**BIOGAS ASSESSMENT PROJECT**

**Site ID: 13**

**Date: July 20, 2022**

**Interviewer**: First question, where did this digester originate from?

**Interviewee**: I just saw people coming with the digester. Then, they placed the digester in the hole, and then telling us that the bag produces gas for cooking.

**Interviewer**: So you do not know them by name… I think this type of digester is from Ecogen. Uh, if you can recall, how many people were there?

**Interviewee**: I cannot exactly say how many people were there. I just saw people coming with the bag. I think when they came they simply put the bag in the hole because at that point the hole was already dug, so. Nevertheless, I cannot remember exactly how many people were there, I think it was two people.

**Interviewer**: Who dug the hole?

**Interviewee**: Hired workers?

**Interviewer**: How many?

**Interviewee**: It was two people

**Interviewer**: Who funded this?

**Interviewee**: The money came from the school.

**Interviewer**: Who built it? I mean, was it only the two individuals from the construction company and the hired workers? Who else was involved?

**Interviewee:** It was only them; the hired workers dug pit, and the other people assembled the whole thing.

**Interviewer**: Did you know about biogas before?

**Interviewee**: No!

**Interviewer**: Um-hmm

**Interviewee**: I only knew charcoal - I did not know anything about biogas (laughs). I only knew traditional means of cooking – charcoal and firewood.

**Interviewer**: So you have not heard about biogas?

**Interviewee**: Yes, I did not know anything about biogas.

**Interviewer**: Okay, what was your role?

**Interviewee**: When it came, our role was to feed it every day, from Monday to Friday, to keep it running all the time.

**Interviewer**: After the digester was installed, what were your expectations?

**Interviewee**: We expected to save money that we were spending on charcoal; I mean, once we learned that it produces gas for cooking, we anticipated to minimize usage of charcoal.

**Interviewer**: What else did you expect?

**Interviewee**: We expected to save money that was being spent on charcoal, so we expected to use the money for other things.

**Interviewer**: Okay, what things did you had in mind?

**Interviewee**: We hoped to use the money to buy relish for the students.

**Interviewer**: When the installers had finished installing the biogas digester, what did they say you should expect from it?

**Interviewee**: We expected to benefit… They simply gave us information regarding its operation. They said if we fail to feed it, we would not be getting enough gas and flames for cooking; and they said we should be feeding it. Secondly, they said the system produces water that clogs the pipes and stops flows of gas. Therefore, they said when this happens, we should be opening and removing water from the water trap, and then close it.

**Interviewer**: You mean water flows in the pipes.

**Interviewee**: Gas flows in the system

**Interviewer**: So, where does the water come from?

**Interviewee**: When the digester is not working or when there is no or little gas in the system, water starts accumulating in the pipes. As a result, it stops the flow of gas, and that's why we need to feed it all the time to avoid this.

**Interviewer**: What is this water?

**Interviewee**: When there is no gas production like now, small traces of water accumulates in the system and then blocks the system.

**Interviewer**: Okay, okay.

**Interviewee**: So that's the instructions we were given.

**Interviewer**: Did you receive any training?

**Interviewee**: We received training on how to operate it.

**Interviewer**: Um-hmm

**Interviewee**: [Talking to students]

**Interviewer**: Okay, what type of training was did you

**Interviewee**: We did not go in a class. They simply told us what we should be doing; and that if there is a fault, we should do this and that.

**Interviewer**: Where was this training?

**Interviewee**: At the site of the digester.

**Interviewer**: Okay, so can you remember what they told you? I mean, what is this ``do this and that, if there is a problem`` you are talking about? Can you elaborate on that, please?

**Interviewee**: OK, if it’s a broken like it is right now, we just need to inform them. The digester is broken right now because of pressure; we failed to harvest the gas for a couple of days, so the gas accumulated in the bag that the pressure was too much and ended up damaging the pipe close to the gas valve, which is close to the bag. However, for problems related to gas production, we simply take out the water from the water trap. In addition, when there is little or no gas we simply need to feed it, so that it can produce gas.

**Interviewer**: Were you taught how to disassemble it?

**Interviewee**: Yes, we were told

**Interviewer**: Oh, what were you told?

**Interviewee**: We have tools and in some places, we use our hands like to remove water from the water traps and replace.

**Interviewer**: How many people attended this training?

**Interviewee**: It was my friend and I.

**Interviewer**: You and your friend?

**Interviewee**: Yeah - the chef and I. She is not here now; she has knocked off.

**Interviewer**: Which problems do you feel you can manage to fix?

**Interviewee**: When there is water in the system, I can manage to remove it, even when my colleague is not around.

**Interviewer**: How?

**Interviewee**: When there is water in the pipes, the water stops at the water trap or at a place close to stove, the place I showed you. So, I’m able to remove the water in the system in these places even when my colleague is not available. I simply untie that place and that place too, and then I lift or hit the pipes, so that water backflows in the pipes into the bag or at the water trap.

**Interviewer**: So, you are confident that you can remove water from the system when it blocks?

**Interviewee**: Yeah, it`s just those two places. But, in most cases, water is trapped on that place because it’s difficult to get to that place as it is raised. Therefore, when it blocks, we open the water trap first and then we remove all the water from there [where you colleagues is taking a picture]

**Interviewer**: Oh, that’s impressive. Can you manage to fix a leakage or a punch on the bag?

**Interviewee**: If someone can teach us, we can do it. I do harvest gas from the system when there is too much bag in the system for later use; I manage to do that as well.

**Interviewer**: So you were taught how to do that?

**Interviewee**: They told taught us how harvest and store gas; so we can do it; we harvest gas at the stove in the kitchen.

**Interviewer**: How do you do that?

**Interviewee**: The storage bag has pipe or opening. So, when we want to harvest gas, we open the gas and connect a pump that uses solar power to help the gas move when there's little pleasure. In other cases, we just put a bag of sand to increase pressure instead of the pump.

**Interviewer**: Let me be clear on how you harvest gas at the stove. How do you do that?

**Interviewee**: First, we open the gas valve, and then we connect a pump to the storage bag and the digester bag. The pump helps to draw gas from the digester to the storage bag. So, when there is little pressure we connect the pump to electricity or solar, and then it moves the gas from the digester bag to the storage gas. Some time, instead of the pump, we simply put a bag of sand on the digester bag to help move the gas from the digester to the storage bag.

**Interviewer**: How does it look like? I mean can I see it?

**Interviewee**: Mmh, I can say the pumping device looks like an adapter, and we connect it to solar or electricity to work. You can’t see it now because it`s in the stores room and its locked now.

**Interviewer**: I would like to see this device. How many storage bags do you have?

**Interviewee**: We have two bags.

**Interviewer**: How big?

**Interviewee**: Like this [show height]

**Interviewer**: 2 meters

**Interviewee**: It is big and when it is fed, it gets big as that drum [Points to a 200-liter drum). And, during holidays, I like to take the bags home and use the gas for cooking.

**Interviewer**: Do you have biogas at your place?

**Interviewee:** No, I just take a stove from this place and use the gas from storage bags. So, I do not need a cylinder or a gas canister, the storage bag contains the gas, which are using on the stove for cooking.

**Interviewer**: So after all the training or the instructions, how prepared to run or operate the reactor did you feel you were?

**Interviewee**: [speaks to students] I felt very good, very positive indeed.

**Interviewer**: Did you feel you could fix all the problems?

**Interviewee**: Yes, but we cannot fix the problem we have now; we need the installers to come and fix the problem. After that, we will feed and it will start working again.

**Interviewer**: But, after the training, you felt you would operate and maintain it…

**Interviewee**: Yeah.

**Interviewer**: Did you imagine a problem that you could not solve?

**Interviewee**: No… But, yes, because the installer told us that if there is any issue beyond our capacity we call them to come and fix.

**Interviewer**: What problems did you encounter that you required consultation?

**Interviewee**: During the first days, when we were not conversant with the digesters, it was starting and stopping. It was confusing; we would try hard to troubleshoot as much as we could. Then, we realized that it required constant feeding.

**Interviewer**: Why do you think chose to build it here?

**Interviewee**: [student comes] Can I attend to that one please?

**Interviewer**: Yeah, yeah, I will pause the recording. [After some time] where were we?

**Interviewee**: We were on why did we choose to build it here?

**Interviewer**: Oh yeah.

**Interviewee**: It came here to help us with cooking as well as to save money, which we were spent on cooking. It also came here to conserve the environment.

**Interviewer**: Before the digester, what were you using for energy i.e. cooking?

**Interviewee**: We were simply using charcoal.

**Interviewer**: No firewood?

**Interviewee**: No firewood, just charcoal.

**Interviewer**: In a month, how much charcoal were you using?

**Interviewee**: In a month, we were using probably three bags of charcoal.

**Interviewer**: Are the bags not too little for the whole school? Is it not a boarding school?

**Interviewee**: It’s not a boarding school and some students bring food from their respective homes. Some just buy junky foods.

**Interviewer**: What do you cook?

**Interviewee**: Chips, eggs.

**Interviewer**: and you were only using charcoal? I mean, most people I have seen selling chips use firewood; they say customer like chips cooked on firewood, and it’s true the chips tastes better.

**Interviewee**: Sometimes, we could use it, but it was rarely because it involves heavy cutting of trees as a result it causes deforestation; besides, it’s tough to gather firewood.

**Interviewer**: Charcoal doesn’t cause deforestation?

**Interviewee**: It does.

**Interviewer**: So, how is it different?

**Interviewee**: I just don’t like seeing people cutting down trees to use as firewood, and it is also tiresome.

**Interviewer**: (laughs) Okay, let’s move on. What was your feedstock?

**Interviewee**: Potato peels, slices of cabbage. And, they advised us not to feed hard stuff like maize cobs and stones; we were feeding it with things that easily break and decompose.

**Interviewer**: So, it was a strictly food waste?

**Interviewee**: Yeah, food waste strictly, and no papers.

**Interviewer**: Sure. Before the digester, what were you doing with the food waste?

**Interviewee**: We were simply throwing away the food waste in a bin.

**Interviewer**: So after the digester, that’s when you started using food waste productively?

**Interviewee**: Yeah, we were not able to cook and serve food using food leftovers.

**Interviewer**: When was built it?

**Interviewee**: 2021, or late 2020.

**Interviewer**: Okay, how did it work after commissioning?

**Interviewee**: After we installed it, we tried it with one banner, and it worked. But, before that, we waited for some weeks to start up. Then after that, we started using it for cooking.

**Interviewer**: How many weeks did you wait?

**Interviewee**: I think it was two or three weeks

**Interviewer**: So after those weeks, how did it work?

**Interviewee**: It worked very well.

**Interviewer**: What do you mean?

**Interviewee**: The gas was strong and it was far more powerful than charcoal; the flames were intense and blue. It was easy to cook too as we were using two burners; so we were cooking fast, and then we would turn it off.

**Interviewer**: How much gas did it produce? I mean, how much cooking time did you get?

**Interviewee**: Maybe, we were getting one hour and 30 minutes of cooking time. And, if we were cooking beef, we could use it for two hours.

**Interviewer**: How many times were you using it in a day? Were you able to prepare breakfast, lunch, and supper?

**Interviewee**: We prepare breakfast and lunch, which we prepare around 11 AM. So, after that, we were done for the day; we finished cooking after preparing lunch.

**Interviewer**: What food items were you cooking on it?

**Interviewee**: Rice, chicken, vegetables, and beef. The beef was the one that taking longer than the rest.

**Interviewer**: So after cooking lunch at around 11:00 AM, were you not using it afterwards?

**Interviewee**: Yeah

**Interviewer**: So, you were getting about two hours of cooking time a day?

**Interviewee**: Yeah!

**Interviewer**: How many students are here?

**Interviewee**: Many - over 500 students.

**Interviewer**: You mentioned that not all the students eat here; some bring their own food; some buy junk foods. Approximately how many customers do you have?

**Interviewee**: I sell food to 30 or 50 students per day

**Interviewer**: What did you start it the digester with? And, where did you get the feedstock?

**Interviewee**: I think we used a half a ton car, if not two tons to start it up; there was plenty of feedstock!

**Interviewer**: Okay, what else?

**Interviewee**: To start up, we also used added water, and we continued to add water daily.

**Interviewer**: Where did you get the water?

**Interviewee**: We have a dug well. We were also getting water from the tap.

**Interviewer**: That is water from the water board?

**Interviewee**: Yeah. We use water from the well for other things and not for drinking. Apart from that, we also have a borehole.

**Interviewer**: What about that tank?

**Interviewee**: That’s a storage tanks?

**Interviewer**: Where is the source? Do you pump water from the ground and store it there, or you simply store water for water board in the tanks?

**Interviewee**: It was Blantyre board water.

**Interviewer**: How did you prepare the feedstock?

**Interviewee**: We were feeding it with 20 kg of food waste, especially potato peels. To this, we were adding four buckets (20 liters) of water. Then, we were putting the mixture in a drum to decompose, and then pour the feedstock into digester bag. We did wear gloves when preparing the feedstock.

**Interviewer**: Why wearing gloves?

**Interviewee**: To protect ourselves from bacteria. And, we were wearing a mask to protect ourselves from bad smell.

**Interviewer**: Who has responsible for feeding it?

**Interviewee**: A certain man was helping us in feeding.

**Interviewer**: So I can say three people were responsible for feeding it. Who is this other person?

**Interviewee**: His name is Stevie

**Interviewer**: I mean, what is his role?

**Interviewee**: He works as a ground labor; he was only feeding it when my colleagues and I were busy.

**Interviewer**: What were the maintenance requirements?

**Interviewee**: To maintain it, we only needed to harvest gas from the digester bag when it was filled to allow it to produce new gas. I think that was the only thing that was needed to keep it working. I’m saying this because I observed that the pipe was damaged because the bag was filled with gas and there was no exit for the gas.

**Interviewer**: But you have harvesting bags or storage bags. Why didn't you harvest and store the gas?

**Interviewee**: Yes, we have storage bags. But this happened during a school holiday so no one was around to harvest the gas. So the gas needs to be harvested whenever it is full. I mean, when you feed it gas keeps on coming and it needs to be removed to avoid such occurrences.

**Interviewer** Okay, does it produce digestate?

**Interviewee**: Yeah, it released digestate at the outlet there

**Interviewer**: Where does the digestate go?

**Interviewee**: We use it there in vegetables and other places

**Interviewer**: How does it go there? Do you carry it there or does it go there directly?

**Interviewee**: We carry the digestate in a drum to the vegetable garden.

**Interviewer**: You have said you carry it to other places as well. Where else do you carry it?

**Interviewee**: We carry it to our homes and use it in our gardens. We also use it as fertilizer for flowers.

**Interviewer**: Did you sell the gas?

**Interviewee**: Not when I was around. But, there was a certain time some people were looking for gas. But, I don’t know if they came to get the gas.

**Interviewer**: Where were you around that time?

**Interviewee**: I was on holiday.

**Interviewer**: The time it was working, did it meet your needs?

**Interviewee**: Yeah, we were not struggling; we would simply cut vegetables, put a pot on the stove - it was very easy – it was easy to cook.

**Interviewer**: Were there times you wanted to cook, but you could not do so because there was little or no gas at all?

**Interviewee**: It was happening when there was little or no gas in the bag. But, we were quick to note problem; we noted that when it was out of feedstock, we could not get enough gas.

**Interviewer**: Okay, why were you not feeding it us required? Was it laziness or you were just thinking everything is OK

**Interviewee**: Just taking things for granted. When we saw it working, we thought that it was going to keep on working at the same pace. Maybe, sometimes, it takes longer for the feedstock to decompose in the drum. So, we couldn’t feed it when the feedstock hadn’t start decomposed.

**Interviewer**: Okay

**Interviewee**: But, it was nothing to do with the feedstock because it was always available.

**Interviewer**: Oh, that reminds me, how often were you feeding it?

**Interviewee**: Every day we were supposes to feeding it. And, we were feeding it every day.

**Interviewer**: Everything in life has challenges. What were the challenges?

**Interviewee**: Uumh, we had fears that this thing is expensive, so we tried hard to take good care of it and make it last long. At the same time, we were doing everything so that we should not return to use firewood.

**Interviewer**: You haven’t answered my question. Like I said everything else challenges, what challenges did you encounter or are you encountering with this thing? First, I would say…

**Interviewee**: The main issue was blocking of the system due to water log. A limitation in its functionality is that, water accumulates in the pipes and blocks the flow of gas, as a result, little or no gas comes at the stove.

**Interviewer**: You can go attend to the students… Yeah, you were talking about challenges. You mentioned the water issues in the pipes. How did this problem manifest?

**Interviewee**: Whenever, there is no fire, we go check - so we knew.

**Interviewer**: Where do you check?

**Interviewee**: First, we look at the white thing (water trap). Then, water clogs along the pipes and there is another place at/or close to the stove.

**Interviewer**: How many water-clogging problems did you faced? And how many managed to fix?

**Interviewee**: Many times - and we were told to open the water trap regularly to get rid of water in the system.

**Interviewer**: Like how many times?

**Interviewee**: Maybe, five times. But, then we started removing water from the water trap even before it is blocked.

**Interviewer**: Okay, how long did it take before it stopped working?

**Interviewee**: Mmh, it has worked before a long time, but I cannot say how long. I think it’s been year and some months now.

**Interviewer**: OK after a year or so that’s when it stopped?

**Interviewee**: Yeah

**Interviewer**: Did it stop at once or gradually?

**Interviewee**: It did not stop at once. It was gradually declining. Yeah, and it hasn’t really stopped working like it can never be fixed. The problem is the gas pipe burst. It's only that. You would have seen the bag fully inflated, if the pipe didn’t burst.

**Interviewer**: After the pipe burst, what did you do? What have you done?

**Interviewee**: We told our Madam who called them. She told us to leave it as it is because someone will come to fix it.

**Interviewer**: When was that?

**Interviewee**: Last week, the person coming to fix it was supposed to come last week.

**Interviewer**: When did it stop working?

**Interviewee**: It`s been a month or two.

**Interviewer**: You said you were taught ….

**Interviewee**: Wait! Let me attend to the student.

**Interviewer**: (after some time) oh, while you were away, my friend was asking about the ponds behind that block. I said they are fishponds…

**Interviewee**: Yeah.

**Interviewer**: Do you have fish there?

**Interviewee**: There is chambo in there – yeah!

**Interviewer**: (Laughs heavily) oh?

**Interviewee**: We have chambo in there. We feed it ourselves and we have its feed. We fish chambo in there.

**Interviewer**: Okay, we are on this piece of information. Have you seen something like this?

**Interviewee**: No!

**Interviewer**: It has information regard issues associated with digester, and even the issue of water blocking the system you talked about is here. What do you think of this kind of information, and do you think it would have helped?

**Interviewee**: Yeah, they talked about water clogging the system. This information could have helped a lot.

**Interviewer**: Elaborate.

**Interviewee**: We could have learned a lot about problem solving and it could have helped to us solve certain problems.

**Interviewer**: What they told you, the training you received; wasn`t enough?

**Interviewee**: It was sufficient. But, I feel like I’m the problem that it`s not working. I’m the one to blame for it stopping to work because I was the one tasked to harvest gas. Unfortunately, when I left for a four-day holiday, I didn’t feed it. So gas production continued and had no outlet; and I even conceded that I didn’t harvest the gas, when the installers asked me through my boss.

**Interviewer**: How would you describe the current state of your digest?

**Interviewee**: It’s currently not working but I think it is fixable. [Stops to pick a call]

**Interviewer**: How did it reach this state?

**Interviewee**: I failed to harvest gas from the digester bag that`s the reason it’s not working today.

**Interviewer**: So you are certain that if you had harvested the gas, it could have been working today?

**Interviewee**: I`m more than certain.

**Interviewer**: Is there any other reason or cause it is in this current state?

**Interviewee**: It’s only for that one reason – and now we can't feed it because gas will be leaking through the hole. We will start feeding it again once it’s fixed.

**Interviewer**: When are they coming to fix it?

**Interviewee**: Any day - my boss asked me today if the technicians had come to fix it.

**Interviewer**: Now that it is not working, what are you using for energy i.e. cooking?

**Interviewee**: We are now back to “Deforestation” – We are now using charcoal.

**Interviewer**: (laughs) Okaaay

**Interviewee**: Charcoal burners are now our lifesavers – Biogas stoves are history now.

**Interviewer**: What challenges are you facing now since it`s not working?

**Interviewee**: Uh, We are spending a lot of money (laughs)

**Interviewer**: Like how much?

**Interviewee**: In a week, we are now spending K3000 to K3500.

**Interviewer**: What are you doing with the feedstock now?

**Interviewee**: We are just keeping the feedstock; potato peels are not difficult to keep. As for other food waste, we dispose of in a refuse pit.

**Interviewer**: Where are the potatoes peels today? I can`t see them.

**Interviewee**: We didn’t cook chips today.

**Interviewer**: Where are yesterdays or the other days potato peels?

**Interviewee**: We just throw them in the bins, and we will use the later.

**Interviewer**: How much did the reactor cost?

**Interviewee**: Yeah, I don’t know. But, it was a lot of cash.

**Interviewer**: Why do you say that?

**Interviewee**: The thing just looks expensive. And, I have not seen people using it, so it much be really expensive.

**Interviewer**: But, the money came from school fund?

**Interviewee**: Yeah

**Interviewer**: We are going towards the end of the interview. We need to go, so you can attend to other duties as well. Did you or your organization contribute anything in kind?

**Interviewee**: Aah, it’s only the land – and the big blue drums.

**Interviewer**: Do you know how that much cost?

**Interviewee**: I don’t know: maybe K2000 or 3000 each, and we have 3 of them.

**Interviewer**: Who built it?

**Interviewee**: Only 2 people

**Interviewer**: Did you do any brickwork?

**Interviewee**: I don’t know. Maybe, they did. I can’t no, because the time they were installing it I was busy with other things. But, I’m sure there s something underneath. They can't just say bury the bag without any protection.

**Interviewer**: Which special items had to be imported from other countries?

**Interviewee**: The bag - that bag is not from Malawi. I have grown up here in Malawi and I have never heard or seen something like a biogas digester. I also receive visitors who come to see what it is; maybe it’s somewhere else. But, as far as I’m concerned, this was my first time to see.

**Interviewer**: Tell about me that, who comes?

**Interviewee**: It`s mostly people who have heard about cooking using gas. Most people ask me about biogas especially when I carry the storage bag filled with gas. Children get very surprised and alarmed when they see me carrying the storage bag on my back. They even run in fear. But, some grown up people, know that it gas, and they ask where I getting the gas. Then, I tell them we have a digester bag.

**Interviewer**: What do people think or say about biogas?

**Interviewee**: People are interested to learn more on how it works. They even come after, and I take them to the kitchen to show them how it works.

**Interviewer**: Do they seem impressed?

**Interviewee**: (laughs) I think so. But, money is a challenge. Times are hard!

**Interviewer**: (Laughs) what is your opinion of biogas?

**Interviewee**: I personally think biogas is very important to us. It helps us a lot in terms of cooking and saving money. Also, it’s helping us to conserve the environment.

**Interviewer**: Uh-hmm

**Interviewee**: I would like to see it working again to make our cooking easy. We do not struggle to cook as we do at our homes when we have it running. It’s fast just like cooking on an electric cooker – You cannot compare into with charcoal or firewood in terms of quickness. When you put a pot of water on the stove, it doesn't take long to boil. It takes only 5 minutes.

**Interviewer**: How long does it take the water to boil on charcoal or firewood? And how big are the pots?

Interviewee: It’s a big pot that one can use the water adequately for bathing. It takes normally not less than 20 minutes to get the same water boiled on charcoal. Biogas is not like charcoal or firewood, which forces you to constantly blown air to increase the intensity of the fire. With the biogas you just turn the switch control nod left and right, just like you increase volume on a radio. So when we want to cook rice, we just minimize the volume on the stove. To get well-cooked rice you just minimize the gas on stove as I have said.

**Interviewer**: You know this thing is good. How are you allowing it stay unfixed for a month or so? We can’t say its money. One student’s tuition can get this thing working.

**Interviewee**: (laughs) we are simply waiting for the installers to come and restore it.

**Interviewer**: Why do you think it’s taking long?

**Interviewee**: I think it’s taking long because of the technician. He is the one taking long. My boss called me to ask if he has come today.

**Interviewer**: Last question, if you could have designed your own waste or energy intervention, what would you have chosen instead?

**Interviewee**: I can’t choose anything else besides biogas.

**Interviewer**: Why?

**Interviewee**: I can’t say solar panels because it has its own limitations.

**Interviewer**: What limitations?

**Interviewee**: Sometimes, the panels get broken, after that is the end of it. As for this, it gets its power from cow dung.

**Interviewer**: So you would have no chosen anything else but biogas, the bag can also get damaged.

**Interviewee**: Mmmh, honestly, I don’t have options. This is a difficult question for me.

**Interviewer**: Why is it Difficult?

**Interviewee**: I can’t say charcoal burners. That’s eeish. So, I can only opt to use food waste for compost making; it’s simple you just put food was in a bag and allow it to decompose. Later, use it as manure.

**Interviewer**: Why are you not doing that?

**Interviewee**: Because we are just waiting for the technician – that’s all. He will come.

**Interviewer**: Why have made you think it the technician who is delaying this instead of anything else?

**Interviewee**: My boss asked me if the technician had come, and told her not yet. The owner is ready. The technician is the one who has problems.

**Interviewer**: Okay, that’s my last question. In closing, do you have anything else to say?

**Interviewee**: You asked me about which options I could have chosen instead of this. What options are available? I didn’t have options.

**Interviewer**: What you said was quite like. You can use the waste to make compost and fertilizer. That's a very good option. In terms of energy, you mentioned solar, that’s another option. We have electricity cooking option, LP gas

**Interviewee**: Oh, I forgot LPG gas. We have that. At some point, we used that. It has gas canister that needs refill of gas once it stops working.

**Interviewer**: Why did you stop?

**Interviewee**: We just abandoned it.

**Interviewer:** [question inaudible]

**Interviewee**: I don’t know. But, we have many gas canisters.

**Interviewer**: How many?

**Interviewee**: Many. Some even took them home.

**Interviewer**: How different is LPG gas from biogas?

**Interviewee**: With LPG gas, you need to go search for the gas when it's finished. While biogas needs feeding with waste, which is usually readily available. So LPG is a bit complicated.

**Interviewer**: Okay thanks. That end of our interviews.

**Interviewee**: Thanks for coming. I enjoyed the conversation and I have learned one or two things. Thanks, and make sure you call my boss to inform her you came.

**Interviewer**: I will, and I called her when I was coming, before I called you.

**Interviewee**: That’s great. Thanks.