ACKNOWLEDGEMENT

Writing a thesis is a life-changing experience and without the encouragement, help, and support of a number of people, it would never have come to realization. It is with honest gratitude that I acknowledge and thank the following people who were such reagents in my dissertation process.

I pay my sincere gratitude to University of Petroleum and Energy Studies for giving me this opportunity to do research. I am highly indebted to Dr. S. J. Chopra, Chancellor and Dr. Parag Diwan, Vice Chancellor for their words of wisdom and motivation, to bring the best in me. I am highly thankful to Prof. Utpal Ghosh, PVC and Dr. Anirban Sengupta, Dean for their support and encouragement during my research studies.

I take this opportunity to express my gratefulness to my guides Dr. Krishan Kumar Pandey and Dr. Arvind Kumar Jain. They have been an inspiration for me to work hard and achieve higher standards in my research work. I thank them for their constant support, expertise, guidance, encouragement and commitment during every stage of this thesis development. I would also like to thank their family for all the support, love and care during these years.

I am extremely indebted to Prof. Anil Kumar, HoD, if it wasn't for him I doubt I would have ever been able to navigate my way through this, ever so important process. He kept me on track, understood my health and family circumstances and allowed me the freedom to make and correct mistakes without making me feel inadequate. He is one in a million.

I express my humble gratitude to the industry experts who have been cooperative and supportive in rendering me the valuable advices and inputs. Special thanks to Mr. Ashish Nandan who helped me whenever I needed. He is the person without whom building industry contact would have been very difficult. A very special thanks to Mr. Anil Lakhina who allowed me to work with him and learn what 'Solar' is, when I knew it as just a shining Star. Special thanks should also go to the interviewees and questionnaire survey respondents. Without their participation, the thesis could not have been written as there would have been no empirical data.

I would like to thank all the FRC committee members, Dr. Tarun Dhingra, Dr. Atul Razdan, Dr. Prasoom Dwivedi, Dr. Joji Rao and Dr. D. K Punia for their valuable inputs and suggestions. At UPES, I am also grateful to a number of people including Library, Finance, IT and Admin staff for their assistance and support. I am sincerely indebted to the faculty members and all my fellow doctoral students for their support and constant encouragement. A special thanks to Mr. Parimal Srivastava, Mrs. Kriti Srivastava, Mr. Vijay Pal Singh Shekhawat, Mr. Md. Yaqqot, Mr. Atri Nautiyal, Dr. Namita Pragya, Mr. Manish Yadav, Mr. Manish Madan, Mr. Jayant Mahapatra, Dr. Hiranmoy Roy, Dr. Anshuman Gupta, Dr. Ajit Nigam, Mr. Vijay Pal Shekhawat, Mr. Vinayak Saxena, Mr. Robin Malhotra, Mrs. Tanu Malhotra, Mr. Sanchit Lakhtakia, Mr. Abhinay Bajpai, Mr. Devanshu Bhatia, Dr. Anil Ramesh, Mr. Loveraj Takru, Ms. Sonal Gupta and Ms. Shilpi Mukherjee and last not but the least my students who have always been a source of motivation and support.

I would like extend my special thanks to my friends who have provided unconditional support to me all these years and especially in the last days of my submission, Dr. Neha Grover Nagpal, Dr. Geo Jose Fernandez, Ms. Somya Sharma and Ms. Tanushree Sharma.

Lastly, I must express my deepest appreciation to my dearest family member, my mother, my elder brother and his wife who have been there for me ever, my elder sister and her husband, my nephew Raghav, Amodh and Madhav and my niece Anika. Especially, I would like to thank my beloved wife Akanksha who appreciated my efforts and always provided cheerful encouragement during the period of study and whose love and affection provided me joy and relaxation though she sacrificed a lot of my company. And finally, to all of those people who encouraged me throughout this process, your inspiration is what guided me, and I am truly grateful to all of you. Although this study is completed, it has opened the door for others to continue to strive to gain a better understanding of solar energy. And last but not the least I'd like to thank GOD for everything.

Karan Kapoor March, 2014