|  |  |
| --- | --- |
| **Interviewer name** | INTERVIEWER |
| **Sub-contractor organisation** | XXXX |
| **Interview date** | XXXX |
| **Duration of interview audio recording** | 1 hour 13 minutes 38 seconds |
| **Face-to-face or virtual interview** | Virtual |
| **Interview participant** |
| **Code** | I19 |
| **Participant name** | RESPONDENT |
| **Organisation name** | XXXX |
| **Gender** | Female |
| **Stakeholder category** | XXXX – Engineer and Planner professional |
| **Country** | India |

**Introduction**

**INTERVIEWER** 00:00

All right. Okay, you're all set.

**RESPONDENT** 00:07

Yes.

**INTERVIEWER** 00:10

So, good afternoon, XXXX. Thanks a lot for taking time out to participate in a study that aims to obtain a better understanding of energy access and gender equity within energy access in India.

**Consent**

Before we start, I would like to check a couple of mandatory requirements. One is have you completed and returned the consent form?

**RESPONDENT** 00:36

Yes.

**INTERVIEWER** 00:38

Through this...Yeah, I received it.

**RESPONDENT** 00:41

Yes. Great Great, yeah.

**INTERVIEWER** 00:44

So this interview, we would request you to share your experience and expertise as someone working in the energy sector, as well as your views and opinions on gender equity within energy access. Is it okay if we record the interview for our documentation purposes?

**RESPONDENT** 01:00

Sure.

**INTERVIEWER** 01:01

The recorded interview will be transcribed for analysis and the copy of the transcript will be shared with your for your approval. All the information we obtain serves the sole purpose of the study and will be seen only by the research team. Your name and any other identifying features will not be used anywhere in reports and other publications emerging from the study. And the interview should take about an hour or more than an hour. So if all that is okay, shall we proceed with the interview?

**RESPONDENT** 01:29

Yes.

**Part 1:**

**INTERVIEWER** 01:31

Can you start by briefly telling me a bit about your current role position and the organization that you work for?

**RESPONDENT** 01:40

Yeah, so.... Hi, this is XXXX. And I work with XXXX, which is a not for profit base think tank. We are based out of XXXX. The larger objective of our work is to retain consumer interest in the energy space through research and analysis on policy and like similar regulations and governance issues, and also to advocate for better policies in a way that it benefits the consumers to its best. In my role at XXXX, I currently work as a XXXX. And my focus for the last XXXX years now in XXXX has been more on energy access, quality of supply, understanding residential energy consumption patterns, energy efficiency behaviors, modeling. And to some extent, also looking at alternative sources of electricity, which include distributed energy generation, in areas where access is.... access through the grid is difficult.

**INTERVIEWER** 03:14

So when you say energy consumption at household level, you are primarily focusing on the electricity part of it?

**RESPONDENT** 03:21

Yes, yes.

**INTERVIEWER** 03:23

Right. And could you just briefly tell me a bit about your own background of work? And how long have you been involved with energy issues, or like specific energy related activities and programs that you have undertaken within your work?

**RESPONDENT** 03:39

Sure. So I have a bachelor's XXXX

**INTERVIEWER** 04:22

Right. Right. So to what extent does energy access feature in your present work?

**RESPONDENT** 04:31

So one of the projects that XXXX has been working on is called the XXXX, where we have been actively trying to assess supply quality to different consumers in the country... across the country. And this is a project that we've been driving since XXX. Although, since the last one year, given all the challenges due to pandemics, we're sort of winding down on the whole project now, because of in accessibility to locations where we have monitors, and also unavailability of people, and so on, so forth. But that has been a very large, I would say component or chunk of my work for the last three ish years now, where we've been trying to assess the quality of electricity that is being supplied to consumers, across almost 400 different areas in the country, which has kind of... sets the ball rolling within the policy and regulatory space to create an emphasis on having systematic monitoring of quality of electricity. So, to me, access is not just supply, but it is also meaningful supply. So unless you have... whether it be electricity or supply of liquefied petroleum gas, or be it water or be it, you know, any sort of resources, as long as you have a meaningful... you can make meaningful use of that supply. That is only I mean, then it actually could be called as access. So just having merely grid reach your house is not access, although it is let's say the first point of access, but beyond which, unless you can utilize it for your benefits, it won't have much... doesn't add much value.

**INTERVIEWER** 06:50

Right. So what can you just tell me? Which zone geographical locations your this work? Is? I mean, based out of based?

**RESPONDENT** 07:04

Sure, sure. So the XXXX, we've been running across XXXXXX

**INTERVIEWER** 08:54

Right. Right. So you were talking about how the work, the research work that you do go into policy and regulation, frameworks. How does that work? Like do you segue into governance systems or discoms? Or how does the process informed policy?

**RESPONDENT** 09:17

Yes, so. So one is, since XXXX has been involved in the electricity regulation and governance space for almost 25 years now. We have... and also XXXX on the XXXX, which makes it a little easier for us to communicate with states regulatory and DISCOMs, regulatory authorities and even DISCOMs. At the central level also, since we have been actively engaging as a consumer research organization and playing a watchdog or sort of even advocacy role on different policies and the energy space, at times, we've been commenting, critiquing, and providing for ... providing suggestions to better these policies. Hence, any effort that we do at XXXX definitely has its own ripples through different means and processes or ways. So for example,XXXX.

**INTERVIEWER** 13:10

Right. So could you just elaborate a little bit on this data collection and monitoring process that you have? mean, I just want to qualify it a little bit... Because I'm trying to move towards understanding whether you have noticed differential access, if you have, I mean, what are the criteria based on which you are... Are you looking at diversity of access within your work? And within your data collection and monitoring? And if you are, then what are the criteria under which you're looking at diversity? And how do you see the differential access for energy?

**RESPONDENT** 13:51

So right, so definitely, we are... we are seeing a lot of diversity in... Now, like I said, I'm going to talk about accessing the terms or like you have the point of supply? Yeah, but that is going beyond supply for us So we definitely see a lot of difference in the access across different states, rural areas, or semi urban areas within states. But it is also largely depends on the financial health of the DISCOMs supplying electricity, geographical, you know, spread, or issues within those states and the political will in those particular states or DISCOM operating meetings. So all of this together, you know, sort of defines how the quality of supply will be or how has it changed? Has it improved, etc. So just to give context. So for a state like Maharashtra, here access as the point of supply... receiving that hasn't been so much of a problem, in comparison to let's say, Uttar Pradesh or may be Bihar...

**INTERVIEWER** 15:34

 You are talking about connectivity.,...

**RESPONDENT** 15:36

And hence,... Yes, how school connectivity.. right, so the connectivity has always been there. But for multiple reasons, the hours for which electricity is being supplied, has been contentious in different states, and has remained at a certain number of hours in different states. However, after lets say stringent systems of reporting, monitoring have begun, we definitely see improvements in supply quality across even different states. So, for example, in XXXX, when we started the project, there were some rural areas where we had reported as low as even 10 to 12 hours of electricity supply. But in the last three, four years, we have seen a significant jump, and it has gone to almost 22 hours of electricity supply across even rural areas within the state. Now, again, a small caveat here is probably the areas that we monitor are not really representative of the state, and that we're not monitoring really rural areas, because these monitors are built in with GSM communication chips. And they wouldn't, they wouldn't work in really remote areas. So based on the sample that we have, we've definitely seen improvement. Similarly, in states like Uttar Pradesh and Bihar, where rural areas would have received only about seven to eight hours of electricity supply have definitely gone up to almost 1213, even 18 in some cases. So there has definitely been been a change. And interestingly, again, bringing it into context, the whole access elements that we look at is just getting electricity supply versus when you get that electricity supply really makes a big difference. So for example, if you if in a state like XXXX, they'd earlier get about eight hours of electricity supply, it will mostly be early in the morning, or probably during the day, when you typically don't need even, you know, lighting or let's say even fans, which we call as basic electricity appliances. When this goes up to 18, or even 14, let's say it is evident that you get electricity in the evening, when you definitely need these basic set of appliances

**INTERVIEWER** 18:12

Sorry, I was on mute. Yeah, right. So what I wanted to ask you is like this monitoring and data collection process if you could, like how what how do you do that? Hello.

**RESPONDENT** 18:39

Hello. Yeah, right. Can Can you hear me fine? Yeah, Yes. So this this system, we sort of designed to have a monitoring unit, which would work with little or no human intervention, once installed. So it's a very simple plug and play voltage monitor with an inbuilt GSM communication chip. And what that meter does is once it's plugged into any power plug it relays data on voltage supply at that particular you know, space every minute. So it gives us the quality of electricity that has been received and also the number of hours for which electricity is received at that particular center. And the... all of the data that is being collected through this initiative is made publicly available through a website. So any and everybody can view, download, data that has been collected through this initiative. This, the idea was to generate an evidence based feedback on the actual supply quality received at the consumer end. And so when we look at electricity, there are multiple junctions where interventions need to be done, starting from where the electricity is being generated to where it is being consumed. And at the consumer end are typically supply quality issues have remained over the years is because the distribution networks aren't being maintained well. And hence, this sort of a system. So at several discom levels, there is a very, I would say I wouldn't call it efficient, but there is a capable system to measure and monitor electricity supply through different feeders. However, what happens beyond the feeder is currently not being monitored, or at least not being monitored in most of the states. The smart metering, which is an essential component of ensuring that access and quality of supply is being maintained, is done only in very select or smaller pockets within the country. So this sort of an effort was a way ahead in trying to look at what is it that the consumer is experiencing, given whatever system inefficiencies we have.

**INTERVIEWER** 22:07

Okay. Oh, but just to understand. Is there any way you also, because as far as I understand your... the way you're collecting, looking at the data is at the household level? Right? Is there any way you're also looking at what is happening inside the household? In terms of how electricity is used inside?

**RESPONDENT** 22:30

Yes, yes. Yes. So one is through the voltage monitoring initiative, we've also tried to track few commercials at UPS, industrial setups, even agricultural connections to see how the supply quality is at these different areas. And going further, since XXXX, we have also been monitoring... you know this number is sort of small in comparison with the voltage monitoring households, but we have been monitoring over XXXX households across semi urban areas in XXXXX to look at how households are consuming electricity. So the this was like a very logical next step towards, you know, understanding access better in a way that assuming electricity supply quality has improved. Now, we really need to look at what sort of energy appliances households use, when do they use them, and effectively, what is the kind of the load that they are going to build on the distribution network. And this gives a much better sense, this could feed back into the whole planning process of DISCOMs or even at state levels, to ensure that the system is capable enough to meet these increasing demands, one. Two, we are also trying to see how efficiency is playing a key role in regulating this demand in a way, and three, with the new push for smart metering, a lot of distribution companies are going to start looking at load management as a mechanism to reduce let's say electricity consumption in a way that it benefits the climate and benefits people overall, you know, reduction in coal based generation, etc, etc. and hence this effort is more aligned to understand what sort of energy demands do people really have, and how can it be influenced. So for example, let's say the Ujala program that was launched by Ministry of Power and Bureau of Energy Efficiency was towards, increasing the penetration of ... light and LED bulbs in households. And we've seen that it has significantly helped in reducing the energy demand coming from lighting. However, as supply quality improves, households will definitely need more energy in order to be more comfortable. And that could include let's say, ceiling fans, air coolers or air conditioners, even as the climate starts warming, that's going to be the next set of demand or even refrigeration. So through this... through the other monitoring effort, we've sort of got a very good sense of how households are consuming electricity, and what times of the day, what size, you know, what is the actual energy consumption pattern in different households... So if households have very basic set of appliances, like just lights, fans, probably a television set, some mobile charging units, then what sort of a... what is their energy demand like? in comparison to households, which use let's say, higher energy guzzling equipment like water heaters or air conditioners? And this is also in turn feeding into some of our policy regulatory submissions on identifying what sort of subsidy programs can be designed? Who should the subsidy be targeted towards? And more than, let's say, LED bulbs, what next can let's say Bureau of Energy Efficiency or MOP support. So one program that we have been pushing for is the brushless DC or a super efficient sort of ceiling fan program, where we have been suggesting that using, you know, energy efficient ceiling fans can definitely help in reducing a large scale of energy demand. However, the initial or the upfront cost for these ceiling fans is really high. And if a manufacturer driven subsidy or a subsidy, targeted towards consumers is provided, consumers could replace their existing ceiling fans. So these are some other sort of, you know, fallouts that are coming from the studies that we've been doing.

**INTERVIEWER** 27:36

So in this access, picture, how does gender equity feature?

**RESPONDENT** 27:44

Right, so I think there are a few very, I would say very common aspects that come up. So one is, like I mentioned when the electricity is available. So typically, if electricity is available in the evening, times when households needed the most, which could be even as simple as lighting. And it definitely supports or rather, plays a key role for women who spend most of their evenings in the house, mostly cooking. Right? one. Two, for a lot of households where women even spend most of their time indoors, would need some sort of cooling during let's say, summer, yeah, during summers, or even during hotter, any other hotter seasons. So if electricity is available to households definitely elevates their, you know, drudgery in terms of dealing with court situations in the household. Similarly, availability of electricity, and let's say good quality of electricity helps households in refrigeration, which again, helps, let's say women build, you know, have easier cooking lifestyles, or using or even appliances, which otherwise are not available. So for example, you want to mixer grinder. So, I'd like to share a very interesting story here of a village within Dandeli forests in Karnataka. So one of the distributed renewable energy system providers was setting up a solar PV plant in that.. in a few villages around the forest, because it's forested land, the grid cannot really reach that area. So there's a... there are rules and conditions for where the grid can be extended. So those households were very clear. They said he If we get electricity even if we don't have let's say ceiling fans operating, we definitely want mixer grinders to option. So, that is probably a very like an inherent requirement for their particular you know, eating habits or cooking habits. So, these are some elements which definitely we see a different level of improvement especially in women's lives with availability of energy and mostly electricity. Another important example from one of again, our studies we we've seen is in certain parts of Uttar Pradesh, certain villages of Uttar Pradesh, we've seen that a lot of households with improvement in electricity have started moving towards induction based cooking. Of course, the provision of an induction cooker or an induction cook stove was provided through some other scheme and you know, through some other organizations. However, because the access of cylinders in these households was problematic in the sense that the deliveries were delayed or you know, access to even connections was difficult. These households had leap frogged from cooking on the *chullah* to induction based cooking. So, they would typically cook certain parts of their meals on the induction bookstore and the restaurant still being cooked on the *chullah*. So, this leapfrogging definitely helps in improving indoor air quality and even the drudgery for women in collecting firewood and instead using cleaner cooking means.

**INTERVIEWER** 31:58

So within this have use losses and what if I asked you about policy challenges, what comes to your mind? Are there some specific policy challenges which you see?

**RESPONDENT** 32:14

I think one large policy challenge definitely is having a very capable or an efficient system for monitoring the quality of supply. So right now, even though I'm I mean, through our experience on XXXX (XXXX) I say that yes, we have been seeing improvements in supply quality, but they may really not be enough and representative of the whole country. So, unless we have a very stringent monitoring system to ensure meaningful electricity is being supplied, when I say meaningful it means - meaningful times of the day. In meaningful even the voltage quality is good in order to ensure that appliances don't go bust. All of this is essential to ensure remaining to ensure that consumers remain connected to the grid and can use it efficiently or effectively. Another one component or challenge is also the pricing of electricity. So, along with pricing comes the whole metering and billing issue which supposedly will get tackled with the whole smart metering effort, but there are certain of these set of challenges. So, it will be largely let's say issues related to metering and billing in rural areas and monitoring of quality of supply.

**Part 2:**

**INTERVIEWER** 33:42

So, within the gender question of energy access, how equitable do you find energy access is at community and household level?

**RESPONDENT** 33:57

So when you say community, what is the scale that you are referring?

**INTERVIEWER** 34:03

Aah, I don't know. neighborhood - village - district

**RESPONDENT** 34:09

Okay.

**INTERVIEWER** 34:10

I would say local government systems probably sometimes.

**RESPONDENT** 34:16

Right. So I think it definitely, if we have to talk in today's times in India, the quality of electricity being supplied in let's say the community versus at household level is almost similar. However, like I mentioned before, some issues related to pricing. affordability, do play a key role in allowing for equal. So if…

**INTERVIEWER** 34:55

I'm specifically asking you from the lens of gender equity See, yeah, the equity in terms of gender.

**RESPONDENT** 35:05

Right. So again, I would like to go back to this to the point that I started with, which was basically meaningful access. So on one hand, making electricity being accessible at household level for, in order to help reduce, let's say drudgery for women is one. On the other aspect is being able to get good quality electricity supplies, even to run commercial setups. And these commercial setups could be for, for, let's say, the community in order to be able to work locally, produce locally, right? Won't have to migrate. On the other hand, even to allow women an opportunity to, you know, start building some sources of income rather than just labor or, you know, farm labor sort of systems. So if, let's say, there is enough access available, during the daytime, it could give an opportunity for people within the community to start enterprises, build those enterprises and make a meaningful livelihood also living within their own communities.

**INTERVIEWER** 36:37

Yeah, and when you talk about women using energy for livelihoods, we're also talking about like household based livelihoods, right?

**RESPONDENT** 36:46

Yes. correct, which could be even as small as having a small shop, but which needs let's say, a refrigerator to pool, probably even water and some cold drinks, which definitely adds value to their enterprise.

**INTERVIEWER** 37:01

Right. Like, I mean, so basically, we get into trying to understand how different genders also use energy differently within a household, right?

**RESPONDENT** 37:13

Correct. Correct.

**INTERVIEWER** 37:15

So how, how do you see that difference? I mean, do you see different tasks or how do men and women use energy differently within a home.

**RESPONDENT** 37:26

So, I think how men and women use electricity differently in homes is largely driven by the kind of appliances that the household owns. So, it is very difficult to see that most households even very basic, you know, remote rural households will definitely have a television set, right. So for medium or sources of entertainment. appliances are I mean, you can find these appliances in most household. However, other basic set of appliances, as in which probably you and me living in urban areas, consider them basic, for example, a mixer grinder may not really be basic for a rural house. So there is a difference in the appliances hence owned within the house,

**INTERVIEWER** 38:20

Where it is much cheaper to buy a mixer grinder than a television.

**RESPONDENT** 38:24

Correct. And also to sustain the mixer grind. So your setup box itself, you need a recharge of what a few 100 rupees every month versus having a mixer render, which can last you let's say at least eight to 10 years. So this definitely sort of creates a divide. And I would say, priorities then change. So entertainment is definitely priority because even the man of the household can join, but a mixer.

**INTERVIEWER** 39:02

Yeah, who sets these? That's what I was leading on to this to ask you who do you to set these priorities?

**RESPONDENT** 39:10

 I think it is... I mean, in most households it will be the man who sets these priorities. Another example of this is even water heaters. So, an electric water heater is something which is the last on the households list. When it comes to reducing, let's say drudgery for women. So even if they have an LPG gas connection, the woman of the household will still set up a *chullah* to heat water because that's like bulk use of energy just because they don't have an electric water heater system. And that is typically the task of a woman. So, from the time she gets up in the morning to the last person having a bath, she will set up a *chullah* and then have to breathe those fumes emanating from that. So, this was another classic sort of a study that XXXX.... And we also have another health Group, which is like another arm of XXXX, where that team had also done a study, interestingly to see in villages where LPG gas connections were available, what was what was the air pollution levels like, or even through the study that we did in several households, or through surveys, we figured out that even if households had LPG gas connection, typically water eating would definitely be done on the *chullah*. And in evidently, the woman will have to take care of the same. So, and this is even in states like Maharashtra where electricity supply is not so much of an issue.

**INTERVIEWER** 40:55

Right. Okay, so even then, a provisioning for water heater is like a very low priority.

**RESPONDENT** 41:02

Yes, yes.

**INTERVIEWER** 41:04

Even though it's like a hot water is being consumed by everybody in the family.

**RESPONDENT** 41:09

Right.

**INTERVIEWER** 41:09

Interesting. Yeah, what about water lifting, I mean, like pumps and all...

**RESPONDENT** 41:15

So typically, in most villages, they now at least they have a water, village level tank, in most villages. However, in broadly states, like Bihar and Uttar Pradesh, we still saw that there weren't many village level water tanks. So, in Maharashtra at least, you have one tap one household sort of scheme, where the village sets up.. the grama panchayat sets up a large enough tank to supply water.

**INTERVIEWER** 41:48

But do the women have to come and collect the water? Or does the pipe water reach the homes?

**RESPONDENT** 41:54

So the woman would have the right yeah, so that is what I was coming to is that the woman would still have to come to the tap to collect the water, which is again, the task for women. Now, it also again, depends on which areas where depending on what your ground water table is, like. In most villages in Uttar Pradesh, and Bihar we observed that households, which have what I would say large households who have a, you know, consistent source of income, definitely had a bore pump, to pump up the water into their water tanks. And most low income households, again, relied on collecting water from some source, either tap or a well, or...

**INTERVIEWER** 42:43

So that's what I was going to ask you. Like, what is this water source for this community level water tank.

**RESPONDENT** 42:51

So it is typically a village well either one or multiple. And the Gram Panchayat, of course, after receiving funds from the state and also from the villages, sets up a pump to get water from these wells.

**INTERVIEWER** 43:13

But that much of mechanization has happened where they don't have to really pull out the water manually anymore from the village well?

**RESPONDENT** 43:20

Right, right.

**INTERVIEWER** 43:22

Okay. Oh, what's the other key energy infrastructure other than electricity systems? XXXX works with what other energy infrastructure?

**RESPONDENT** 43:36

So one of the area in terms of access, but maybe looking at is cooking, and more so again, from the energy lens, but to look at how easily accessible is an LPG system for households. So what have the challenges been in You know, let's say the Ujjwala program, and how has OMCs or distribution agents been able to supply LPG cylinders to different areas. So that is another area where we've been looking, we've been trying to assess...

**INTERVIEWER** 44:25

So this was actually something I mean, I'm not really within the format of my interview. It's more of an India specific query. I'm asking quite a few people that this like, connectivity through Ujjwala as LPG connectivity for clean cooking and the impetus that this government has put on it, it has managed to connect up increase the connectivity to LPGs even though like the sustainability has been a bit of an issue by the connections definitely have gone up right.

**RESPONDENT** 44:56

Right.

**INTERVIEWER** 44:57

Why LPG? Do you have have any thoughts on that because at the end of the day LPG is a petroleum product, we are not a petroleum independent country, prices of petrol keep on going up, as a result gas cylinder refills, anyway which people are finding difficult to buy keep on getting more and more expensive. So, what's the logic behind depending on LPG for clean cooking fuel?

**RESPONDENT** 45:22

I think the sheer logic is that is the next best clean cooking fuel that is available currently. So, one way...

**INTERVIEWER** 45:33

It is not really green, right?

**RESPONDENT** 45:35

it is not it is not it is not. So, one way of looking at it is that you move so, let's say you move the urban... rural households away from kerosene or oil based lamps to cleaner electricity, I mean, clean quote unquote cleaner, which is basically first you started electricity with coal. And now you have increased a lot of renewable energy penetration into your grid systems. And so, you're slowly getting everybody connected to the grid and the grid is becoming greener by itself. On the other hand, you are now moving to natural gas based cooking in urban areas by setting up piped natural gas systems. So, natural gas is something that we can produce although we are still importing most of it, but we do have natural gas as a resource. And then hence you slowly move the LPG towards rural areas. So you start getting urban areas cleaner, move away from dependency on natural gas, the other element is start introducing or pushing for induction based cooking in urban areas first and then...

**INTERVIEWER** 46:53

Okay, so, that's what I was actually leading up to, to ask you about how you view gender equity in energy access different between urban and rural contexts.

**RESPONDENT** 47:06

Yeah. So. So, I think in terms of access, equity in urban areas is much better than definitely well in rural areas more because of two things. One is the fact that in an urban center, even if you really want to cook on firewood, you won't get access to it. So, you have to move to I would say easier, better, cleaner cooking fuels,

**INTERVIEWER** 47:40

but in urban slums you still see that, dont you?

**RESPONDENT** 47:46

Yes, Urban slums of course...okay. So, in urban slums, you would still see remnants of these and more. So, again, for water heating, where they would set a *chullah* to heat water. But largely, there has been a significant migration. And when I say when I'm saying equity, it is more towards getting cleaner fuel access to cleaner fuel, which itself is lacking in more rural areas. One, two is, I think the, the, the issue of, you know, men still or you know, our dominant patriarchal system still does not allow for systems or mechanisms to reduce drudgery for women in rural parts. So, access, if it is, so, as access improves, and gives an opportunity for women to start becoming enterprising, or, you know, start enterprises of their own, there is a high possibility that like, urban woman who have little time at hand to spend on, let's say, cooking, the same would happen in rural areas, and hence, a lot of appliances which sort of ease out your whole process could also start getting introduced.

**INTERVIEWER** 49:20

So you think energy access as it improves in quality, rather than just connectivity would actually have a transformational effect?

**RESPONDENT** 49:29

Yes, certainly.

Part 3

**INTERVIEWER** 49:33

And you all already were talking about how a lot, a lot of this sluggishness in terms of transformation is also because of the decision-making being very patriarchal still rights? So, to what extent does gender equity factor in your work on energy access?

**RESPONDENT** 50:01

So, I think it depends on the nature of the work that... we are.

**INTERVIEWER** 50:12

Yeah, what I would like is for you to just elaborate a little bit in terms of, you know, projects or how do you set priorities? Do you have set priorities for gender equity, to look at gender equity within your work, or internal processes that you may have implemented?

**RESPONDENT** 50:33

Right. So, I don't really know if I would answer this question of yours very correctly. But so, when we talk about access in, in all contexts within our work, it is always looking at equitable access. And when we say equitable, equitable for all. And when I say all, now, the next level is that all urban and rural households should get same quality, same availability, same affordability in terms of supply, at least, how households use that electricity, how better can they use, it has a completely different nature or aspect to it. Through the exercise that we're doing on trying to understand how households are using electricity, it also helps us look at you know, what sort of appliances households use when they when do they use them? Why do they use them? What sort of behavioral changes can we expect in such households? Why do we see certain kind of appliance usage in certain areas in the country. And these definitely help in building our... I would say, our understanding on what the gender situation is like in different parts, and hence what needs to be done. So for example, typically, in Uttar Pradesh, through our monitoring effort, we saw that households, the electricity consumption of households, does not go up significantly in summers, and we were very, sort of perturbed by why does this happen. And then they figured out that most in most households, all the male members would sleep outside the house during summers, because the inside is really warm. And inside, they wouldn't have enough equipment to cool the household. And then you also experience power cuts during the night, or, you know, early mornings, and the women will typically not sleep outside the household for safety and other concerns. So this is…. sorry, my daughter just woke up...

**INTERVIEWER** 53:06

No problem.

**RESPONDENT** 53:08

So these are the kinds of issues that we are seeing and, and we try to then build these into our policy recommendations and suggestions on improving supply quality or, you know, addressing issues of affordability. So if electricity becomes affordable enough for such households, they wouldn't mind setting up two ceiling fans probably inside the household where women actually sleep.

**INTERVIEWER** 53:35

Okay. So do you actually find any impact of these efforts of your policy recommendations? Have you evidenced any impact?

**RESPONDENT** 53:49

Right. So in terms of monitoring, definitely, we have seen that a lot of our suggestions in how quality of supply should be monitored are slowly percolating through the system. In terms of, you know, appliance usage, one program that we've been working on with MOP and Bureau of Energy Efficiency for quite some time is on offering households, especially, let's say rural households, a bunch of appliances, a bunch of energy efficient appliances. So we've been working on this program to support Bureau of Energy Efficiency to develop a super energy efficient program, which means we can bunch together five different set of appliances, not just LED bulbs, but ceiling fans, refrigerators, and coolers probably... coolers or air conditioners and bundle them up in a way that it reduces the price of the set of appliances and introduce them to households at lower costs. This is one of the programs that we are working on.

**INTERVIEWER** 55:01

Any kitchen appliances in that bundle,

**RESPONDENT** 55:04

So the refrigerator is one set of plans.

**INTERVIEWER** 55:06

Okay. So thinking beyond your specific work, do you think energy policies should be gender sensitive?

**RESPONDENT** 55:17

They definitely should be gender sensitive on two fronts. One is in, you know, in a way that it allows women to be more, you know, allowing women to take more decisions where. Let's say affordability will play a key role. So if electricity really becomes affordable, the women of the household could demand for appliances which can ease drudgery. On the other hand, I would say also, better quality of access, allowing men and women both to set up enterprises locally rather than migrate or, you know, having to do waged labor.

**INTERVIEWER** 56:08

Right? Oh, and do you see policy gaps around women's access to energy, say at local or national or even international levels?

**RESPONDENT** 56:28

Not really.

**INTERVIEWER** 56:30

Okay. Do you think social policies have an impact on energy equity?

**RESPONDENT** 56:39

Definitely.

**INTERVIEWER** 56:41

Could you elaborate a bit on that?

**RESPONDENT** 56:43

So I think the whole Ujjwala program is a very, I would say, broad example of such kind of a policy, which is brought to light, the fact that women have been suffering for quite some time and having access to clean cooking fuel. So even if it is liquefied petroleum gas, and we need to import it as a country, I'm still okay with being able to at least provide clean cooking fuel access, rather than looking at let's say, the import costs or import dependence that we are building on. This is the first step. But then as we move, and the leapfrogging that I talked to you about improving access on the other fronts could also help them leapfrogging to immediately cleaner sources of fuel.

**INTERVIEWER** 57:40

So if you imagine for a moment, no policy or financial constraints, what in your view would be a best practice solution for achieving gender equity and energy access?

**RESPONDENT** 57:56

I think making electricity and like I said, a bunch of appliances extremely affordable to all house would be one key way of moving towards a more equitable access.

**INTERVIEWER** 58:16

Okay, but if you did not have financial constraints, okay, so you would expand that to bigger projects.

**RESPONDENT** 58:27

Yes.

**INTERVIEWER** 58:30

And that's already something that you guys are working on.

**RESPONDENT** 58:33

Right, right.

Part 4

**INTERVIEWER** 58:35

So how balanced you see Do you experience gender representation in various decision making bodies within energy governance structures?

**RESPONDENT** 58:48

So I can speak only for the electricity sector, because that's where we work. And I would say it is really bad. There are very few women in representative roles at different sector offices and at different sectoral positions. Even me and the like, and XXXXwhom you mentioned before, being in XXXX, since we interact a lot with sector people. More often we are the only women sitting in the room. So yes, that is true.

**INTERVIEWER** 59:31

Do you think energy access finance processes, especially renewable energy access finance processes? Do you think they should be gender aware or gender sensitive?

**RESPONDENT** 59:46

Um, I don't really think that is necessary. As long as I mean renewable energy, promotion, gets. It's, you know, required processes set, right? It shouldn't really matter, who wants to put up a general energy plant or where someone wants to put up a plant? So...

**INTERVIEWER** 1:00:14

Yeah, but we find that traditional finance processes are often inaccessible to women, right, because their way of being able to take loans and all is very different from men. So, traditional finance processes are well known to be insensitive towards the gender parameter. So I'm just trying to explore that in terms of you know, the new energies that are coming in,

**RESPONDENT** 1:00:41

Right, right. So, like I said, I mean, I am I would rather like to disassociate the whole gender you know, effect on uptake of renewables. So, renewable should be looked at in a way that who, where how it should be irrelevant. And hence, it should be it should work similarly across for all genders and areas. Like I said, you have a priority lending for any renewable project, so whoever asked for it, they should get.

**INTERVIEWER** 1:01:20

So you don't see any challenges in terms of gender equity, in terms of energy access? finance for energy access?

**RESPONDENT** 1:01:30

No, isn't there are definitely challenges. I would desire this wouldn't be many,

**INTERVIEWER** 1:01:36

okay. But could you elaborate on what you see as challenges?

**RESPONDENT** 1:01:41

So, like, you rightly pointed out access to finance itself is a big challenge. But however, I think that is not got to do much with the renewable energy per se, but it's the whole system of lending itself. Unless that changes, whether it's for nobles or an enterprise or you know, any sort of upfront loan for women is always a challenge.

**INTERVIEWER** 1:02:11

So, I want to ask you a question because especially since you work on access, and optimizing access, and optimizing good sustainable connectivity, not just as a connectivity, but more as a supply which all has impacts on increased energy consumption, right? So, how do you see this as opposed to the whole environment debate and you know, the whole looking at how to reduce energy consumption as direct impacts on global warming and climate change?

**RESPONDENT** 1:02:57

Right,, right. So, one, one very basic idea here is that the demand for energy is always going to go up. Be it urban areas or be it rural areas. The key to ensuring that energy efficient appliances are being used, renewable energy penetration increases, we reduce our impact, energy impact on the globe is all through pricing. So having very effective and efficient pricing mechanisms to ensure that basic needs and that could include basic cooking, basic cooling, basic lighting, basic refrigeration demands are definitely met. However, any sort of you know, splurging in terms of energy use should definitely be priced. So which will then you know, sort of push push push people to use more efficient appliances and reduce their energy consumption. So, I think very key...

**INTERVIEWER** 1:04:15

Yeah, so, since you work at the policy level, how do you think policy recommendations can do this differentiation between what is the essential energy that is required and what is like energy guzzling?

**RESPONDENT** 1:04:31

Right. So, one thing is through a lot of studies that XXXX has been doing or like minded organizations have been doing, we have been... the whole idea of doing some studies is to try and understand what is that basic level of energy demand? Is it 100 units is a 200 units is it 500 units. So that is something that as a community, we are trying to build a discourse about and understand, one. Two, the other hand, a lot of Euro tariff based pricing policies have already been started implemented. In India, especially in some, you know, some smaller pockets, where any energy used beyond let's say a few 100 units is being charged twice the price or three times the price, this is slowly de-motivating people from being able to consume as much as and when, whatever way of electricity that they want. And this is then shifting the trend towards having at least efficient lighting, efficient cooling sort of mechanisms. Now, having said that, like I said, the demand is definitely going to go up, there is no way in which we can keep, we can reduce or bring the demand down. The only way is...., then,

**INTERVIEWER** 1:05:53

Can I get into that? Yes, a lot of the environmental activists and all are actively questioning this basic premise as to why must the energy demand go up only and the fact that the world can't accept any more increase in energy demand. And a large part of that narrative is also focusing on why are we trying to transit people who have lived in ecosystems, which had very low energy footprints to higher energy footprint. I mean, to explain with a very dumb, simple example of the whole, you know, the Nano car for every person kind of logic, that, you know, the streets of India cannot take it if every Indian has a Nano car. So that narrative itself is being considered as quite well, to put it very mildly, suicidal sometimes from environmental scientists, Right?

**RESPONDENT** 1:06:59

Yeah. Which is absolutely. So that that sort of thought process is, is correct, in a way where we're trying to reduce, you know, let's say, the impact of our consumption completely on the globe. However,

**INTERVIEWER** 1:07:21

I would say why are we trying to transit people who have worked without a large energy footprint for such a long time? Why are we trying to transit them into a big energy, not big,... but like a substantial energy user?

**RESPONDENT** 1:07:37

Right. So one thing is, there is no denying that urbanization has been increasing. And we have been, as an urban culture, or nature has been reaching, even to the far-off lands who were first, who were probably a few years back completely dependent on the ecosystem. Today that's not the case, one, and we have to live with this sort of change that is happening. Two, we are definitely again, owing to urbanization, seeing a lot of change in our local environment. And in a city like Pune, where I stay.. even three years back, summers were so bearable, but in the last three, or probably five ish years, they have started becoming unbearable, right. And this can be attributed to a lot of things. Three, there are policies that there are certain policies which can take care of issues like these. So for example, why haven't public transport policies really been taken up in all cities in order to ensure that Boss nobody would need a Nano? Right?

**INTERVIEWER** 1:08:45

Right.

**RESPONDENT** 1:08:46

But now that because you don't have efficient public transport policies, you would need to work towards probably having at least an electric vehicle, rather than having petrol consuming vehicles.

**INTERVIEWER** 1:08:58

Right.

**RESPONDENT** 1:08:59

So there are shifts in different trends, different ways that we look at policies, or even problems in different cities. So for example, why is rainwater harvesting not mandated for every building in urban centers? So, there are too many things you can...

**INTERVIEWER** 1:09:17

Its more a failure of government governance and planning process. Right?

**RESPONDENT** 1:09:21

Right. So okay, given this background, you really can't question why the demand is going to go up. Right? Unless some systems start getting set right, the demand is not going to stop growing. So today, until today, we never thought about electric vehicles. But now we need to plan for electric vehicles. And now when you need to plan for electric vehicles, you need to add more supplying sources. Thankfully, the idea of supplying sources is at least now moving from coal to renewables, although I I know maybe renewables may not be 100% sustainable, but they're definitely much more sustainable than a coal based power source. So then you have 10 different systems that are failing. And the only system that keeps getting blamed is why is there a demand increase? So, that can't be answered, right? You need to set right, all those systems, and then after which the demand will follow, and it will start reducing. And so finally, one very simple thing is human aspiration. So, you can't really ask humans to reduce their aspirations as you can, technically. But as in I living in an urban center is the, you know, in a, you know, in a house, which has a concrete roof, I can definitely reduce my aspirations. But a person who lives on the streets today cannot, right? and then he will aspire. Absolutely, he will have demands, which will...

**INTERVIEWER** 1:10:55

And the problem is that it's actually the aspirations of people like you and me or even richer, who are actually having the larger energy impact really? It is the urban centers who have energy at the tap and water at the tap that is where the misuse happens.

**RESPONDENT** 1:11:19

And hence, hence, I also said that pricing is a very key. So, in urban centers, the moment you start pricing, start pricing electricity, then the demand will settle.

**INTERVIEWER** 1:11:32

Yeah, but then we have government systems who come into power saying that we're going to give you free water

**RESPONDENT** 1:11:42

Or even free electricity. Its all the political side of things.

Part 5 (Closing)

**INTERVIEWER** 1:11:49

Right. So yeah, so is there anything we you feel that we have not discussed on this topic that you would like to add?

**RESPONDENT** 1:12:00

Nothing that comes to mind.

**INTERVIEWER** 1:12:02

Okay, thanks a lot. XXXX. If there are any follow up questions. I can get them to you, right?

**RESPONDENT** 1:12:09

Sure sure.

**INTERVIEWER** 1:12:09

Yeah. And, yeah, so one was I was actually looking at people working with energy from non binary backgrounds, because when we're talking about gender equity, I'm kind of still very much trapped within the binary definitions of men and women. And I'm struggling to find people who come from a different gender orientation or sexual orientation. If you know anybody, I have been in touch with XXXX, who has worked with your organisation before, and she's had committed to work with me, but has been actually very busy. So I will follow up with her. But meanwhile, if you have anybody else in mind who I can talk to, that'd be great.

**RESPONDENT** 1:13:03

Sure. Yeah, I will try and recollect and probably connect you.

**INTERVIEWER** 1:13:06

Sure that would be really appreciated. And so XXXX. Thanks a lot for taking time out.

**RESPONDENT** 1:13:14

Sure.

**INTERVIEWER** 1:13:17

How old is your daughter?

**RESPONDENT** 1:13:19

She's XXXX.

**INTERVIEWER** 1:13:22

Right? So she has every right to demand your time now. Thank you. Okay.

**RESPONDENT** 1:13:28

Thank you.

**INTERVIEWER** 1:13:29

Yes. Thanks.