

## MOTIVATION LETTER

Coming from the nation with a wide variety of topography and climatic condition, within a limited stretch of geography, I always used to get fascinated about the diversity of natural resources we have been gifted with. However, it was only after my graduation in Mechanical Engineering when I started viewing my country as a place gifted with variety of sources for the generation of renewable energy such as solar, wind, hydro, biogas, biofuels, etc. The same vision of generalization which I got from my bachelor's degree compelled me to analyse the scenario regarding the actual conversion of available potential resources in to work output throughout the nation. After analyzing such scenario I came to a conclusion that my country needs a lot of skilled manpower and research scholars in energy sector in order to fully utilize the abundance of renewable resources and hence I planned to pursue a postgraduate program in Energy Science and Engineering with a planned dream of serving my motherland with the specialized knowledge and skills which will be obtained from the postgraduate Programme.

Apart from this, my B. Tech project also relates its root with one of the major section of renewable energy sector which is Solar PV cells and accompanied by dynamics part of core (Mechanical) engineering. My project work was based on the concept of energy optimization of the solar roof added on automobile vehicles. It used the idea of self-tracking solar panel so that maximum amount of normal rays could fall on the solar roof independent of the direction in which the vehicle approaches resulting in better energy absorption. Due to the limited knowledge of subject and tools, project was finally limited to a prototype model which needed further modification such as material flexibility of solar roof, reduction of mechanical losses due to movement of the panel and optimization of the shape of roof so that the air drag loss can be minimized. Therefore, I would like to take this opportunity to pursue postgraduate Program at IIT KGP in the Department of Energy Science and Engineering as it has wide range of course content, expert faculties as well as extensive lab facilities with which I can extend my knowledge base and level of practical exposure and hence further involve myself in working on energy efficient systems.

In addition to this, I do have keen interest in research and academia. While mentioning my interest in research and academia, I would like to mention that I have two years of experience in teaching mathematics to class nine and ten students. It was the time after my intermediate when I was preparing for scholarship for bachelors studies. I involved myself in teaching mathematics and the feedback from my students really made me feel that I have some natural bent in teaching. I am good at analyzing things and hence I hope that it would help me in research career as well. With such lab facilities accompanied by numerous experts in energy field I am confident to take my research abilities to the next level once I get chance to be enrolled in such an eminent department at IIT KGP.

Finally, the conglomeration of different nationalities and cross-cultural atmosphere inside the campus is one of the biggest reasons someone really enjoys being part of the IIT community. The

aspirations, inspirations and perspirations of the students inside the campus gives you goose bumps. It is the place for dreamers and hence I could not help myself to resist getting into that zone of dreamers and achievers. Hence I would love to be a part of IIT KGP specifically in the Department of Energy Science and Engineering so that I can eventually turn out to be a part of the workforce in the sector such as renewable energy generation, energy management, energy systems modeling and become a scholar in energy engineering field.