



# The Climate Connection

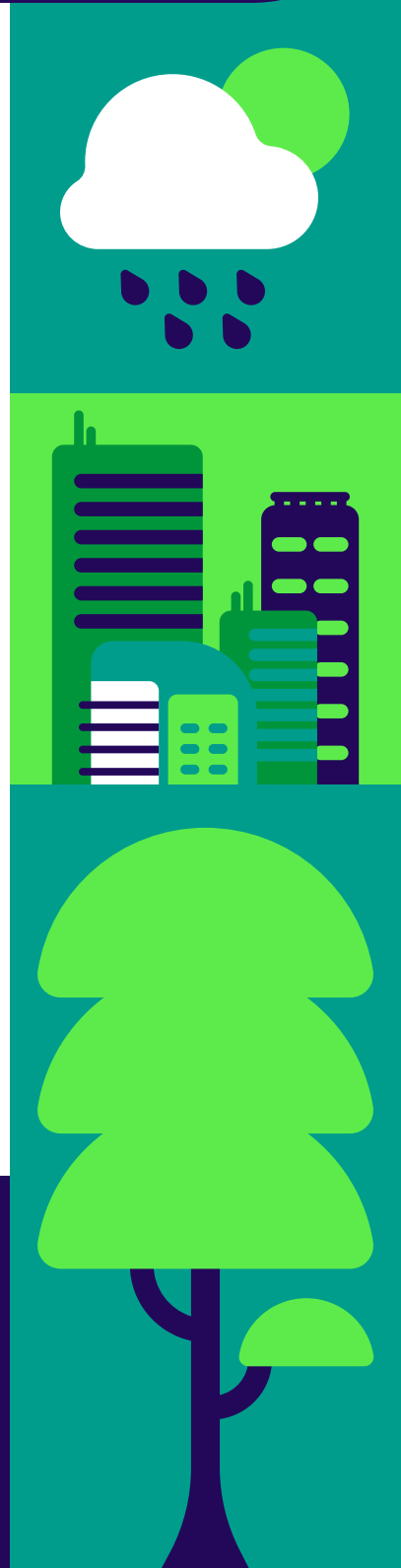
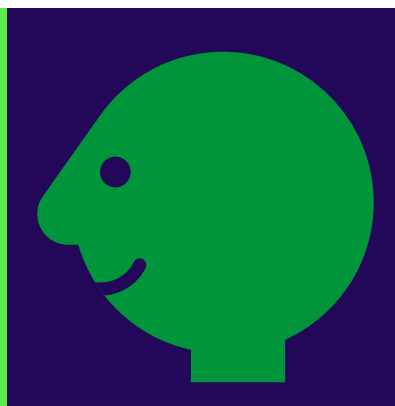
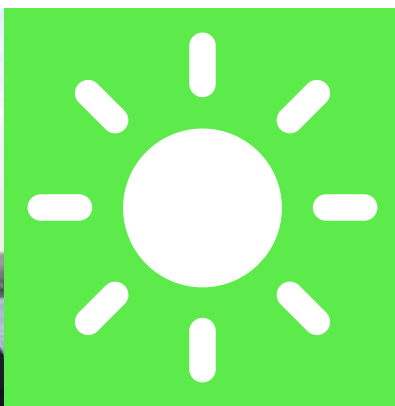
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# Green careers guide

Dr Arturo Alarcon Rodriguez  
Brazil



# Dr Arturo Alarcon Rodriguez

## Brazil



**My name is Arturo Alarcon-Rodriguez, I was born and raised in Bolivia. I am an electro-mechanical engineer, and currently a senior energy specialist in the largest multinational development bank of Latin America. In 2004 I was awarded a Chevening scholarship to pursue a master's degree at the University of Strathclyde, in Glasgow.**

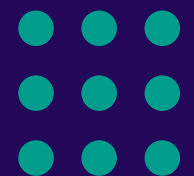
I chose the MSc in Electrical Power Engineering with Business, as I wanted to have a better understanding of the electricity industry, not only from the technical perspective, but also from the regulatory and economic point of view. Studying in the UK at that time gave me the opportunity to be in the front row of the discussions that, already in 2004, were held on the transition towards a more sustainable future. Twenty years ago, the British universities were already researching some of the innovations that are currently being implemented (such as electric vehicles and distributed generation).

In 2005, I graduated with distinction from the master's program. However, I wanted to learn more about how power systems were going to evolve and wanted to be part of that revolution. I applied to the PhD program in the Electrical and Electronic Engineering Department at Strathclyde. My PhD focused on how power systems should be planned with large numbers of distributed energy resources, that is, photovoltaic generators, electric vehicles and storage devices connected to residences. I developed and coded a computer program that could help to answer that question. My PhD experience in the UK was life changing. As I conducted my research, I was able to be in touch with top researchers from all over the world, and to participate in technical discussions



about issues that still today are relevant, more than a decade later. Particularly, I feel that I had the chance to have a preview of the future, and to be prepared for it. That future is happening now.

I finished my PhD in 2009. After my graduation, I worked at the University of Strathclyde as a research assistant, at the Institute for Energy and Environment. There, I was able to participate in a project that was called "Transition Pathways towards a low carbon economy". This project discussed on how to decarbonize the British economy, something that now is happening, not only in the UK, but all over the world. The transition towards a low carbon economy is something we all need to think about now, as climate change is the most pressing issue that our society is facing, and perhaps our biggest challenge ever. Solving climate change will require not only individual action, but collective commitment to a more sustainable way of living.





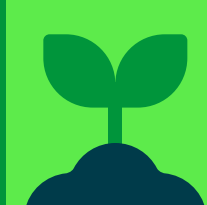
Although I loved the academic life, I also wanted to try a “hands on” job. In 2010 I applied for a job as Energy Analyst at the Energy Division of the Interamerican Development Bank, the most prominent multilateral development agency in Latin-American, which provides funding and technical cooperation to 26 countries in the region. There, I started working as an energy analyst (2010), in Washington USA, and was later appointed as energy specialist (2011), in Bolivia, and furthermore as regional energy specialist (2015), in Brazil. Since the end of 2020 I am based in Panamá. In the last decade I lived in four countries. Quite an experience!

In these roles, I lead and worked as a team member in the preparation of loans and technical assistance that helped to fund more than US\$3 billion dollars of investment in Bolivia, Brazil, Argentina, Uruguay, Paraguay, and Panamá. Although all these projects were focused in the power sector, they were also very diverse, and ranged from rural electrification with photovoltaics to hydropower development. All these projects had a direct impact on sustainable development, as it is the main role of the institution I work for.

For instance, one of the projects was a rural electrification program that allowed 15,000 people to gain access to electricity in rural Bolivia. This program also funded the installation of the first hybrid solar power microgrid for rural electrification in Bolivia, reducing the use of fossil fuels in very isolated communities. I was also the coordinator of a project that permitted the installation of a 120 MW hydroelectric power plant in Cochabamba, Bolivia, enough to provide electricity for one million people. This project was emblematic for Cochabamba, as it was also associated with the provision of fresh water. This project was very important for me, as Cochabamba is my hometown.

In Brazil, I was able to support a project for the development of more than 1,000 MW of wind farms, by means of the creation of a credit line of US\$750 million with a local bank. Moreover, I co-lead the approval of a loan of US\$600 million to provide funding to small municipalities for energy efficiency and distributed generation. As part of this project, I led the preparation creation of an online training tool that is helping Brazilian municipalities have a more sustainable use of energy.

My work at IDB also includes the opportunity to do some research, and to produced publications. For example, I have published a guide for the use of distributed solar power in social infrastructure, which was translated to four languages. Also, I have edited, and coauthored publications related to the modernization and digitalization of hydropower. In my role of energy specialist, I have participated in many speaking events, including seminars, workshops, congresses. Perhaps the highlight was my participation as the co-convener of the digitalization session in the World Hydropower Congress, that took place in France in 2019.





When I look back at all the places I had the chance to visit, all the people I was able to meet, and all the projects I had the chance to be involved, it seems like a dream. A dream that came true. I am sure I would not have been able to achieve it without the knowledge I gained while in the UK, and without the glimpse to the future that I was able to have back then. And perhaps the most important bit was the people I was able to meet while I did my MSc and PhD. I am still in touch with them.



electricity from water, sun, and wind, we will be able to build a future that is more sustainable.

The new generations are the ones that will have to lead this transformation. And they have a challenge, as things change faster every day, knowledge is produced massively, and there is already an overflow of information (and distractions). I think they will need to be flexible, to adapt constantly, and to learn how to focus on what is important. It will be key for them to find that sweet spot where you can combine your passion with your career, as that makes everything easier. If I had to give a single advice for young people entering the green industry, it would be to try always to look ahead, ten, fifteen years, and then, be prepared for the change that is coming.



We are going through difficult times, not only the COVID-19 pandemic, but also the real need to address climate change. However, I am optimistic, I believe not all are bad news, in the last decade or so, I've seen how the perspective and position from people in the power sector have changed. If 15 years ago distributed generation was something not taken seriously, or seen as a threat to traditional power systems, now it is a concept that is widely accepted, and already business as usual in some countries. Likewise, electric vehicles one or two decades ago were only taken seriously in research labs, now it is possible to buy several commercial models. I am very confident in human ingenuity, and I am sure that, as we were able to produce







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