **Agroforestry and intercropping with trees for firewood** produces wild foods, seasonal crops and improves soil on degraded lands

### Transformation

2. Power machines for **crop processing, milling, grinding, de-husking, pressing, canning, sealing and packaging**

6. Thermal Energy (**biogas, solar thermal**) to **pasteurize milk**, and biogas for **refrigeration** to preserve vegetables, meats, eggs and milk

7. **Solar thermal** provides heat and improved combustion for **curing** leaves, **canning** beans, **drying** fruits & grains, **smoking** fish & meats, **firing** bricks

11. Agri-residuals, waste from timber industry and improved charcoal production provide **alternative sources of cooking fuel**

### Consumption

4. **Charging and Powering** of electronic equipment (mobile phones, radios and TV) for agronomic information, forecasts, trading and mobile banking. **Electric cooking** (rice cookers, induction plates, electric pots)

8. Collecting organic waste that improves **sanitation** for communities and provides **biogas** for cooking

9. **Baking** bread, **cooking** meals with efficient biomass, biogas and LPG stoves supplied with waste

12. Monitoring biomass growth from satellite to pay smallholder farmers for improved **forest and fuelwood management**