

Capturing data

- **Auto-production:** off-grid electricity, solar, but also fossil fuels
- **Bioenergy:** own-use in biomass processing plants; reporting grid production (IPPs)
- **Primary energy** use in electricity production (bio, geo, solar)
- Hybrid plants

Estimation

- **India:** 5 million biogas plants (MNRE)
- **Ethiopia:** 1 million solar lights imported annually (UN COMTRADE)
- **Malaysia:** 92 (+154) palm oil mills capturing and burning methane from POME (SEDA)
- **Tanzania:** 158 MW of off-grid mini-grids, on grid = 1.5GW (World Bank)

Measuring renewables

- **Electricity capacity:** net installed capacity, grid-connected at the year-end
- **Plant classification:** auto-producer heat/fuel CHP, enterprise survey limits
- **Liquid biofuels:** NCVs, jet-fuel, EVs and natural gas, biodiesel = transport fuel?
- **NCVs:** coal (17); oil (12); solid biofuels (1); other issues with units