

Solar Assisted Wind Turbine (SAWT) system

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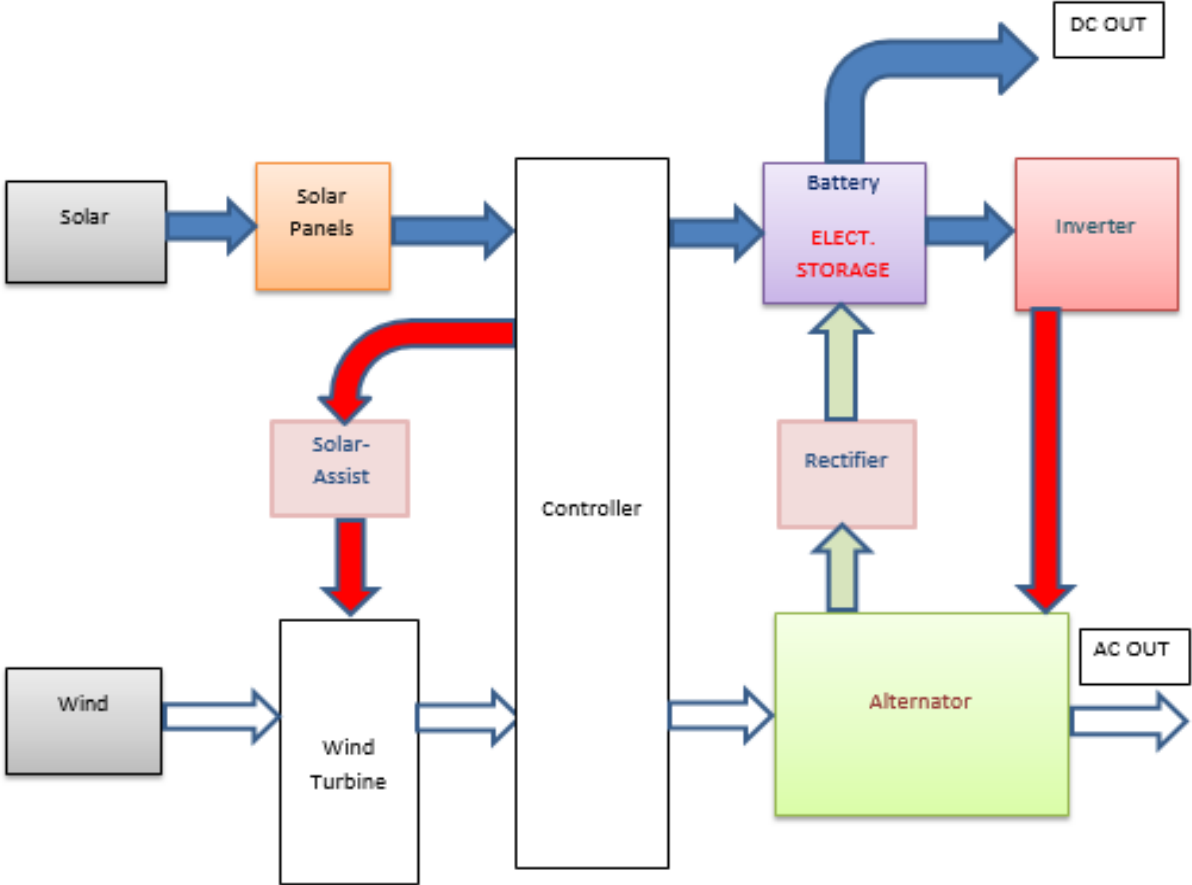
1. Objective

- Sustainable, Hybrid energy systems: Solar Assisted Wind Turbine (SAWT) to serve :
 - Street lamps,
 - Parking Garages and lots,
 - Highway signs,
 - Remote applications, and,
 - Emergency situations.

2. Solar-Wind Hybrid SYSTEM with Battery back-up : Competitive Advantages

- Wind Turbine (WT) features almost 0 m/s cut-in speed ; generates electricity even at very low speeds as opposed to conventional WT that require a minimum cut-in wind speed $\sim 2\text{m/s}$.
- Solar-PV and Wind complement diurnal resources.
- Provides VAWT benefits.
- Provides fully decentralized renewable energy.
- Automatic cleaning and cooling effect of solar cells resulting in more efficient and longer lasting solar cells.
- Fully Scalable.

3. Hybrid Generator : Solar Assisted Wind Turbine (SAWT)



4. SAWT Specifications

- Combined wind turbine with solar-PV with battery back-up.
- Min. daily output = $100\text{W/hr} \times 10 \text{ hrs/day} = 1\text{kWH/day}$
- Vertical axis wind turbine output : 300W max.
- Solar-PV output $\sim 50 - 100 \text{ W}$.
- Battery capacity $\geq 2\text{kWH}$
- Phase 2: Scalar modularity .

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