

One pager

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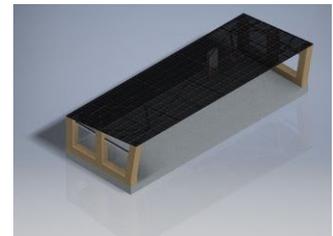
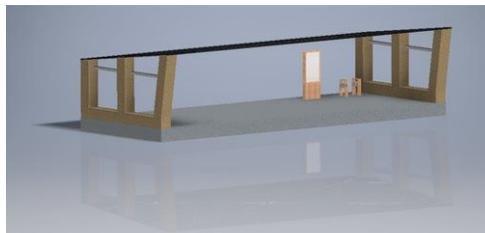
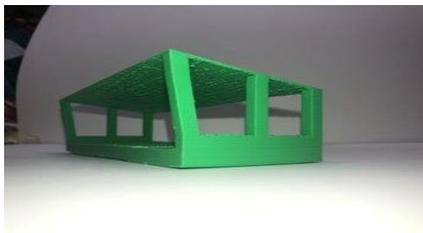
Clean energy transportation we are free e-bike.

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Background: The basis of the project is to create a method of clean and sustainable transportation, for the city of North Vancouver, we are aiming to reduce carbon emissions, attract people to popularize the mindset of clean energy and as well as to provide a reliable service of transportation. We will create an e-bike station for the people of the city of north vancouver that provides e-bikes to travel through the city, these bikes are self sustained and use energy from solar panels this is how we will reduce our carbon footprint.

Relevance to City goals: The relevance of this project is to reduce the amount of pollution and increase air quality in the future years to come. By having people using e-bikes instead of cars and busses we will reduce carbon emotions in the long run. The city will also save money because they will not have to pay for electricity given that the e-bikes will be powered by means of solar. The money that is saved can be put back into the city for other projects.

Overview of project: Our team was responsible for the entire design of the ebike clean energy station. We came up with various designs of the physical structure of the satition and as well as implemented it to achieve the goals that the city needs, we placed solar panels on top of the structure to provide clean power for the ebikes and a kiosks for people to rent out the ebikes. The structure of the design is here and was made in autocad inventor and then 3d printed.



Methods: The steps for using the project would be to scale up the model to a real life structure and implement high quality solar panels, we contacted a company called Empower solar and they can provide the most sustainable panels for the upscale project. The structure was designed to be made with glulam posts and carbon steel frames for the solar panels support, we also added a concrete base support and that will be flush with the ground.

Key findings: We found that creating circuits with solar panels is rather difficult and takes multiple trials and errors to get them to start working. We also found that to get the best design of the model structure we had to make several models and improve upon them to finalize the best design possible. The most important finding was that solar panels are definitely a sustainable source of energy and can be used for our communities benefit to aid our environment and save money that can be put back into our community.

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