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# Design of Electric Actuator

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***Abstract:*** *Various mechanical, hydraulic, pneumatic, electrical, and hybrid actuators can alter motion per the requirements of particular applications. However, except for electrical ones, all actuators are restricted due to their size, complex auxiliary equipment, frequent need for maintenance, and sluggish environment in renewable applications. This brief review paper highlights some unique and significant research works on applying electrical actuators to renewable applications. Four renewable energy resources, i.e., solar, wind, bio-energy, and geothermal energy, are considered to review electric actuators applicable to renewable energy systems. This review analyses the types of actuators associated with the mentioned renewable application, their functioning, their motion type, present use, advantages, disadvantages, and operational problems. The information gathered in this paper may open up new ways of optimization opportunities and control challenges in electrical actuators, thereby making more efficient systems. Furthermore, some energy-efficient and cost- effective replacements of convectional actuators with new innovative ones are suggested. This work aims to benefit scientists and new entrants working on actuators in renewable energy systems. And we Ishwari Jadhav, Sakshi Jagtap, Nandini Ahire, Prasad Mahajan. This Project is a sponsorship project which is sponsor by Techno Valves.*

***Keywords***: *Electric Actuator, Gate Valve, Stepper Motor.*

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