شبكة المعلومات الجامعية

التوثيق الإلكتروني والميكروفيلم

بسم الله الرحمن الرحيم

HANAA ALY

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

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التوثيق الإلكتروني والميكروفيلم

جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

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A NEW STRATEGY TO SOLVE THE INTERMITTENCY PROBLEM IN RENEWABLE ENERGY SYSTEMS USING A HYBRID ENERGY STORAGE SYSTEM

By

Eng. Walid Mohamed Mohamed Kamel

A Thesis Submitted to the
Faculty of Engineering at Cairo University
In Partial Fulfillment of the
Requirements for the Degree of

MASTER OF SCIENCE
In
Electrical Power and Machines Engineering

FACULTY OF ENGINEERING, CAIRO UNIVERSITY
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Under the Supervision of

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Title of Thesis:

" A NEW STRATEGY TO SOLVE THE INTERMITTENCY PROBLEM IN RENEWABLE ENERGY SYSTEMS USING A HYBRID ENERGY STORAGE SYSTEM"

Key Words:
Battery; EDLC; Hybrid energy storage; Renewable; Supercapasitor; Wind energy.

Summary:

Renewable energy receives greater attention as a sustainable alternative to more traditional energy sources. They are environmentally friendly energy sources as solar energy and wind energy; however, there are still some severe concerns about several sources of renewable energy and their implementation as capital costs and their intermittent power production called the "intermittency problem" due to depending on the weather.

The main objectives of this thesis are to study, model, and simulate the performance of the hybrid energy storage system. This represents one of the most promising storage techniques connected with renewable energy sources to reduce the intermittency and variability of renewable energy sources and satisfying the load demand.

DISCLAIMER

I hereby declare that this thesis is my own original work and that no part of it has been submitted for a degree qualification at any other university or institute.

I further declare that I have appropriately acknowledged all sources used and have cited them in the references section.

Name: Walid Mohamed Mohamed Kamel
Date: / /2021 (It's the date that you handover the thesis)

Signature:

Acknowledgments

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