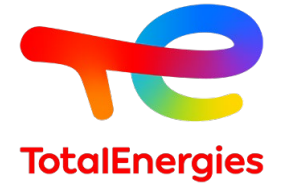# Our interest in hybrid power systems

What is it?

Local integration of multiple energy production and storage technologies to achieve better reliability, availability, and less carbon footprint than with one single source
Off-grid / Weak Grid / **On-grid** (electricity and / or gas network)

Use case examples

- PV + wind + storage: **Increased availability of green electricity**
- PV + genset (+storage): **Fuel saving**, **CO_2 emissions reduction**
- PV + electricity storage + electrolyzer + H_2 storage: **Green H_2 production**
- Green H_2 production + CCGT: **Reduce CO_2 content of electricity**
- Low carbon heat & electricity production + storage: **Reduce scope 1&2 of our O&G assets**
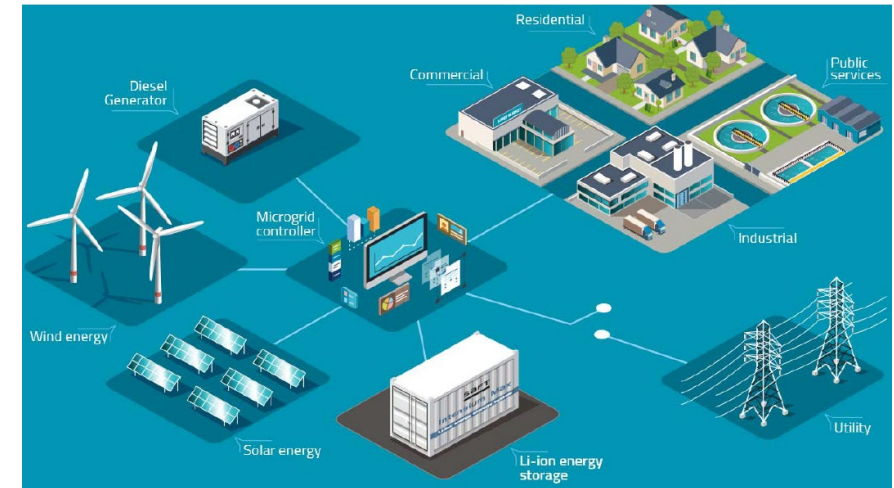
Technology and R&D requirements

- Individual component library including dynamic models, performance indicators, cost, degradation, etc.
- Project **design & sizing: methodology and tools**
- **Dynamic modeling** of the integrated system to ensure reliability
- **EMS Controller** including external inputs (weather forecast, grid market signals, load, etc.)
- Optimization criteria: **Availability / reliability, LCOE, fuel savings, CAPEX, OPEX, emissions reduction, cost and tons of avoided CO_2, revenues (e.g. trading / shifting)** ...