Reflection of an Intern

Learning the impact of Distributed Renewable Energy first-hand

Crossing from Assam into Nagaland's Mon district, the difference between the two regions was stark. Even after making the journey repeatedly during the course of my internship at Hamara Grid, it never failed to surprise me. Along with the sudden absence of paved roads, the police checkpoint that greeted us at the border served as a reminder that though tensions have eased, the state is yet to return to normal. The conflict has constrained development in the region, particularly in Mon, whose economic conditions lag behind those of the other districts in the state. Electricity tends to last only a few hours a day, stifling the growth of small businesses and leading to over 90% of the workforce engaging in agriculture as their primary source of income. Through the installation of solar mini-grids in the 132 villages across the district, the Hamara Grid team was hoping to change that.

The view of the solar mini-grid installed by Hamara Grid in Chenwetnyu village, Mon district, one of the three pilot villages.

While thirty to forty years ago, a lack of access to electricity was not a binding constraint for a poor person to participate in the economy, today it is. Particularly since the outbreak of COVID energy has become an enabler of fundamental aspects of development, especially agricultural productivity, health, education, and job creation. But if there is one lesson that has stood out to me from the past three months, it is that the quality and reliability of that electricity is arguably as important. Unreliable service harms production and profits, and increases the appeal of outward migration for enterprising individuals looking for infrastructure they can have confidence in. To ensure livelihood growth and an increase in village GDP, villagers need a secure platform on which to build there micro-enterprises. I was lucky enough to meet multiple local entrepreneurs who, though still adapting to using electric machines, were enthusiastic about taking up the new opportunities their grid connection had given them.

Reliable electricity access is also particularly important in improving social outcomes. Light extends the effective work day, allowing women to leave certain household chores for the night. If the power supply is erratic, these benefits will fail to materialise; electrified households receiving no electricity at night will fare little better in this regard than households without a grid connection. Equally, though research shows that women in unelectrified households hardly undertake any reading irrespective of their education level, a reliable supply is crucial in ensuring educational outcomes improve. The solar grid, with 24*7 service and a back up generator, guarantees this. Finally, while working in Chenwetnyu village I was struck by how many women of the village would go out for firewood, from the early hours of the morning until 4-5pm. India in fact burns 22% of the world's biomass, the largest of any country and a disproportionately high figure on a per capita basis. Switching to electric alternatives allows time to be devoted to more productive activities instead, while reducing exposure to harmful pollutants from the burning of biomass fuels, which women are especially exposed to.

Boing Konyak, of Totokchinga village, welcomes us into the hut housing his newly installed 7 HP electric rice mill.

Mon is home to the Konyak tribe, notable for their tattooed faces, heads, necks, and backs, earned through headhunting. The umbrella term conceals the immense cultural richness of the district. There are 28 different Konyak dialects, each of which represent a people with their own practices and cultural motifs. Yet the influence of foreign missionaries has precipitated one of the most dramatic social transformations to have taken place in any tribal society. Once largely animist, the Konyaks are now 98% Christians; each of our inauguration ceremonies were bookended by a prayer to the Lord. Many of the traditional practices have dwindled, in some cases for the better – the last recorded case of headhunting was in the 1980s, and tattooed faces in the village are few and far between – but in many instances for the worse. As youth outward migration has increased, Konyak craft practices have not been passed on and knowledge of them is diminishing. Some also fear that the traditional tribal songs will be replaced by Bollywood ones. Hamara Grid is working to harness the solar grid to preserve these practices. Partnering with industry specialists, work has begun to provide work to local artisans and hopefully build an artisanal hub that will promote these invaluable techniques and knowledge well beyond the lifespan of the solar grid.

While practicing a traditional dance, Totokchinga villagers don weapons, detailed sashes and elaborate headdresses, all made by the locals.

This is just the beginning. Solar energy infrastructure is beneficial in and of itself, but if sustainable and enduring development is to be realised the quality of service provided by the mini-grids must be harnessed. The villagers in Totokchinga, Longkei, and Chenwetnyu are the first in the whole of Mon district to have access to three-phase electricity and attuning to that is never a straightforward process. Providing funding to buy new machines is not the only issue. As I leave Mon for the last time, the Hamara Grid team is pivoting towards building the confidence of budding entrepreneurs to take the leap towards electrifying their livelihoods. It will take time, but the close ties formed between the team and the Konyak communities over the past few

months gives me confidence that the project will continue to blossom in all its many faces, strengthening the commitment of all parties involved.

Santiago Tricks is an 18-year old budding writer with a particular interest in sustainable development and global affairs who recently completed a three-month internship at Hamara Grid from December 2021-March 2022. He has a place to study under the History faculty at King's College, Cambridge starting in October, 2022.