

Biogas for Better Access to Energy and Livelihood

Rural villages in northern Syria are facing severe energy crises due to damaged infrastructure, fuel scarcity, and the poor quality and high price of fuels available. All this leads to a lack of power generation, greatly affecting people's lives. Recent fuel shortages in Idleb have led to an unavailability and unaffordability of this critical commodity for Syrians living in the area. Through the Biogas for Better Access to Energy and Livelihood program, **Global Communities is equipping 250 families with the materials and knowledge needed to produce biogas** at the household level, enabling them to cook, light and heat their homes using a sustainable fuel source. This innovative program is funded through the Sanders Family Philanthropic Foundation and Global Communities' own resources in order **to pilot the development of biogas wells as a means to promote resilience in conflict-affected agricultural regions**. Global Communities intends to take lessons from this pilot and reproduce, adapt and scale it in other applicable settings worldwide.



A newly installed biogas well.

Farming households begin with approximately 300-400 kg of manure in the well to jumpstart biogas production. Households can control the amount of gas produced by adjusting the amount of dung they input, but with just 10 kg per day, farming families can generate enough biogas to fuel approximately seven hours of daily use. Biogas can be routed directly into people's homes, and thus power equipment like generators, ovens or heaters.

The Biogas project **prioritizes low-income and female-headed households**. This program also builds off prior programmatic investments by Global Communities and its donors, targeting those previously supported through livestock distribution to strengthen communities and capitalize on prior investments.

“I use the produced gas for cooking, water heating, milk boiling, lighting, and running the generator. I also allow my neighbors to cook in my house and give them of the fertilizer for their planting.”

Woman benefiting from the Biogas Program participant, age 40

Global Communities has completed construction on the first batch of 120 biogas wells.

Biogas is produced through decomposition of organic waste, primarily manure. When the manure decomposes, it releases gas that can be captured and used as a household resource. To do this, Global Communities is installing simple, low-cost biogas digestion wells for farming households in Syria. The installation is accompanied by training, ensuring that beneficiaries use and maintain the wells safely.



Program participants are using biogas to meet household needs, such as cooking and lighting.

While it remains too early to be conclusive, initial results indicate that targeted households have **improved access to a sustainable, clean and cheap source of energy for daily use**, and this has increased their self-sufficiency and reduced the negative impact of fuel price spikes and shortages. Additionally, as a byproduct of the fermentation process, households have a **new source of fertilizer** for agricultural crops, reducing production costs and providing flexibility to address other needs.