

## The Climate Connection

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# Green careers guide

Haider Asfandiyar Pakistan



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Since childhood, I was passionate about civil engineering and used to get intrigued by mega structures like dams, bridges and skyscrapers. In pursuit of my passion, after completing A- Levels, I did bachelors in Civil Engineering from National University of Sciences and Technology (NUST) Pakistan. During my graduate studies I realized that the man-made structures and the built environment around us are one of the huge sources of greenhouse gases (GHGs). The major components used to build our cities: concrete and steel are not only major contributors of pollution but also one of main causes which lead to man-led climate change.

Moreover, the energy needed to drive these carbon factories: urban cities and transportation systems are dependent on fossil based black economy which multifold the effects of Climate Change. In order to understand the business as usual with special regards to construction industry and to bring about a paradigm shift towards a more cleaner, greener and sustainable built environment I decided to pursue Masters in Construction Project Management from the prestigious Loughborough University- ranked amongst top five universities in UK and second best in building engineering. At Loughborough University my electives were focused on sustainability in built environment and included topics concerned with green and sustainable buildings. This also encouraged me to have my research thesis on Skills needed for zero carbon development, decent work and Sustainable Development Goals (SDGs): to work towards a



just transition where green jobs shall be created without compromising the existing job set while enhancing the green skills pool and enabling cities to become hubs of innovation and act as carbon sinks rather as carbon sources. This enabled me to look at development not mere in terms of economic development but rather economic, social, cultural and development which preserves the environment. Sustainable development became the criteria to take along development hand in glove with nature.

Fortunately, when I got back to my home country, I got the opportunity to work with big names like Pepsico International where I worked on one of Pakistan's most innovative projects in Multan: Pepsico Greenfield project where I managed the LEED certification for the project. LEED stands for Leadership in Energy and Environmental Design, which is a criteria to assess green buildings and facilities. At this stage, my quest to work in the renewables and environment friendly systems became so strong that I decided to have a full time career in renewables and green and smart buildings. I completed my US-Green Buildings Council certification: LEED Green Associate.

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Later I got the opportunity to raise awareness about sustainability in built environment at national level by working in Ministry of Planning, Development and Reforms (MPDR) at the China Pakistan Economic Corridor (CPEC) cell as a Young Development Officer/fellow. This raised the bar for me in terms of project management and how renewables could bring a positive change, not only in Pakistan-Pakistan being signatory of Paris Agreement- but also could help fight Climate Crisis at global scale. This allowed me to work on mega renewable projects like 50MW Sachal wind power project and many hydrobased renewable projects. This also opened doors for me to understand lean management of mega solar projects like 900 MW Zonergy solar power project. After working in renewable sector I focused on working towards net zero energy homes/buildings: the total amount of energy used by the homes/buildings on an annual basis is equal to the amount of renewable energy created on site. For this purpose, I joined hands with a local construction firm in Peshawar (ASFANDIS Builders) and gave consultation/supervised construction of one of Peshawar's most sustainable and innovative projects. The project consists of a green roof on top to mitigate effects of storm-water run-off. Further, it fights the effects of Urban Heat Island Effect: An urban heat island is an urban area or metropolitan area that is significantly warmer than its surrounding rural areas due to human activities. In addition, it helps in reducing loads on facility's air conditioning- keeping the facility cool in summers. Moreover, the project has onsite solar PV panels which provide facility with its own clean, renewable energy around the clock.

In my latest project, I am working under the dynamic leadership of Dr. Najeeb- PhD from Cambridge University and CEO of Future Gen Solar (Private) Limited which is Pakistan's first ever manufacturing (not assembly) unit. Our team is working on KP funded project to manufacture first ever prototype of a third generation solar cell. Next step is to manufacture on commercial scale. I am involved in stakeholder management as well as to look into possibilities of integrating PV into building materials. It is also imperative to mention that due to my educational background and my efforts to fight climate change with my undertaken projects in domain of renewables and sustainable development I was selected by World Economic Forum and Melbourne School of Design to represent at The Climate Reality Project Training and got to meet and be trained by the former US Vice President AI Gore and gain hands on knowledge from him.

My advice to young aspirants who want to work in green renewable industries is to think outside the box and no matter what subject you want to study, think in terms of how you can play your role in enhancing the footprint of green energy and consider development in such a way which can be sustainable: economic, social and environmentally viable. Follow your passion and be creative!



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#### Images:

With Ken Berlin: Preseident and Chief Executive Officer of The Climate Reality Project

Green Roof Project

Successfully developing Prototype of Third Generation Solar cells- KP funded Project



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