**Transcript 18**

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| **Sub-contractor organisation** | **ARU** |
| **Interview date** |  |
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| **Interview participant** | |
| * **Code** | **P18** |
| * **Participant name** | **XXXX** |
| * **Organisation name** | **XXXX** |
| * **Gender** | **Male** |
| * **Stakeholder category** | **Policy Body** |
| * **Country** | **Pakistan** |

RESPONDENT: Yes, I will just scan that and send you simultaneously as we speak.

INTERVIEWER: ok.

RESPONDENT: There you go I have sent it to you on whatsapp

INTERVIEWER: Okay. Thank you so much. Okay, then should I start the interview officially?

RESPONDENT: Sure, absolutely.

INTERVIEWER: Thank you so much for coming today and participating. So first let me take you through a brief checklist, please just indicate yes or no. So, have you completed and returned the consent form?

RESPONDENT: Yes I have

INTERVIEWER: through this interview we would request you to share your experiences and expertise as someone who is working in the energy sector as well as your views and opinions on gender equity in energy access.

RESPONDENT: Alright sure.

INTERVIEWER: is it okay if we record the interview for documentation purposes?

RESPONDENT: Yes. It is fine.

INTERVIEWER: so the recorded interview will be transcribed for analysis and a copy of the transcript will be shared with you for your approval. All the information that we obtain serves the sole purpose of this study and will only seen by the research team. Your name and any other identifying features will not be used anywhere in the report or publications emerging from the study.

RESPONDENT: Alright.

INTERVIEWER: Okay, and the interview will take roughly one hour depending on how long or short your answers are so let’s start with the introduction.

**PART 1: Introduction**

INTERVIEWER: so can you briefly tell me a bit about your current role and the organization that you work for.

RESPONDENT: Sure. Well I work for XXXX and that XXXX

INTERVIEWER: Ok. Can you tell us which Alternative and Renewable Energy Sources so you work on? Specifically, the ones that are in focus?

RESPONDENT: Uh. Basically, the policy issued by the government in 2006, that was the first RE policy. That policy was mainly limited to wind, solar and small hydro up to 50 megawatts. And later on, in 2007 there was an amendment in the policy, after which biomass and waste energy was also made… scope of the policy. Although main development is focused on wind and solar, and within hydro, on large hydro and it was it is being pursued by another organization called the XXXX. In the new ARE policy which has been recently approved by the government, many other technologies have been included in the scope such as geothermal, waste energy uh hydrogen based power generation, hybrids of any technologies, storage technology, todal, wave technologies which are somewhat future technologies but still government has included. The government has decided to come up with a separate policy for hydro. So, the government is wokring on. Small hydro large hydro will be covered in a new separate policy.

INTERVIEWER: And do you cover any specific areas in this, like is there an urban rural divide or is this basically at national level.

RESPONDENT: No, basically, the policy is based for power generation, the prime objective of the policy is power generation for renewable energy technologies and since the whole system in Pakistan is that there was a one single purchaser model in which the government entity is the purchaser of all the power generation which is generated by the public sector projects and all private sector projects. So the targets set in the new policies that whatever power we purchase as the government we supply all the consumers. so the prime objective of the project is power generation but with that government is also promoting RE applications in business to business models for capitve views, for reeling for net beating is also being promoted and local manufacturing of RE products.

INTERVIEWER: Right. So basically I want to ask that do you have any policy to expand to remote areas, where there is a substantial population of Pakistan that still ldoes not have electricity, so is there any role of XXXX to provide energy access to them?

RESPONDENT: This has been XXXX’s role somewhat in the past, in fact in xxxx apart from the RE policy as… our mandate was to promote renewable applications of.. and uh renewable technologies. So we did some pilot XXXX.

Now, after the XXXX, provinces have the mandata now, they can generate their own electricity and they can develop projects on their own. Especially for village electrification, the federal government is also looking at it through extending the national grid, because national grid is still under the federal government, but all the village electrification schemes are now under the provinces. So XXXX is not directly involved in this, but assists indirectly in technical assistance and planning. There are certain initiatives that are being taken by the Federal Government, which inclide conversion of tubewells running on conventional electricity to solar in XXXX and some of the areas like old FATA, districts that have merged with KP, and some areas of XXXX as well where the government is specially focusing that rural RE electrification schemes should be developed – through installation of stand-alone solar systems or mini-micro grids. XXXX is involved in the planning of all this. Although it will be interconnected by the provincial agencies but to the extent of planning and initiating this, XXXX is involved.

INTERVIEWER: Alright. Please tell us about your background, what was your education, and how did you get in to this line of work?

RESPONDENT: Well, I have done bachelors in mechanical engineering and in XXXX. I joined XXXX. XXXX at that time, I applied and got selected. Since then, I’ve been working in XXXX in different positions on different projects. Initially, I have done some work on solar on-grid but then mainly on wind and solar projects. Since I have got the policy portfolio, I support different sections working on different technologies within the XXXX in the interpretation of the policy.

INTERVIEWER: Okay. So how long have you been involved in energy issues and specifically do mention any energy access projects that you worked on?

RESPONDENT: On energy related it has been 15 years, energy access you can say, it is somehowe related to energy access because all activities of XXXX that I have been involved with are targeted for providing electricity and injecting more electricity and injecting more renewables in the national grid.

INTERVIEWER: You mentioned about off-grid, please tell us what you did on that project.

RESPONDENT: Basically, I was part of the team within XXXX that was responsible for planning and development of XXXX. Then you know, when the project is developed, then a separate team is developed, a unit is created for implementation. But in the appraisal I was involved.

INTERVIEWER: Okay, tell us that in relation to the policy context shaping your work, what current developments and policies whether at the provincial level or national level influence your work?

RESPONDENT: Well, basically all the policy related regime especially as I mentioned recently we have… the government has announced a new policy… so I have been directly involved in the formulation of the policy, in the consultation of the policy document, sharing the draft with the stake holders, the provinces especially. And the provinces have an important role in this. Previously, provincial the government was doing things at their own discretion. But now the provincial governments are allowed that they cannot initiate their own projects. Especially in the last few project what happened was that there was a time that grid was not available and sufficient. In the last decade, Pakistan has gone through energy crisis, but since the last 3-4 years, this scenario has changed. Many projects came in the pipeline, where there was lesser demand and even lesser grid availability. To overcome this, there was a coordinated mechanism devised in the new policy that in future, all planning of renewables will be done collaboratively between the federal and provincial governments.

So the impact of this was that the issues that have mainly been brought up, that in 2006 policy it was targetted that there should be atleast 5% share but with the increase and awareness regarding the environment and climate change…. And the government also has some obligations, being the signatory of different accords… international accords related to climate change so the government also wants to increase share of renewables. So for the first time, in this policy we have determined a target that we want to have 30% share of renewables by 2030 and 20% by 2020. So these are the targets that have been governed. And, although there were certain issues, especially from within the government sectors… that there are inherent issues with the renewables because of their intermittence and how will transmission be possible in a shorter period…. maybe how many changes you will have to bring in the entire infrastructure, physical changes, improvements etc … will it be sustainable or not, what will be the cost effectiveness.

One of the other targets of the government is as part of the SDG goals that we need to provide the total population with energy access by 2030. So different figures are quoted for our electricity supply, in some places, it is quoted that 70% of our population has access to electrictity and some places it states that 95% supply is there. I think there is confusion that maybe 95% have energy access, but electricity access is still not more than 75%. Because there are huge chunks of villages in KP, XXXX, Southern Punjab and Northern Sindh that don’t have electricity access. So this was another area that the policy targeted that electricity should be so cheap that everyone can access… access is not just that you get them connected, access also means that it should be affordable, for population, for consumers. So this was another challenge that the new policy tried to address.

INTERVIEWER: Right, so basically you said that energy sources are available for 95% but that includes other energy in addition to electricity?

RESPONDENT: In addition to electricity, cooking fuel, or fuel for other purposes. Wood, kerosene.. other than lighting purpose or electricity, energy resources are being used for cooking, heating water, or many other things. These are different figures that you find in different studies , and world bank reports say something else. They talk about 95-96% of energy access. Electricity access is a little different, in some areas if there is energy access, it does not include electricity at this time. And there is a change .. difference between the both.

**PART 2: Understanding of Challenges**

INTERVIEWER: Okay so let’s move to the second part. So, what does equitable energy access mean to you and what would it look like?

RESPONDENT: Well, equitable energy access is I think there is, in every country especially in Pakistan where population is huge, there is a great divide between electricity access and consumption… in rural and urban areas and even within the urban areas there are some locations where infrastructure is not proper. For some reason, being expensive, electricity is not reaching the people, or people are not being able to consume it.

That’s why the different data that is available in studies regarding Pakistan… I think per capita consumption in Pakistan is less than 500 KWh per annum. Whereas global average is more than 3000, in some countries even going up to 18000-20,000. So our per capita consumption is low, and maybe in urban areas our average is more, but in rural areas it is very little. And you don’t even have energy access so equitable energy access… so the thing is every one should have access and access to affordable energy.

INTERVIEWER: Right, so tell us, what does gender equity in energy access mean to you?

For me I think, again when we talk about gender equity. Equity between different levels, different cultutural backgrounds. So societies should have equitable energy access and then the feature of gender comes in that. Male and female should have equal access. But somewhere or the other the difference in access comes, specially in rural areas because men tend to work outside the homes. Sometimes they do tend to have more electricity where as women working in area, where they are working in their homes, they don’t have electricity access in their villages and are deprived of it all their lives. So there has to be a balance and both men and women should have an equal access to electricity and their livelood is quite impacted by that.

INTERVIEWER: Okay, do you think that gender equity should be a priority for policy and interventions?

RESPONDENT: Yes, I think it should be. When we talk about energy access to all that means everyone have and has the right to get equal access to electricity and energy. And everyone needs meaning both men and women equal access to electricity and sometimes in some scenarios it is more important for women to have access to electricity and energy.

INTERVIEWER: For example what scenarios?

RESPONDENT: If you go in details, if homes have access to electricity, then I think it will have a better impact on women than men, who are working outside the home. Women are the ones who are staying inside the home and they are more in need of electricity and energy access for cooking, for daily chores, household chores, to do everything. They are more deprived, if we look in terms of what the requirements are in the house, men don’t have as many requirements as women do.

INTERVIEWER: Okay. So you mentioned briefly that XXXX has done some access projects, although indirectly, and although I know your work is more focused on generation, but how is demand for energy determined by XXXX and how does it and if it all understand consumer needs?

RESPONDENT: Well XXXX…. determination of demand is not the main objective of XXXX. There are other government organizations for example the NTDC National Transmission and Dispatch company… they are mandated to determine the demand for the whole country along with the DISCos. DISCOs identify how many existing customers are there, how many in future based on requests for new connections… there is a new mechanism, a new method through which they determin demand.

Then there is the other part that where there is no electricity at the moment, in future, the DISCos are able to expand there.. so these expansion plans are there. Then there are service through which the government basicallu collects the data that which villages don’t have access to electricity. Then the government segregates the areas by virtue of extending national grid.. where can electricity be provided and where it cannot be. The role of XXXX comes where electricity cannot be provided, and the provincial government departments with regards to off-grid renewable applications. There XXXX gives input, how it can be planned and what are the best, more economical ways to provide it.

INTERVIEWER: So does XXXX do any demand calculations for this planning, or basically its just going to rely on the information provided by the other government departments.

RESPONDENT: No, it is provided by other government departments because primarily this data and information comes from the provinces. Because even at the federal level, this data comes from the provinces that which districts, how many villages, what is available in which villages… even the distribution companies have some first hand information with regards to their network but they also collect information, like demographic data from provinces.

INTERVIEWER: Right, ok. Tell us, how equitable is energy access at community and household level in terms of gender do you think.

RESPONDENT: At the moment obviously, it is not equitable at all. Again in many areas, if we talk about 30% or 25% also, there are areas… where even 25% population doesn’t have electricity accesss.. so even then I think there will be more impact on women. Again, many men go to the cities for job purposes, or any where else as well, they get access to electriicty or energy but their families don’t. All the elderly, people or children or women are left behind in those villages and obviously, they are more badly affected by the energy access and not having the energy access.

INTERVIEWER: Okay. Please tell us, that within households are then any differences with regards gender in terms of roles and responsibilities that affect energy consumption or energy access.

RESPONDENT: I think within households, although both men and women have electricity need, but obviously, women are more dependent on electricity access for cooking purposes, instead of you know… in villages solid fuels are collected, wood is collected and this is the responsibility of women in rural areas. So they spend more time as compared to men in finding these resources and then utuilizing them. And then there are health hazards as well… if we compare, women have more health hazards due to cooking issues, pollution hazards due to using other resources and males are not at the same risk. So I think within households this balance in terms of need for electricity is more towards the women.

INTERVIEWER: Right and do you think different groups of women benefit from access differently? By different women I mean in terms of age or income or geograohical location or even religion or on the basis of ethnicity or cultural?

RESPONDENT: There is difference, if we see women living in urban areas have a more better access to electricity and energy as compared to women in living in the rural areas. And even in the age groups, I think middle aged women are more likely to be working women ranging between their 20s to 50s they are in more need of energy, they are the ones working in their homes as compared to the elderly ones. Or compared to childrem the 30 to 40 or 40 to 50 age group needs more energy, they are the ones who are more affected due to non access to energy.

INTERVIEWER: Do you think there is a difference on the basis of religion, ethnicity or culture between different types of women.

RESPONDENT: I don’t think so… as far as provision of electricity is concerned, so it is not a consideration.. consumer is a consumer for even when the government is making its plans we talk about consumers that they don’t have access to electricity. Whether they have energy access or not, there is no differentiation especially that you have to provide to a specific ethnic group, that is not the issue at all.

INTERVIEWER: Right, please tell us which key energy infrastructure does XXXX provide, and what scale is this work done. Like you mentioned that there are large wind and solar projects, but are there any considerations at small scales for instance clean cooking technologies or other resources and technologies that can be provided?

RESPONDENT: Our primary task is focused on large scale XXXX based projects through private sector. Because in renewable… the overall government policy for power generation projects is that they are installed through private sector, especially all the projects in renewables that have been installed recently are all private sector investement. XXXX is a facilitator that enables development and we provide government guarantees and sign agreements with the private developers, who come and install it. XXXX also monitors it basically at the time of appraisal.

Apart from large scale projects, small scale projects again depend on the government and different schemes are developed for this from time to time. We did some village electrification projects, then the government changed its name as the “XXXX”… so what happened that XXXX brought there requests that in our areas.. the areas they were selected or elected from, so projects used to be for that area from funds of XXXX. XXXX used to work out, do the feasibility study and provide them that and they would implement it directly. These people were either in private sector or elected in provincial government so this model ran for some time.

In addition, net metering is another area.. so all the small scale application at household lever, although primarily it is in the urban areas, but again, the beneficiaries are normal consumers… domestic consumers and commercial consumers are more compared to industrial or large level. And there are many other such schemes being developed by the government.

We are also commissioning an overall study across Pakistan, to identify the areas where there is no energy access, there is no electricity and in the next 5-10 years as well, they will not get the grid extended in those areas, so what are the possible solutions for them… whether they are stand alone solutions or mini grid micro grid, we are trying to include the private sector on the basis of different resources available, which resources are available where and based on that we will develop the models and provide electricity access there.

INTERVIEWER: Ok. So how is the demand determined to recommend the best solution, like you said standalone solutions and min-grids, so how is it determined what to install?

RESPONDENT: So for these decisions, basically the proper demographic data is collected. We have taken a similar initiative in XXXX. And we collect data from studies that how many villages are there, what is the population in each villahe, what is the structure, do people live in close clusters or are their homes constructed farfrom each other, what kind of houses are made, how many people live in each home. So based on that it is devised that minimum per person or per family what we need to provide and which solution to provide so that their lighting needs as well as 2 or 3 fans for cooling depending on how many persons are living in the house. Then this is planned that if a standalone system is required that will be installed or mini/micro grid then what size it will be.

INTERVIEWER: Okay, so is there any consideration on clean cooking in that?

RESPONDENT: XXXX is not directly involved with clean cooking, I think XXXX which is the energy consumption authority, they have done more work on it, plus the ministry of climate change has done some work on clean cooking stoves recently.

INTERVIEWER: Okay, please tell us that when a new infrastructure or technology is provided, are there any differences between men and women in terms of who benefits?

RESPONDENT: In terms of when it is provided, there is no discrimination that for whom it is being provided. It is not targeted for men or women specifically but in terms of their usage, benefits can be more, specially when we talk about net metering or solar installations. You can see the direct benefits in homes, where there was no electricity access or no energy access, and if they get access, them maybe the benefit will be more to women as compared to men. But when devising or promoting such technologies it isn’t considered that who is the target or if the audience is men or women.

INTERVIEWER: And from the decision-making point of view, are there gender differences in making decisions about the purchase of appliance and technologies at the household level and then the community level and then at the city level.

RESPONDENT: I believe there is because mostly such decisions are taken by men in our communities, so the consideration for men or whoever is taking the decision is the price or the cost of the system or the application so inevitably, while doing the decision making the important thing is what am I able to spend. And again, this is not considered that how much will be the benefit specially when it comes to this gender thing, that how much benefit will be for women, when they are buying an appliance or energy efficiet stove. Or if they are buying an electric stove, then men might not be interested in buying an electrive stove as compared to maybe women being more in favor of it and maybe this is the main reason that these are not common in Pakistan because this decision is not taken by women.

INTERVIEWER: And you have sort of answered this as well regarding finances that who takes the primary decisions or are there any differences between men and women?

RESPONDENT: I think that is very clear, in most of the cases, 99% of the cases it’s the men that are taking such decisions.

INTERVIEWER: Right, okay tell us about the difference in gender equity in energy access, between urban and rural context.

RESPONDENT: I think yes, because energy access conditions are much better in urban areas and there is energy access there, women tend to get more benefits out of it and where there is no acces, women are more poorly hit there.

INTERVIEWER: Right. Okay, I wanted to ask about the off-grid projects, like you mentioned in XXXX, so you find out about the number of villages, the number of households so are there any gender considerations in how demand is calculated?

RESPONDENT: It depends on what kind of project is being devised, so basically if it is for lighting needs, then the consideration in that is how many people are living in a household. 6 people are in the household, 10 people in the household, there are 4 rooms, there are 2 rooms … so demand is calculated like that – 4 lights and 2 fans need to be installed, or 2 lights and 1 fan need to be installed. But if the project includes things like you know replacing traditional resources for cooking with fuel efficient or energy efficient cooking methods or products so then the consideration there would definitely be that who would use them. And many projects like these have happened in Pakistan through different donor agency funding where the target was cooking stoves apart from providing energy access so in that the main consideration is always where the cooking is done, how many people related to that, what are the health hazards, who is affected by them… so obviously women are impacted more so the product needs to be structured accordingly.

**PART 3: Policy and Interventions**

INTERVIEWER: Okay, right, let’s move on to part 3 which is about policies and interventions. So the first question is to what extent does gender equity factor in your work on energy access if at all?

RESPONDENT: Not much as I mentioned earlier. At XXXX level, our work is promoting renewable energy, indirectly yes it does have benefits for in terms of gender especially women. The target is that maximum local resources can be utilized, renewables should be used so that climate change conditions become better, and carbon emissions reduce. Another main target is that electricity tariff or prices should be made lower so that electricity usage increases. If the usage increases, I think it will benefit women more if not more than equally as it will benefit men living in domestic areas. Even in their work places it will be a benefit. So, indirectly there is a pattern but we do not discriminate, we try to keep no discrimination within the genders.

INTERVIEWER: Right, that means none of the XXXX policies will have gender considerations as such?

RESPONDENT: We try our best that they should be gender neutral, in fact when the 2006 policy was developed, and in 2011 we were working on a medium term policy that was not approved by the government, governement extended the 2006 policy… but along with energy we also did a… carried out a gender review of our 2011 medium term policy draft so we try to keep it gender neutral.

INTERVIEWER: Right, can you please tell us specifically what you explored in the study?

RESPONDENT: Basically the 2006 policy stated that after some time, we will bring a new policy based on experience. So we started working on a new policy in 2011 as a medium term policy. From 2006 for the next 5 years was short term till 2011. From 2011 onwards medium transition for long term policy had to be devised, so that policy was drafted and whiled drafting that, we tried that it should be kept gender neutral. Gender concerns should be addressed and gender review was also done for that policy, although the government did not approve that policy because they extended the 2006 policy.

INTERVIEWER: So can you tell us some of the findings of the gender review.

RESPONDENT: No, it was just structured initially and as far as I remember, the gender review was to make sure there was no gender discrimination in it and we tried to ensure that we kept it gender neutral and the analysis was to confirm that it was a gender-neutral policy..

INTERVIEWER: Okay, by the way, does your organization have any gender related policies in terms of recruitment and representation?

RESPONDENT: I think HR at our organization would be in a better position to tell you this, but overall like in the government, I think there is a special quota fixed for females. We encourage that females should be recruited in our staff and females should be inducted although the issues in recruitment are coming in the government since last 5-7 years – from time to time, there is a ban on recruitment so then recruitments can’t happen but the effort is made that whenever induction is made, females are given a due share.

INTERVIEWER: Right, so what are the rough figures, what is the percentage of female employees at XXXX?

RESPONDENT: Female employees, I think if we look at the total staff, including officers, it is not more than 10% but then some of the staff includes drivers and they generally tend to be men.

INTERVIEWER: Right, okay, tell us, beyond your own specifc work do you think gender polcies should be gender sensitive.

RESPONDENT: I think they should be because when you talk about energy policies at the down stream level, energy policy is translated into energy access. Obviously then you start talking about the livelinhoods of the common people living in marginalized areas or those who don’t have access to good quality of energy supplies, energy infrastructures etc. Then the discussion comes that obviously it should be gender sensitive, although most of the time the policies are not that gender sensitive.

INTERVIEWER: so do you think there are policy gaps around women’s access to energy access at the local or national level or what gaps do you think exist?

RESPONDENT: As far as renewable energy is concerned, as I mentioned, we try to keep it geneder neutral. Maybe in some other policies but not in the power sector. In the power sector, all the old policies are mostly gender neutral because the main target is to provide electricity access, affordable energy and sustainable energy solutions. So where we talk about sustainable energy, we try that all men and women get energy access. But if we go in specific, then maybe at provincial level there are schemes and policies in which there is a need to have to be concious of gender issues.

INTERVIEWER: Okay, are there any socila policies that you think have an impact on energy equity and what changes are required within these to make energy policies more euitable and accessible.

RESPONDENT: What do you mean by social policies?

INTERVIEWER: Social policies, meaning any policies that are not directly energy policies but have a direct or indirect impact on energy access. For example, like you said what should the gender representation be like in energy governance sector or education or any thing that indirectly …

RESPONDENT: See, this includes policies for example employment policies. Obviously they should be gender specific, gender should be targeted and encourage more and more participation of women. In addition, I think that due considerations should be given in planning and projects, that what will be the impact on livelihoods. Especially, when we talk about social development coupled with energy access, while planning this it is important to consider that many livelihoods programs and plans are devised that are mainly focused on increasing productivity. So when productivity has to be increased then gender considerations need to be given due considerations.

INTERVIEWER: Okay, tell us, if there is an ideal scenario and imagine there is no policy or financial constraint, then what in your view would be best practices to achieve gender equity in terms of energy access.

RESPONDENT: Best practices I think maximum participation of women is not restricted to working environments or jobs or seminars. When consultation processes happen to devise policy or when government launches programs for females then women should be included maximum in their appraisal. Then the gender aspect will also be addressed openly and the target will be planned accordingly.

INTERVIEWER: so what challenges do you see in this? In Pakistan’s current situation, what challenges do you see to achieve this?

RESPONDENT: Challenges… so the challenge is that women participation is also low because the job environment does not include sufficient women participation. Women’s strength is low in different organizations, even in the private sector. In the public sector it is extremely low. Education for women is more important because if we have educated women only then we can have them in the mainstream of planning or decision making in public sector and private sector.

INTERVIEWER: Right. And in your role, within your organization, what can you do to achieve this?

RESPONDENT: I think when it comes to policy planning so we try to cover this aspect and devise some programs etc under this. At the organizational level we try that maximum induction is done. During new recruitment, a certain share of positions should be for women. In terms of job creation and organizational activities, maximum role should be given to women. This is what I think we can do best on organizational level.

**Part 4: Topical Questions**

INTERVIEWER: Right, ummm you have answered this a little bit already, but how balanced is gender representation in various decision making bodies in energy governance and structure?

RESPONDENT: I think at the moment it is more directed towards men, because the number of working women is very less, specially in the public sector

INTERVIEWER: Tell us how is gender reflected in Pakistan’s altrenative energy policy. Do you think any of the measures can be effective?

RESPONDENT: There is no mention of policy as far as the policy is concerned. As I said, we have tried to keep it gender neutral so we think it is equally beneficial .. equally applicable to both genders.

As far as women’s role in the RE sector is concerned, I think in the last 3-4 years we have seen a lot of women who uhh who have started working in different private companies that are involved in sales, designing and even installation of solar systems, who are all engineers.

There are many bodies working, infact recently, I have heard of an all women board. There is a company that has an all women board, who are trying to develop a large-scale PV project in Pakistan that will be the first project uhh globally.

INTERVIEWER: Okay. Excellent... Very Good. Okay, you mentioned earlier from the representation point of view, but in your earlier answer you had mentioned that perhaps women don’t get equal benefits or equal access, specially in the rural sector. So do you think there can be any energy policies to improve this?

RESPONDENT: Uhh Policies I think overall, overall when the government promotes renewable applications or energy access, then women will get benefit out of it. Specially, because the best part about renewables is that instead of putting large infrastructure or extending the grid, you can say that custome made applications and products are also available. Lighting Africa program was extending in Pakistan by IFC, first Lighting Asia and then Lighting Pakistan. In Sindh, a large number of solar lanterns have been provided and we have found that women have benefited from these more. Their Productivity has increased. Earlier, when it used to get dark, people used to go to sleep, now at night – we have seen in our projects as well – people start emboridery and stitching work at night. In the northern areas smaller hybrid projects were installed. When they got electricity access, the time spent on finding firewood or other resources for fuel was significantly reduced. So the time saved, they are making productive use of that time. So, I think promoting renewable energy or promoting uhh providing cheap electricity uhh to your households in rural areas will be uhh will be beneficial for women specially.

INTERVIEWER: Right.. So does XXXX promote decentralized power generation or basically it is working on the model of national grid expansion.

RESPONDENT: Both kind of projects are there. Globally, at this time, the special thing about renewables – that the policy also talks about – is that where the resource is available, the technology should be used there. Infact, see, 1000 Mega Watts is not something that we can just set it up for generation. So decentralized is a term.. I think it should be distributed, where the resource is wind, wind projects should be installed, where there is solar, solar should be installed. For the big projects, the main emphasis is that grid access should also be increased simultaneosuly and the more cheaper renewable electricity is injected in the grid, the overall basket price will come down.

INTERVIEWER: Right…so…

RESPONDENT: The main issue right now is that electricity prices are rising, which is one more reason that energy consumption in Pakistan has decreased in the last year…

INTERVIEWER: Okay…

RESPONDENT: They are using less electricity because the electricity bills are too high and on the other side, there was a time that electricity demand was higher and supply was in shortage. Now the Pakistan Government has a surplus and the demand is going down, electricity prices are rising and people are not utilizing. So the capacity is idle. So the more renewables are injected, the average basket price will reduce and consumption will increase.

INTERVIEWER: Right. So basically the people who don’t have electricity at all are not included in the prediction or estimation of demand then?

RESPONDENT: See, there are two kinds of prediction when expansion or demand forecast is done. One is your economic growth targets, where you have to inject and how much electricity demand will increase. Plus, addition of new consumers is also part of that demand identification that how many new consumers will be added by extension of grid infrastructure. And the electricity being provided in the urban and rural, still some population is left where the grid cannot be extended, so that population did not have any solution till now. But since the last few years, projects are being initiated for this population seperately and in any case, we have to use the RE applications and off-grid application to give them electricity.

INTERVIEWER: Right. So the energy you were talking about, are there any specific sources that are given priority, like how do you determine that will it be wind, solar or biogas?

RESPONDENT: Depends on how… for example, in XXXX it is specially being planned tht wind and solar seperately or in hybrid mode with battery, that is the best option. Or in Northern Areas, specially KP, there are many projects where solar and micro-hydro hybrid projects have been installed.

INTERVIEWER: okay.

RESPONDENT: because in the complete full scale, there is intermittency. Hydro is also less in winter and more in summer. Sun is there during the day and not at night. Wind patterns keep changing. So the hybrid mode allows you to utilize the resources available in that area. Again, demographics matter a lot in this, what is the population like and how scattered it is. Is the areas flat or hilly? Will a standalone system be better there or mini-micro grids? Because there was no concept of mini-micro grids in Pakistan before but now the efforts are being made, that instead of the government putting up a project, because government projects fail for this reason, that a product is being given to consumer B who has no ownership. You provide him with something one time and then the panel didn’t work or battery didn’t work and there was no backup plan for that. Now the idea is to involve the communities or evolve them to become energy service providers.

INTERVIEWER: Right.

RESPONDENT: They are brought in on commercial basis, but local resources are used when providing electricity based on the affordability of people in that area.

INTERVIEWER: Right. Like you mentioned that electrification project that can’t happen in XXXX. So basically if you have to make it successful, what would the model be, will you go towards private investment?

RESPONDENT: Yes, like we saw an agency did a project, its called results based financing model. Instead of giving free solutions to those communities. With free solutions, people use them and then wait for the next free solution, and won’t do anything themselves. In results based financing, private companies have come in – the gap financing and funding will be provided by the government to them, based on the ration of standardized equipment that they supply. And the equipment is leased at 0% interest, so the consumer is not getting it for free – they need to pay the Rs 200, Rs 300 monthly in which they would get one solar lantern. And the vendors are present with 2 years warranty that if something goes wrong they will replace it,.

INTERVIEWER: Right,.

RESPONDENT: so this is how things are getting better. This structure was used in Africa. It has been successful in Asian countries, even Pakistan. And creating awareness within communities is very important, one person utilizes it and then he says that he is giving Rs 200 per month for it. And they are small lighting products, full systems with one fan and 3 lights. So people have purchased it themselves and when they have the ownership of it… they have to pay because they have the ownership of the system so then they take care of it as well.

The vendor is also available in the local community for O&M issues, or any awareness issues – the retail shop will be there to fix it or tell them how to operate the system, how to fix it. So these are the boundaries that we are working on. Using these models, how will we provide energy directly or bring in private investors for mini-micro grids to install 1 micro-grid in each village. Electricity is generated and then billed through a prepaid Pay As You Go system, which is mobile based units.

INTERVIEWER: Right. So XXXX facilitates this entire process?

RESPONDENT: We can call it facilitation or in a way, the planning of this…

INTERVIEWER: Right..

RESPONDENT: XXXX is involved for the technical feasibility development once the data collected from all the provinces.

INTERVIEWER: Okay, this means you may have some knowledge if any gender based programs have been initiated for energy access finance?

RESPONDENT: None at the moment… XXXXhas an RE financing scheme that was initiated in 2008 or 2011/12. And it has been extended for the third time. Initially it was up to 10 Mega Watts but now projects up to 50 Mega Watts are included as well. But there is no specific gender provision in this although it could be included. If a program for women is initiated for energy efficient appliances that includes electric stoves or things like that, so they can also be made a part of the financing.

INTERVIEWER: But it isn’t like that at the moment?

RESPONDENT: It is not at the moment, but in future, I think that there can be further segregation done in this.

**Part 5: Conclusion**

INTERVIEWER: Okay. Thank you so much uhh in the end would you just like say anything? any final comments

RESPONDENT: I think this is an interesting study, this research that you are doing. And I think in future, this energy transition that is happening globally, in Pakistan at one end we are talking about energy access and at the other we are talking about energy efficiency. So I think there is another area gender mainstream or gender equality in energy access that I think needs to be looked at in paralle. In the end, I think the goal is the same that energy efficiency needs to be attained with energy access, that is the only way to achieve sustainability.

INTERVIEWER: Right. XXXX thankyou so much for you time.