

IEEE PES HUMANITARIAN ACTIVITIES COMMITTEE PROJECT 2018

“RENEWABLE AND SUSTAINABLE EMPOWERMENT FOR THE NEEDY”

The IEEE SB NSSCE in association with Power and Energy Society (PES) was given the opportunity to do the IEEE PES Humanitarian Activities Committee Project (HAC project) “*Renewable and sustainable empowerment for the needy*”. this was proposed by a team of five student members- *Ms Sreelakshmi S Aji, Ms Thanusha J, Ms Annmary Joseph* and the Current Vice-Chairman of our IEEE SB Chapter, *Mr. Abhiraj V S*. The team won the IEEE PES HAC competition on **10th October 2018** and was one among the three internationally selected project. The project was successfully commenced on the 30th of March 2019. With the full support from the Chapter Advisor, Assistant Professor *Mrs. Nimitha Muraleedharan* and from our mentor, the current Chairman of our IEEE SB Chapter, *Mr. Abhinav R*, the project was a successful.



PROJECT MOTIVE

Figure 1. The HAC crew with Delegates

Due to flood effects in Kerala, most of the tribal villages nearby had lost their homes and access to the daily utilities. In light of this prevailing situation, we had planned to provide lantern kits (8-10) to the needy students. We had decided to make the kit by ourselves, by which we can get ourselves more exposed to the technology works. Also, giving more preference to women empowerment, our women members were engaged more in the manufacturing of the lanterns. In addition, we have thought of providing half day awareness class to the youth of the tribal community.

PROJECT IMPLEMENTATION:

1. FINALISING PERIPHERALS AND PLACE

We had started with finalising the circuit and then searching for the components and were able to find some of the best materials possible. Here by we set our work to full motion from 15th November 2018. Next, we started searching for a appropriate nearby tribal society affected by

flood. The place surveyed and finally selected was "**AYYAPANPOTTA**". On interacting with the residents, we came to find out that they were all interested for it. We approached the ward member, **Mrs. Sali Varghese** and was fully supported by her.



Figure 2 Sessions



Figure 3 sessions

1. HANDS ON CUM ASSEMBLING WORKSHOP

We wanted to give all the volunteers and members of our IEEE SB the basic idea of the project so with regard to that we organized **2-day hands-on cum assembling workshop of solar lamp and led kit assembling** on 21st and 22nd of March. About 15-20 members attended the workshop and were actively involved. Firstly, we briefed the aim and the reason for doing this project. *Ms. Thanusha* explained the concept behind the solar panel, the way to choose the appropriate solar panel with the rated values and the disadvantages of the panel with practical demonstrations. *Ms. Sreelakshmi S Aji* handled the session on battery charging circuit designing of the led lamps. She organized the session very well, explaining the volunteers about the way to choose the appropriate components to get the required output. With all this the volunteers were made to assemble the circuit and solder it on the board. The bulb assembling session where the volunteers were shown the various components of a bulb along with the explanation of their functions was taken by *Ms Anmary Joseph*. With this the workshop was concluded and was a success where we got our circuits ready and lamp assembled by our fellow volunteers.



Figure 4 Workshop



Figure 5 Charger Circuit Assembling



Figure 6 Bulb Assembling

2. PROJECT INAUGURATION

On 30th march 2018 we all reached the village by 9:00 am and started setting the hall which we were allocated for conducting our project. The inauguration was done by *Mr. Abu john*, Assistant Engineer of KSEB Malampuzha, *Mr. Sunil Kumar*, Sub-Engineer on KSEB Malampuzha and ward member, *Ms Sali Varghese*

3. FORENOON SESSION

Soon after the inauguration *Mr. Abu john* and *Mr. Sunil Kumar* took a session where they had covered topics that would help the residents understand the basics of power and energy and also gave them the general overview of generation, transmission and distribution of electric power supply by making use of diagrams, presentation and charts.

Through this session they discussed the various hazards caused by electricity and corresponding methods of safety and precautions. This knowledge enabled the tribals to handle electricity with caution and care. This also equipped them with the basic precautions that have to be taken under such condition



Figure 7 Solar panel basics



Figure 8 Awareness session

We then provided a demonstration & hands-on session on basic electric fittings like bulb fitting, fuse wiring, grounding etc. This helped them attain basic practical experience in dealing with electrical fittings.

4. AFTERNOON SESSION

Then there was a presentation on renewable energy resources and its advantages over conventional energy resources. This helped them understand the importance of having a sustainable approach towards project undertaken. We then gave a solar emergency lamp kit to them with an appropriate demonstration on its use and maintenance. This served as a small practical example of a sustainable device working on renewable energy i.e., solar energy, in this case, this helped them relate to the topic of sustainability.



Figure 9 Solar Basics and Sessions

Finally, the residents were made to assemble the LED kit under the guidance and training of our volunteers. This gave them an exposure to some elementary processes like assembling and soldering etc. This session involved their active participation and boost their self-esteem. We had completed our session on 2.00 pm and distributed ten solar emergency lamps manufactured by IEEE volunteers, fifty 9 W lamp kit assembled and distributed to the families in Kava.



Figure 10 Solar lamp and bulb distribution

The session was officially ended at 3.00 pm, the event was made grant success by the coordination of the residents in Kava, along with the dedication of our members. The success of the **IEEE PES Humanitarian Activities Committee Project (HAC project)** was possible with the good will and dedication of all the crew members and the guidance of our mentors. This project will always be an achievement for the IEEE SB of our college, this is just a beginning of a new revolution and more stories about our success are yet to be carved.

----- We believe in the Joy of Volunteering -----