Spaces for Change.S4C

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Policy Brief: Feed-In Tariff Regulations for Renewable Energy Sourced Electricity in Nigeria

Gendering Access to Renewable Energy

Renewable Energy Feed-in Tariff (REFIT) is a regulatory mechanism for accelerating investment in renewable energy-based electricity using long-term contracts and guaranteed pricing to protect producers from some inherent risks associated with renewable energy (RE) production, thus allowing for more diversity in energy technologies. In the same spirit of pursuing a dedicated and coherent action plan for maximizing the use of abundant RE resources in a sustainable manner, we take the view that the formulation of the Renewable Energy Feed-in Tariff (REFIT) Regulations presents an important opportunity to articulate policy and structural shifts that aim to close the gaps in energy access, and strengthen the interface between gender, resource efficiency and environmental sustainability.

Power imbalances that traditionally exist on the basis of gender have strong implications on women's capacities to access energy, and participate in economically empowering activities in the energy sector. To this end, this paper contributes a number of proposals for developing a gender-responsive tariff regulation enabled by innovation, technological change and gender equality.

Why REFIT Must Prioritize Gender

Despite being ranked as Africa's largest oil producer and holder of the 9th largest natural gas reserves in the world estimated at about 180 trillion cubic feet, Nigeria at 4,000mw daily power generating capacity is still struggling to meet the energy demands of its 170 million citizens.

Summary of Proposals

In sum, Spaces for Change (S4C) calls on National Electricity Regulatory Commission to:

1. Make the REFIT licensing conditions more flexible and less onerous for women entrepreneurs and investors.
2. Integrate gender equity in burden sharing of RE-electricity generation costs so as to avoid exacerbating inequalities in energy access.
3. REFIT should not exclude off-grid power generation
4. Use targeted actions to expand the poor's access to RE-based electricity
5. Increase engagement with both women and men stakeholder groups in energy decision-making.

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At 48%, Nigeria is far behind South Africa's 82.7% electricity access rate, Senegal's 56.5% and Morocco's 98.9%. Chronic shortages of electricity supply yield impacts that have social, economic, physical and psychological dimensions, experienced differently by male and female end-users. In fulfilling their traditional gender roles, women have more need for energy for household chores such as cooking, heating, laundry, cooling, lighting, storage and the like. As such, they bear a significant share of the burden of energy poverty, a situation compounded by entrenched income inequalities and lower literacy levels among women. Prevailing energy policies pay scant attention to these differentiated energy needs and consumption levels between men and women. Households and businesses depend on petroleum products (mainly petrol, diesel and kerosene) as alternative sources of energy supply to light up homes, carry out basic domestic chores and power the industries that create jobs. Given the slow progress of fuel subsidy reforms; the recurrent fuel scarcity; the high dependence on wood fuels, (especially by women, low income and rural households) and the attendant adverse impacts on human health, the Nigerian government now seriously considers renewable energy development as a major option for raising its share of global power generation.

Proposal One: **Licensing conditions, procedures and evaluation criteria for license applications (Page 15)**

The enunciated licensing conditions and procedures hold enormous prospects for raising material standards of living, reducing poverty and expanding women's access to cleaner cooking fuels. The availability of alternative cleaner fuels is also necessary for substantially reducing global greenhouse gas emissions. There are two major ways REFIT's procedures and evaluation criteria can expand women's access to energy and effect transformative changes to the processes and structures of energy production:

1. Women-targeted energy financing and marketing approaches: They have been used to remove the barriers and disadvantages women face in gaining access to credit, new technologies, and marketing networks in order to confront the structural constraints that inhibit their visibility and participation in the energy sector. Best practice examples of gender-responsive renewable energy financing strategies documented by Norad (2010) show different methods of setting targets for women to become clean energy employees and entrepreneurs in the modern energy sector as follows:

"Solar Sisters in East Africa uses a "micro-consignment" model and partners with formal and informal women's organizations to market off-grid lighting, and combines sales with promoting mobile phone charging as a women's business, and using mobile banking and text messaging to communicate with the entrepreneurs and to streamline funds. In Bangladesh, an energy microfinance NGO has bundled projects that involve training women and employing them as engineers to install solar panels for CDM financing. In Senegal, improved stoves production in two regions provides employment for 43 male metalworkers, 50 female potters and 27 male and female re-sellers. More efficient production and sale of charcoal and minor forest products in the same project resulted in the employment of 214 women and 237 men through enterprise groups. In Nepal, women are encouraged to participate in technical training as micro-hydro operators, bio-digester masons and solar technicians, with incentives given to women for childcare plus a fifty per cent quota to encourage women to participate in technical training."

2. Flexible licensing and tariff conditions for women energy entrepreneurs: Making the licensing conditions more flexible and less onerous for private investors, including women entrepreneurs expands opportunities for them to become providers and deliverers of renewable energy products and electricity services below 30MW. A variety of measures such as quota system, dedicated tariff category, targeted subsidies could be used to ensure that women get issued a certain percentage of licenses to operate and distribute power supply within a local distribution zone to non-wholesale customers. This will also encourage other women and girls to use those services. Further, this adds to the list of efforts geared towards accelerating the achievement of RE generation growth of 8 per cent and 16 per cent projected between 2020 and 2030 respectively.

Proposal Two: **Integrate Gender Equity in Burden Sharing (Page 10)**

The draft regulations stipulate that additional power generat costs resulting from the REFIT may be covered through burd sharing by electricity consumers. Renewable energy product involves high operating costs and overheads resulting from costs of connection, construction, upgrading transmission/distribution lines, substations, and associa equipment. Except reinforcements costs (deep connection co which are borne by the System Operator or the Licen Distributors, the developer bears these overhead costs, includ the cost of connecting their plant physically to the nearest poin the electricity distribution network. As other financ mechanisms such as the Power Consumer Assistance Fund (PC and the Rural Electrification Fund are not yet in place, burd sharing enables the developer transfer some of these costs electricity consumers.

Not integrating considerations of gender equity could potentially lower energy consumption among women, disincentivize the usage of renewable energy electricity, and force more women and low-income households to embrace cheaper biomass fuels. An equity based approach may entail distributing the cost burden among electricity consumers on the basis of gender, geography, population size, education level, income capabilities, household energy expenditure, consumer concentration etc.

Proposal Three: REFIT Should Not Exclude Off-Grid Power Generation (page 9)

REFIT covers only power generation from generators connected to the Transmission and Distribution Systems that have between 1MW and 30MW installed capacity. It is acknowledged that feed-in tariffs usually cater to renewable energy sources which are connected to the grid. However, excluding off-grid power generation deprives investors and entrepreneurs of the benefits of long-term contracts and pricing based on the levelised cost of production, which REFIT offers. This exposes them to market shocks while potentially contracting the plans to extend the green electricity market to communities situated far away from distribution networks that lack access to electricity and energy-efficient services. Absent REFIT's regulatory mechanism, adequate price signals will be needed to ensure timely investments in the off-grid supply of electricity through optimal use of renewables. All of these have strong implications on the prospects of realizing 2000MW of RE power projected to be admissible into the grid by the end of 2020.

We propose that REFIT should not exclude off-grid power generation mainly because such installations can have significant long-term socio-economic impacts, requiring the benefits of REFIT's long term-based risk-reduction measures. This recommendation is consistent with practice elsewhere. As practiced in the United Kingdom, renewable electricity generated by eligible off-grid and on-grid systems can receive payments under the Feed-in Tariff scheme. Off-grid renewable electricity producers, however, do not get export tariffs for selling excess power to the grid. Encouraging the inclusion of off-grid power generation into REFIT in no way detracts from the other targeted measures to collaborate with the Rural Electrification Agency to develop the technical and operational modalities for off-grid projects.

We recognize that IPPs are permitted to sell power directly to buyers wishing to purchase renewable energy outside of the REFIT mechanism. But this stop-gap measure should be weighed against the energy independence benefits, the industry development benefits, benefits to small scale investors and the private sector, benefits to rural communities, benefits to women, as well as the environmental benefits of off-grid generators' participation in REFIT scheme. In terms of benefits to gender, extending REFIT's full offerings and effects to off-grid power generators will among other advantages, help to bridge inequalities in accessing non-polluting energy services, open new markets, ease women's work burden and the time they expend on manual labour and domestic chores (such as longer walking distances to fetch firewood and water). Reduction of time spent on these tasks allows women to spend more productive hours on income-generating activities.

Proposal Four: Targeted Actions for Enhancin the Access of the Poor to RE-based Electricity is Necessary

The REFIT regulatory framework should give greater attention to the linkages between poverty and inequalities in energy access. According to the World Energy Outlook 2014, an estimated 620 million people in sub-Saharan Africa do not have access to electricity, and for those that do have it, supply is often insufficient, unreliable and among the most costly in the world. Costly electricity is often beyond the reach of the poor and low income households, even if it is available. Absent targeted actions and initiatives designed to expand the poor's access to electricity, RE-based electricity could come at a cost so high that increases the vulnerability of the poor to social, economic and environmental shocks, and make investment in renewable energy a risky decision. As Norad recommends, and we agree, specific tariffs for different areas could be used to influence access for different population groups, particularly since women are over-represented amongst the poor. Additional research study is however, needed to determine the feasibility, costs, effectiveness, efficiency, reliability, and differentiated impacts of the different solutions.

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Proposal Five: **Increase participation and engagement with both women and men in energy decision-making**

As primary users of household energy-consuming appliances (refrigerators, microwave, blenders, cookers etc), biomass and traditional cooking fuels, women are key stakeholders in energy-efficiency and environmental sustainability initiatives. Their expertise, perspectives and participation are critical to the formulation of energy policies like REFIT. Gender engagement is also key in the execution of innovative energy investments that have great potentials to redistribute wealth, transfer technology and expand access to cleaner fuel alternatives. Along these lines, it is clear that without gender-inclusive consultations and gender-balanced representation in the REFIT review processes, it will be difficult for the National Electricity Regulatory Commission (NERC) to overturn gender disparities in energy access and realize the renewable energy generation growth of 8 per cent and 16 per cent projected between 2020 and

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