Department of Electrical and Computer Engineering (ECE) North South University

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SENIOR DESIGN PROJECT

Renewable Energy Based Water Purification System

Semester: Fall-2020

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ID: 1231121043

Md. Rashidul Hasan Rifat
ID: 1521093042

Faculty Advisor:

Dr. Shahnewaz Siddique
Assistant Professor, ECE Department

DECLARATION

With utmost sincere, this is to certify that this Project is our original work. No part of this work has been submitted elsewhere partially or fully for the award of any other degree or diploma. Any material reproduced in this project has been properly acknowledged.

Students' names & Signatures

1. Md. Rejuan Ahmed Khan

2.Md.Rashidul Hasan Rifat

APPROVAL

We, **Md.Rejuan Ahmed Khan (ID-1231121043)**, **Md.Rashidul Hasan Rifat (ID-1521093042),** students from the Electrical and Computer Engineering department of North South University; have worked on the project titled **"Renewable Energy Based Water Purification System**" under the supervision of **Dr. Shahnewaz Siddique** as a partial fulfillment of the requirement for the degree of Bachelors of Science in Engineering and has been accepted as satisfactory.

Supervisor's Signature

Dr. Shahnewaz Siddique 9/7/21 (E-signature)
…………………………………….

Dr. Shahnewaz Siddique
Assistant Professor
Department of Electrical & Computer Engineering
North South University
Dhaka, Bangladesh.

Chairman's Signature

…………………………………….

Dr. Rezaul Bari
Associate Professor & Chairman
Department of Electrical & Computer Engineering
North South University
Dhaka, Bangladesh.

ACKNOWLEDGEMENT

In the name of the Almighty, the most gracious, the most merciful. By the grace of almighty, we have accomplished our senior design project titled “**Renewable energy based water purification system**”.

It has been an immense amount of pleasure to learn and to be advised under the supervision of **Dr. Shahnewaz Siddique**, the honorable Faculty from ECE Department of North South University, throughout the time. We are, to be honest, grateful to him for his continuous support and inspiration upon completing the project.

We would like to express our sincere gratitude towards **North South University**’s Department of Electrical Engineering and Computer Science for providing us with the platform to showcase our design capability and implementation of our theoretical knowledge as part of our curriculum for the undergraduate program.

We are grateful to our families and everybody who guided us and provided facilitation.

Abstract

A transition to clean energy is about making an investment into the future. Science has found that nothing can disappear without a trace. Nature does not know extinction. All it knows is transformation. And that transformation is what leads the life on earth keep moving. According to biologists, all life form came from the different form of water. We are living on this planet due to the blessing of water. From the dawn of civilization to till now, humans, both, cave dwellers and city dwellers have been using water for various seminal purposes: drinking, bathing, watering animals, irrigating lands and producing foods. In the developing countries, having fresh water is still considered to be a challenging task. Likewise, the rare availability of the resources and the cost of the management made this more difficult to have access to clean water even in our country as well. However the circumstances is, yet it is that urge which lets the humanity to still move on and find out the estimated solution in the best possible way.