

## Lighting Up the Streets of Nineveh, Alqosh Sub-district, Iraq

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### Background

In 2011, at the age of nine, I visited my relatives in northern Iraq. It was exciting to connect with my heritage, culture, and family. I adore Iraq for connecting me with my extended family and cousins; the multitude of stories shared; the food, especially the fruits; the different ethnic and religious groups; and the beautiful scenery. I enjoyed those three months in Iraq, and I desire to go back, but I also saw where the Iraqi government had failed to serve and protect its people. As someone who grew up with stable electricity, I was not accustomed to the electricity turning on and off daily. Therefore, I felt uncomfortable asking my family to turn on the generators to create electricity because they must pay for the diesel fuel. Those three months I spent in Iraq are forever ingrained in my mind, and I have promised that I would help bring peace where in a developed world, electricity is a necessity. Electricity allows people to connect and grow, but reliable electricity is not available for every person. Unreliable electricity can cause community-wide stress, educational barriers, safety concerns, and interruptions in daily activities. On top of that, the inconsistent electricity makes it difficult to transition to a virtual environment in a pandemic. This project benefits the entire sub-district with solar LED street lighting, which will alleviate the stress and anxiety triggered by the darkness.

### Regional Context

In northern Iraq sits the historical village of Alqosh which holds the burial tomb of Nahum, an Old Testament Jewish prophet, and Rabban Mar Hormizd Monastery, a Christian Holy Site. Alqosh is home to Assyrians, a Christian ethno-religious minority group that has been marginalized and persecuted for centuries. The citizens are still recovering from the Iraq-Iran war to the ISIS invasion, where infrastructures collapsed like the electrical powers<sup>1</sup>. As a result, the electricity turns on and off, creating burdens during the day and fear at night. During the day, families have to transfer food from the refrigerator to the freezer, buy diesel to fuel the generators, have cold showers after sunset, and adjust their daily lives to unpredictable electricity hours. Then in 2014, ISIS took advantage of the darkness at night and targeted the northern Christian villages, disrupting the peace of many homes. After the defeat of ISIS, families were able to return to their homes but were hesitant to engage with evening events in the dark. Thus, our project aims to improve safety and security conditions by providing motion-sensored solar LED street lights for the village of Alqosh in Nineveh province.

### Community Partners

The Shlama Foundation (Shlama<sup>2</sup>) is a 501(c)3 non-profit organization in northern Iraq founded after the ISIS invasion and strives to rebuild villages directly and indirectly affected by ISIS. Shlama's mission is to fund humanitarian aid and emergency response projects for ethno-religious minorities, which will help survivors of mass atrocities live and prosper in their ancestral homeland. In only seven years, Shlama has funded over 200 humanitarian projects, including the installation of solar power projects in villages with limited or no source of government electricity<sup>3</sup>. For instance, Shlama installed solar LED lights in three villages throughout Ninewa: 36 solar LED street lights in Tesqopa, 25 in Ain Baqre, and 24 in Bendawaya. Shlama will proceed with the implementation of solar lighting in Alqosh sub-district as it is a populous village lacking a basic electricity infrastructure. Shlama has forged trusting relationships with the indigenous Assyrian communities and established great rapport with local leaders which is how I heard about the Shlama Foundation. My family in Alqosh are thankful for the projects Shlama has completed in the villages and when I wanted to learn more about the electricity in Iraq for a paper, my

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<sup>1</sup> M. Reda, N. Saied, A. Khaldi, M.A. Abdul-Hussain, A. Ekwue. "Iraq Electrical Power Infrastructure - Past, Present and Future Developments and Expectations.

<<https://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=4076010>>.

<sup>2</sup> "Home." *Shlama Foundation*, 2022, <<https://www.shlama.org>>.

<sup>3</sup> "Completed Projects." *Shlama Foundation*, 2022, <<https://www.shlama.org/projects>>.

cousin informed me that I should contact the Shlama Foundation. I was able to talk to the cofounder, Evette Shahara, who has been my point of contact for this proposal.

### **Project Objectives**

The Alqosh sub-district becomes flooded with darkness after government electricity cuts off. In contrast, the neighboring village Bendawaya is bright at night because of the solar LED streetlights. The next step is to install solar LED street lights in the main streets of the Alqosh sub-district. Inflation will create variation in the number of street lights installed, but the quantity will be in the range of 25-30 street lights. I will be responsible for evaluations where I will talk to local leaders pre- and post-implementation about crime statistics, traffic accidents, pedestrian deaths, economic activity, and social gatherings to track performance indicators of the solar LED streetlights. Then, after post-implementation, I will do a zoom/phone call with local citizens and ask about their satisfaction with the solar LED streetlights. The uplist data will hopefully show a reduction of car accidents and pedestrian deaths, increase of social gatherings and community-building, economic activity due to extended business hours, and employment opportunities since the youth unemployment rate since 2019 is 25.16%<sup>4</sup>. The main focus of this project is to provide an alternative and clean source of electricity not impacted by government outages and sustainable practices that will increase solar power generation.

### **Project Activities and Timeline**

Working alongside the Shlama Foundation, my role will be split into pre-implementation and post-implementation of the project. For safety and security purposes, I will be contacting local leaders, citizens, and engineers through phone/video calls. For pre-implementation, I will 1) contact local leaders (mayor and priests) about the crime statistics at night, traffic accidents, pedestrian deaths, social gatherings, and economic activities to track performance indicators. 2) I will communicate with the distributors of the solar LED street lights to place and track the order and take inventory. 3) I will let the engineer of Shlama know when the order is arriving which can take three to six weeks after ordering. During implementation, I will make sure engineers are submitting their timesheets and documenting progress with pictures and videos for the final report. For post-implementation, 1) I will have a phone/zoom call with local citizens at different locations of the sub district to discuss post-implementation satisfaction. I will translate our conversations from Neo-Aramaic to English for our final report. 2) I will contact the local leaders to discuss statistics after implementation and create a data report for future projects.

### **Long-Term Impact & Sustainability**

Throughout this project, we hope the Lighting Up the Streets in Nineveh project will promote peace-building--to ensure sustainability, stability, and growth in the aftermath of genocidal devastation. This project is important for a vulnerable minority population in post-occupation, post-ISIS Iraq and will contribute to broader national and local reconciliation efforts. As agreed, engineers with Shlama will be responsible for long-term maintenance of the street lights to ensure they function properly, are cleaned after dust storms, and are repaired if damaged. Most importantly, engineers will educate the citizens regarding clean energy solutions. We will use our uplist data and citizens satisfaction to guide future projects in sustainability of northern Iraq. To increase awareness, local Shlama leaders and engineers have agreed to take pictures of the progress for the data as well as to spread awareness in their social media networks. With the financial support of the Davis Foundation, northern Iraq will be stepping forward into sustainable energy practices for the benefits of villagers now and for future generations.

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<sup>4</sup> "Youth Unemployment Rate for Iraq". *Fred Economic Data*, 2021, <<https://fred.stlouisfed.org/series/SLUEM1524ZSIRQ>>.

Projects for Peace Budget

<b>Name:</b> Athera Yakoo
<b>Project Name:</b> Lighting Up the Streets of Nineveh
<b>School:</b> University of Michigan, 2022

<b>TOTAL FUNDS REMAINING:</b>

<b>Total Additional Funding:</b>	0
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<b>TOTAL EXPENDITURES:</b>
10,000

Student Expenses					Project Expenses				
Travel (Including Airfare)	Lodging	Communications	Food (Biweekly)	Miscellaneous	Transportation Costs	Direct Equipment and Supplies	Marketing and Event Support	Staffing Costs	Miscellaneous
					220	8,230	200	1200	150
<b>Total</b>	<b>Total</b>	<b>Total</b>	<b>Total</b>	<b>Total</b>	<b>Total</b>	<b>Total</b>	<b>Total</b>	<b>Total</b>	<b>Total</b>
0	0	0	0	0	220	8,230	200	1200	150

<b>Total Student Expenses:</b>
0

<b>Total Project Expenses:</b>
10,000