Six months ago, in November 2018 I had the honor to become part of “Empowering Women as Managers in the Renewable Energy Sector,” an executive program developed by the U.S. Department of Energy and the Asia-Pacific Economic Cooperation (APEC). The women-only program was divided in several phases that included a thorough online training related to renewable energy (RE) developments including topics as project management, RE co-benefits, financing, economics and gender-energy nexus. It was delivered by the Berlin-based, Renewables Academy (RENAC).

After several months of a challenging education program, I became a program finalist and was invited to Singapore to a face-to-face training with other 13 women. Our countries included Chile, Indonesia, Mexico, Philippines, Thailand, and Vietnam. The group was joined by the (women) managers of the program from Cameroon, Costa Rica and Lithuania, all based in Europe. The final training week in Singapore gave each woman the opportunity to share her story and their own path to their current professional position. It was an honor to participate in those conversations, where we all talked about challenges and opportunities in the energy sector while contributing to our world’s energy transition.
The face-to-face training included the participation of investors and sector experts, male and female, from the region and Singapore. They engaged with us in furthering deeper discussions and analysis about the renewable energy sector’s future in the Asia-Pacific region, and how each of us could contribute to its development.

The Asia-Pacific region, through APEC addresses the importance of the energy sector in this geographical area, as it accounts for nearly 60% of the world’s energy demand that includes “four of the world’s five largest energy consumers as China, the United States, Russia and Japan.”

According to APEC, ministers and leaders of the region are working together towards achieving two main objectives: 1) doubling the share of renewable energy in the region’s energy mix including power generation by 2030; and 2) reducing the region’s aggregate energy intensity by 45% from the 2005 levels by 2035. These goals were set out in the 2014 and 2011 APEC Economic Leaders Declaration, respectively. It was my first time in Singapore, a small island, city and state, an important Asian economy, and a part of the world with limited land and natural resources. Due to those limitations, Singapore has committed before the United Nations to take actions to overcome their sustainable development challenges. The country looks to achieve its vision of a “clean, green, and sustainable Singapore” where its citizens and future generations can enjoy a healthy and fulfilling life. Singapore has focused its efforts on sustainability and produced ecosystems for flora and fauna on its territory from all over the world.

While in Singapore, and before investors, researchers and my fellow classmates from the Asia-Pacific region, I presented my business plan idea, a gender-related program called: “La Huasteca: Bringing Clean Energy Technologies to Women in Remote Communities of Rural Mexico,” which focused on promoting wellbeing of indigenous women living in
remote areas by providing them access to cleaner technologies and resources for their daily chores: specially woodfire cooking. In making an effort to address this problem in a hard-to-access area in Mexico, I targeted “La Huasteca” and focused on San Felipe Orizatlán in the State of Hidalgo, where I grew up and went to school before going to college in the United States, and starting my renewable energy journey.

**The Idea**

After spending half of my life in San Felipe, I was able to fully immerse in the local culture, traditions, but also became aware of local problems including energy poverty. Energy poverty is a recurrent problem affecting a large amount of the population, especially women living in rural areas, where they have no access to clean energy technologies to cover their homes’ energy needs.

Women in rural areas cook their meals the traditional way, using firewood, resulting in high-levels of exposure to black carbon for prolonged periods of time, in addition to spending a significant part of their day collecting firewood. The aforementioned exposure leads to health problems such as blurry vision, lung cancer and other respiratory issues in the short and long term that at the same time decreases their income, as they need to pay for a doctor’s visit or medication. This problem has affected the “La Huasteca” region for generations and this business plan aimed to be a key contributor to the general wellbeing needs of the target group.

My social business plan looked to address the energy poverty and gender nexus as a very important area of development, especially after looking at the needs of women living in rural areas. I focused on Goal #5 Gender Equality: “Achieve gender equality and empower all women and girls” and Goal #7 Affordable and clean energy: “Ensure
access to affordable, reliable, sustainable and modern energy for all”. These two are part of the United Nations’s list of 17 Sustainable Development Goals (SDGs), which are considered a “universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity.”

**The rationale of the business plan**

The Renewable Energy Policy Network for the 21st Century, REN21, conducted a Global Final Energy Consumption study in 2017 that found that 19.3% comes from renewable sources that corresponds to 10.2% from modern renewables and 9.1% from traditional biomass. Traditional biomass releases emissions that have a great impact on the global climate change including carbon dioxide (CO2), methane (CH4) and others with lower impact as carbon monoxide (CO), black carbon and brown carbon.

Energy poverty and its link to climate change relies on the fact that approximately three billion people or 45.26% of the world’s population -estimated by the World Bank in 2017, live in rural areas and therefore, a large part of this population rely on and decide to use traditional biomass for cooking, which is prejudicial for them in a variety of ways. They are also located in areas vulnerable to environmental impact due to climate change. In regards to access to developed energy services there is a great importance on human needs as addressing basic energy services as electricity, health, education, but not excluding the use of the modern fuels and clean technologies for cooking.

The use of traditional biomass is a main source of energy in the rural world to cover basic needs such as cooking and heating. Cooking is considered an activity associated directly
with women and has been perceived as a global social issue related to gender that directly affects those from rural areas that lack access to efficient fuels for energy transformation. Women traditionally are the ones in charge of the household activities, including providing the majority of fuels needed for the household energy needs and cooking –using firewood every day exposing themselves to direct smoke for hours.

The Global Alliance of Clean Cookstoves states that “a reduction in time spent collecting fuel and cooking enables women to spend more time with their children, tend to other responsibilities, enhance existing economic opportunities, and pursue income-generating or educational opportunities and leisure activities and rest – all of which contribute to poverty alleviation”.

**Mexico**

Mexico has a population of 127.5 million people, according to the World Bank, and 20% of the total is considered rural. Approximately 25 million people cook their daily meals with firewood.

Mexico’s Ministry of Energy determined that firewood is one of the main fuels for residential use in the country’s rural homes as it provides about 80% of the energy consumed.

The last official census conducted by Mexico’s INEGI in 2015 concluded that the State of Hidalgo ranks number 8th in the top ten list of the highest levels of poverty in the country, has a population of 2.85 million, with 52.1% women, and 48% of the total live in rural areas.
Results and Possible Next Steps

After presenting my business plan idea in Singapore I was able to engage on further discussions to enhance my business proposition. I also got the opportunity to meet organizations and experts with which, in the near future when funding becomes available, I am planning to implement a pilot of my project in San Felipe to directly benefit women in the surrounding area where I grew up to provide them access to cleaner energy sources to help them reduce their daily black carbon inhaling from cooking.

Since my first women-only professional training experience, I have learned many personal and professional skills that have empowered me both, in the personal and professional arena.

I learned that providing women and any professional with the right skills and education would skyrocket their empowerment to become more immersed and therefore more successful in the professional field. My training experience also taught me lessons related to the importance of supporting each other and being empathetic to understand the needs of a diverse workforce and working environment full of brilliant female and male professionals to contribute to each other’s success.

Finally, the aforementioned program provided me with a deeper understanding of the role of women in the renewable energy arena and how I can contribute directly to its development. It showed me how rapidly the world is moving towards its energy transition, and how it is complemented by those empowered and with a passion about it willing to make a difference, whether male or female.
About Jacqueline

Jacqueline Sanchez serves as Energy & Sustainability Policy Associate at the Institute of the Americas in La Jolla, California, where she focuses on energy, sustainability and trade policy development issues with countries in Latin America.

Jacqueline has actively participated in climate change and renewable energy endeavors including being part of the U.S. Department of Energy and APEC program: “Women Empowerment in the Renewable Energy Sector”; becoming a Climate Reality Leader for Al Gore’s Initiative: The Climate Reality Project; and participating in California’s Governor’s: Global Climate Action Summit.

Before her current role, she worked for the British government at the British Embassy in Mexico City as Senior Trade and Investment Officer leading the Renewable Energy and Environment sectors, and at the British Embassy Quito as Commercial Attaché.

Jacqueline holds two bachelor’s degrees in Business Administration and Accountancy with concentration on International Business from New Mexico State University (NMSU) and an MBA from Mexico’s Institute of Technology (ITAM). Ms. Sanchez studied at the University of Angers in France and her postgraduate education includes a diploma in Project Management from ITAM and a certificate in Economics for Foreign Policy from the London School of Economics (LSE).

Ms. Sanchez has ten years of experience in international business development covering different sectors and has a broad knowledge of the U.S., U.K., Mexico and other markets in Latin America. Jacqueline has worked, lived and studied in the U.S., Mexico, France, and Ecuador, and speaks Spanish, English and French.