

January 2018



Parliamentary Action on Renewable Energy

Policy Documents - A Toolkit for Legislators in Africa



Climate Parliament
Legislators working worldwide to combat climate change



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Abbreviations

ABERME	Agence Béninoise d'Électrification Rurale et de Maîtrise d'Énergie du Bénin (Agency for Rural Electrification and Energy Management, Benin)
AFD	Agence Française de Développement (French development agency)
AfDB	African Development Bank
ANADER	Agence nationale pour le développement des énergies renouvelables du Bénin (National Agency for the Development of Renewable Energies, Benin)
ANER	Agence Nationale des Énergies Renouvelables du Sénégal (National Renewable Energy Agency, Senegal)
ARE	Autorité de Régulation de l'Électricité du Bénin (Regulatory Authority of Electricity, Benin)
ASER	Agence Sénégalaise d'Électrification Rural (Senegalese Agency for Rural Electrification)
CEREEC	Center for renewable energies and energetic efficiency of ECOWAS
COP21	21th Conference of Parties
CSCs	Common Service Centres
ECOWAS	Economic Community of West African States
EE	Energy Efficiency
EEEP	ECOWAS Energy Efficiency Policy
EEP	Energy efficiency policy
EIB	European Investment Bank
EnDev	Energizing Development
EREP	ECOWAS Renewable Energy Policy
ERIL	Local Rural Electrification Initiative
GEF	Global Environment Facility
GHGs	Greenhouse gases
GiZ	German Society for International Cooperation
AREI	Africa Renewable Energy Initiative
IDC	Industrial Development Corporation
IFC	International Finance Corporation
ISA	International Solar Alliance
KW	Kilowatts
NDCs	Nationally Determined Contributions
MCC	Millennium Challenge Corporation

Abbreviations (continued)

MERPMEDER	Ministère de l'Énergie, des Recherches Pétrolières et Minières, de l'Eau et du Développement des Énergies Renouvelables du Bénin (Ministry of Energy, Petroleum and Mineral Research, Water and Renewable Energy Development, Benin)
MGO	Mini-grid operator
MP	Member of Parliament
MW	Megawatts
NCEF	National Clean Energy Fund
NDCs	Intended Nationally Determined Contributions
NGOs	Non-governmental organizations
PA-IED	Practical Actions and Innovation Energy Development
PARE	Parliamentary Action on Renewable Energy
PPP	Public–private partnership
PV	Photovoltaic
RE	Renewable energy
RMI	Rocky Mountain Institute
SBEE	Société Béninoise d'Énergie Électrique (Beninese Electric Power Company)
SDC	Swiss Development Corporation
SDGs	Sustainable Development Goals
SE4ALL	Sustainable Energy for All
SENELEC	Société National d'Électricité du Sénégal (National Electricity Company of Senegal)
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
VAT	Value Added Tax
VGF	Viability Gap Funding

1: About Climate Parliament and UNDP



The **Climate Parliament** is an international cross-party network of legislators, dedicated to preventing climate change and promoting renewable energy. We are the only independent parliamentary network with renewable energy development as its primary focus. Our Secretariat supports parliamentarians to undertake initiatives at national and regional levels to help accelerate the global transition to renewable energy. The Climate Parliament has been working with MPs on renewable energy for over five years, and has established a network of legislators from across Asia, Africa and Europe, all dedicated to effecting the renewables switchover.

UNDP is the United Nations lead agency in providing support to Member States as they consider their long-term development. UNDP believes that enhancing democratic governance is essential for achieving sustainable development and this must include effective parliaments. It provides various forms of technical assistance to more than 60 parliaments around the world (one in three parliaments globally), supporting their efforts to create an autonomous, transparent and inclusive institution. UNDP also strengthens national capacity to manage the environment in a sustainable manner, including as the leading implementer of programming for the Global Environment Facility (GEF) and a range of other climate related funds. UNDP offers highly specialized knowledge, technical assistance and funding for eligible countries to build their capacity to create and maintain a sustainable environment.

2: Foreword from the Secretary-General



Honourable Members of Parliament,

Over the course of Climate Parliament's recent parliamentary roundtables in Africa, we've heard example after example of how a small group of parliamentarians can make a big difference to promoting renewable energy in the context of a national parliament. We hope the resources contained here will help and inspire you to drive this agenda forward in your own country.

In particular, we very much hope you will find opportunities to:

- **Encourage your government to not only sign but also ratify the International Solar Alliance agreement** as soon as possible. A brief on benefits accruing to the countries joining the Alliance is included here.
- **Create funding mechanisms to support the large-scale deployment of solar water pumps in your country.** Indian manufacturers who attended our recent hearing in Abidjan showed us that this key technology could be spread across Africa quickly. As soon as the country has ratified the International Solar Alliance, the government will be able to explore the new US\$2 billion soft loan facility that India has created to support solar projects among African ISA members, which could be one source of financial support.
- **Encourage your government to explore participation in the Scaling Solar initiative** by contacting the International Finance Corporation through the World Bank office in your country. We have seen in Zambia how this can accelerate the deployment of cheap, large-scale solar power. Senegal is already participating. This could be a key opportunity for Africa.
- **Remove taxes on solar equipment.** As Jitu Soni told us, with a single amendment to the tax bill removing value-added tax, he reduced the cost of solar panels, inverters and other equipment in Tanzania by close to 40%. Mali, Burkina Faso and Morocco have all taken similar steps. This could be the quickest way to accelerate solar in your country.
- **Seek financial and regulatory support for village mini-grids** powered by renewable energy. Senegal has shown that rapid progress on this is possible, and even in Senegal the deployment of mini-grids needs to be accelerated to have a big impact. Since our meeting in Abidjan, the electricity regulator of Benin has said that they intend to use the Climate Parliament's model contract for a village minigrad as the basis for a standard contract in Benin. We hope it will be useful in other countries as well. The Model Agreement included as an annexe to this toolkit.

Please do keep us informed about all the actions you take in your country, so that we can share progress reports with colleagues in other countries. Please don't hesitate to let us know if we can help with further information.

Thanks again. We look forward to hearing from you.
Kind regards,

A handwritten signature in blue ink that reads "Nick Dunlop".

Nicholas Dunlop
Secretary-General
Climate Parliament

3: Background

While the analysis and recommendations in this toolkit pertain to Francophone West Africa, the resources contained here include policy ideas, example parliamentary questions and model documentation that should be of interest to legislators worldwide - as well as others working in the energy sector. They were formed in response to the needs of members of parliament in three countries: Benin, the Ivory Coast (sometimes referred to here in the French: *Côte d'Ivoire*) and Senegal. These countries were chosen partly because the renewable energy industry finds itself at very different stages of development in each country, as the reader will note on reviewing the included short extracts from the 'baseline studies' commissioned as part of the project. They were also selected on the basis of the European Commission's priority areas, UNDP's parliamentary development projects and the regional political context - as well as considerations of language and cohesion. The range of policy contexts has enabled us to discover a broad range of policy tools to nurture an industry that offers both a solution to the climate emergency and a pathway to provide access to modern energy services for the hundreds of millions of people who still don't have so much as a lightbulb in their homes.

These resources were developed as part of the Parliamentary Action for Renewable Energy project, implemented jointly by UNDP and Climate Parliament, which concluded its second pilot phase (PARE II) in September 2017. As such, they often refer to the specific policy or institutional context in the three project focus countries, but we feel confident that they offer wider lessons. We leave it to the reader to judge how best to draw general principles from the original context.

Climate Parliament often hosts events that enable MPs to reflect on their experience working on renewable energy legislation in a supportive atmosphere that seeks to strengthen legislation and coordinate advocacy efforts involving stakeholders across the energy sector - including governments, investors, NGOs, and donor agencies. For us, the involvement of parliamentarians in the creation of policies targeting access to renewable energy for all is essential for the success of the Sustainable Development Goals (SDGs). This is an important engine of inclusive development.

Working with UNDP, we build the capacity of parliamentarians to advocate for - and monitor the development of - the renewable energy sector, and to promote the reform of policies and regulations to encourage investment in renewable energy generation capacity.

Our joint actions have led to a wealth of policy analysis and ideas, which we hope will be of some use to others working to develop this vital industry.



3.1: About the Parliamentary Action for Renewable Energy project

In 2012, the United Nations Development Programme (UNDP) and the Climate Parliament collaborated to help strengthen the capacity of parliamentarians in developing economies to develop coherent and effective policy frameworks which promote renewable energy in order to increase access to modern energy services, improve energy security, reduce carbon emissions, and avoid future fossil price shocks. The three-year programme (Parliamentary Action on Renewable Energy -PARE I), supported by the European Commission, the Ministry of Foreign Affairs of Denmark and the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), aimed to catalyse the development of domestic renewable energy resources in less-industrialised countries in Africa, the Middle East and South Asia.

Following the successful PARE I project, the PARE II initiative (outlined in this report) was funded by the European Commission to carry out a pilot study for a broader renewal of the in PARE concept across a greater range of countries. The focus area chosen for this pilot was Francophone West Africa - specifically Benin, Cote d'Ivoire and Senegal - the region having been chosen specifically as a result of the need to support policy frameworks in this field.

As stated in the PARE II Project Logical Framework, the overall objective of the project was to strengthen national legal and regulatory frameworks for renewable energy development and improve parliamentary oversight of the sector, thus providing a more secure, attractive environment for public and private investment.

The indicators against which the success of the project in meeting its specific objective were measured are listed as follows in the Logical Framework:

1. Cross-party parliamentary groups are established to champion renewable energy in their National Parliament
2. National roadmap for parliamentary action on renewable energy development is identified for each country. The national roadmap will be the basis for establishing a detailed work plan per country
3. Parliamentarians in beneficiary countries are better informed about the potential of renewable energy for improving access to sustainable energy and the political will to develop renewable energy resources is enhanced
4. MPs are better positioned to advocate effectively for renewable energy through regional hearings and knowledge sharing facilities and online learning opportunities
5. Gender is integrated across all activities

4: Highlights from our Baseline Studies

The following section contains selected extracts from the Baseline Studies that were conducted in respect of each of the three project countries during the early stages of the project, in mid to late 2016. In some policy areas progress has been made since that time, so aspects of the policy recommendations may appear out-of-date. On the whole, though, the analysis and recommendations contained here remain a useful guide to how Benin, Ivory Coast and Senegal can each embrace the opportunities presented by the renewable energy revolution.

4.1: Benin



General objective

This “Study on the Legislative and Institutional Framework governing investment in renewable energy in Benin” has been carried out in order to make proposals for improving the legislative and institutional framework with a view to greater involvement of parliaments in promoting the investment needed to develop renewable energy in Benin.

Specific objectives

With regard to this general objective, the specific activities required will be to:

- Analyse the legislative and regulatory framework relating to renewable energy in Benin;
- Identify any discrepancies between law and practice;
- Analyse the context, budget, opportunities and challenges of investing in renewable energy in Benin;
- Describe the institutional framework for investing in renewable energy;
- Present the government policy for investing in renewable energy;
- Describe the different political positions regarding renewable energy;
- Draft, if possible, a roadmap with recommendations for concrete activities for parliamentarians (amendments to the legislation, budget allocations, monitoring public projects or procurement, etc.) and other players.

Like other developing countries, Benin is fighting poverty by undertaking numerous reforms to get its economy out of the rut¹. This economy remains dependent on overly expensive energy systems with high carbon emissions. Indeed, an overall view of the energy sector in general reveals²:

- A huge dependence on the traditional use of biomass (firewood and charcoal);
- High dependence on neighbouring countries for electrical energy supplies;
- Little access to electricity, especially in rural areas;
- Almost total dependence on foreign countries for petroleum product supplies³, and
- Significant untapped potential for renewable energy.

In this respect, we note that about 60 % of the total final energy consumed in 2010 is from biomass energy (firewood and charcoal). Petroleum products account for 38 % and electricity 2 %⁴. The situation of the latter (electricity) is rather worrying. The main thing we note in this respect is: a national electrification rate of 30 %, with 55 % in urban areas and 6 % in rural areas. We deduce from this that the electricity consumption per caput is of the order of 110 kWh/inhabitant/year⁵. Added to this is the low national coverage rate for electrical energy⁶.

According to the master plan for electricity, with respect to rural electrification, it is evident that in 2015, 43 % of localities were connected to the SBEE (1654 localities of the 3817 in Benin). Also, 82 % of the non-electrified localities are at least 1 km from the existing MV network, 12 % are between 5 and 20 km and only 2 % are more than 20 km. 78 % of the population living in the non-electrified localities is at least 1km from the network, only 3 % are more than 20 km from the network, 16 % are between 2 and 5 km.

Although electricity is the main component of the energy, driver of all economic growth, in Benin, it is limited to just 2.9 million people, i.e. close to 29 % of the population in 2013. And at the same time, demand for electricity is constantly increasing at a rate of 7 % a year, mainly due to household consumption⁷. Faced with this high demand, the supply of electrical energy is not able to keep up. It is currently characterised by a low level of development of

1 For a detailed view of the strategies Benin has planned for reducing poverty, see “Benin: Growth strategy for reducing poverty (SCR 2011-2015)”, March 2011, consulted on 24 July 2016 at <https://www.imf.org/external/french/pubs/ft/scr/2011/cr11307f.pdf>

2 Final report of the Scaling Up Renewable Energy Programme in Benin: SREP financing plan, September 2015, p. 12 et seq.

3 “The supply situation is characterised by a low level of development of modern energy production capacities resulting in 100 % dependence on foreign countries (international market) to meet petroleum product requirements and more than 90 % dependence on countries of the West African sub-region (Nigeria, Ghana and Ivory Coast) for electrical energy supplies.” See Final report for the Scaling Up Renewable Energy Programme in Benin: SREP financing plan, September 2015, p. 16.

4 For a recent estimate, see the Final report of the Scaling Up Renewable Energy Programme in Benin: SREP financing plan, September 2015, p. 12.

5 Final report of the Scaling Up Renewable Energy Programme in Benin: SREP financing plan, September 2015, p. 13.

6 According to the master plan for electricity, with respect to rural electrification, it is evident that in 2015, 43 % of localities were connected to the SBEE (1654 localities of the 3817 in Benin). Also, 82 % of the non-electrified localities are at least 1 km from the existing MV network, 12 % are between 5 and 20 km and only 2 % are more than 20 km. 78 % of the population living in the non-electrified localities is at least 1km from the network, only 3 % are more than 20 km from the network, 16 % are between 2 and 5 km.

7 Final report of the Scaling Up Renewable Energy Programme in Benin: SREP financing plan, September 2015, p. 13.

the production capacities of the structures empowered for this purpose⁸ as well as a high rate of losses (technical and non-technical)⁹ on the transmission and distribution networks¹⁰.

Faced with this energy situation, Benin has a better solution that has barely been exploited. It involves numerous potential sources of renewable energy¹¹. In this particular respect, Benin has made a commitment, through its Intended Nationally Determined Contributions (INDCs) presented at the COP21 Paris 2015, to mitigate greenhouse gas (GHG) emissions by using renewable energy in the production of electricity¹². In this sense, several intentions and initiatives are pushing strongly for the development of renewable energy in Benin. For example: the programmes for rural electrification based on renewable energy¹³; the SREP programme, which aims to achieve, by 2025, a target penetration rate of at least 10 % of renewable energy in the electrical energy supply mix and an autonomy level of 70 %¹⁴.

This means Benin faces huge challenges in the energy domain. The existence of substantial potential in renewable energy: more than 360 MW biomass, from 500 to 1000 MW solar and 300 MW hydroelectric is a huge opportunity that Benin must seize to get itself out of this energy situation. However, certain prerequisites, consisting mainly of adopting and/or improving the legal, regulatory, institutional, political and strategic frameworks, must be met.

In this regard, it is very much hoped that parliamentarians will get involved and be committed not only to taking legislative action on their own initiative, but also to making proposals to the executive for improving the environment for investment in renewable energy in Benin.

It is with this in mind that this “Study on the Legislative and Institutional Framework governing Investment in Renewable Energy in Benin” was carried out to make proposals for improving the legislative and institutional framework with a view to increasing the involvement of parliamentarians in promoting the investment needed for the development of renewable energy in Benin.

8 Final report of the Scaling Up Renewable Energy Programme in Benin: SREP financing plan, September 2015, pp. 16 to 18.

9 Losses on the electrical networks are divided into two categories: technical losses and non-technical losses. Non-technical losses represent energy consumed, but not recorded. As for non-technical losses, these refer to electrical energy consumed or self-consumed that is not billed (the quotas allocated to agents of the SBEE, non-recovered subscriber consumption, electricity theft, etc.).

10 “Losses in the Beninese network of the SBEE are relatively high and have been increasing steadily over the past five years - currently 22 %”. See the Feasibility study report on the distribution system, Development of the distribution network and National Centres for Distribution Allocation Control, MCC, July 2015, pp.1-11

11 According to the Guide prepared by the UNDP for Parliamentarians (p.32), renewable energy is a form of energy produced from a source that constantly and naturally replenishes itself. Essentially, it is used in three forms:

- Production of electricity: renewable resources are used to produce electricity for domestic, commercial and industrial use;
- Heating: produced in a centralised or decentralised system (in different buildings), renewable resources, such as solar-heated water, can be used directly to heat buildings;
- Transport: fuel for vehicles for private use, public transport and for industrial and commercial use, such as freight trains, boats and planes, can be produced from renewable resources.

12 See the Document Intended Nationally Determined Contributions (INDCs), September 2015, pp. 6, 7.

13 Policy and strategy are developed in the Policy and strategy document for the electrical energy sector, September 2008, Ministry of mines, energy and water.

14 Final Report of the Program for Large-Scale Renewable Energy Valuation in Benin: SREP-BENIN Investment Plan, September 2015, p. 38.

This study covers four priority areas: (I) Descriptive and critical analysis of the renewable energy sector situation in Benin; (II) Investment in renewable energy and the mini-grids: between obstacles and opportunities; (III) Proposals for improving the legal environment for developing renewable energy in Benin and (IV) Urgent parliamentary action plan 2016-2017 (roadmap).



Proposals for improving the environment for developing renewable energy in Benin

Although several important elements of the regulatory, legislative and institutional framework are in place in Benin, progress in terms of improving them is slow. It should be added that this framework lacks an overall vision. It is important that this vision should be clearly defined, especially by the parliamentarians who are responsible for interpreting the needs and wishes of the people.

A vision for Benin to be a leader in the field of renewable energy development and establishing an adequate environment for international investors is perfectly feasible in the short and medium term. For major investors, Benin has made significant progress in improving its overall business environment. The hope is that there will be ongoing projects by regional and international players and donors, prompt implementation of laws and revisions of laws and regulations. Eventually, the various proposals expected by the end of the year will bring Benin close to achieving this vision.

A more ambitious vision for the renewable energy sector in Benin would go beyond the current projects that will address the most urgent needs with appropriate activities. An ambitious vision would try not only to attract major large-scale investment, but also tap into the huge investment potential for domestic production by private individuals and small and medium-sized business in Benin. These micro-producers should be encouraged through policies such as: the introduction of production feed-in tariffs¹⁵ applied in a large number of countries with great success. The basic requirements for such a policy may include:

- Priority access to a network for producers of intermittent renewable energy¹⁶.
- A standard long-term contract available and paid to every producer for the expected life of the production source.
- The capacity and ultra-simplicity for micro-producers (<10kW) to comply with this contract.

¹⁵ Benin would produce a real revolution in the development of renewable energy by introducing into these regulatory reforms: feed-in tariffs. This would follow a study to define the different renewable energy technologies, the corresponding tariffs and the conditions of application of these tariffs.

¹⁶ This concerns, in particular, solar and wind energy (energy is produced when sun and wind are available, and that cannot be controlled by the generator). The grid operator must be prepared to allow production to be fed into the network at any time.



Proposals relating to the legislative and institutional framework

The real problem facing the renewable energy sector is the lack of a legible, adequate and fairly light legislative and institutional framework. External financing and the intervention of private operators in the sector are just waiting for this prerequisite to be met: the adoption of an effective and innovative legislative and institutional framework. In this regard, a number of proposals could be made:

- Speed up the process for adopting the specific RE law by calling on the government to transmit the project to it within a short time;
- Get the law on Public-Private Partnership adopted at the very next session (PPP law);
- Propose a steering committee to monitor the process of revising the electricity code to make ANADER, ABERME and ARE proactive in carrying out their mission in connection with the development of RE;
- Ensure financing for ANADER is taken into account in the specific law on renewable energy or in the finance law;

Proposals relating to the regulatory and political framework

For Benin, making the regulatory and political framework relating to renewable energy attractive through concrete actions will take the form of laws, regulations, budget allocations or incentive measures. The recommendations for improving this framework include the following measures:

- Asking the government to draft a master plan for the development of RE in Benin;
- Proposing to the government a specific budget allocation for the development of RE in Benin;
- Urging the government to establish an adequate framework to facilitate the negotiation and signature of draft financing agreements for the production and marketing of electricity from renewable energy sources;





- Urging the government to carry out a feasibility study on the terms and conditions of sale of electrical energy produced by micro-producers (Feed-in Tariff)

Specific proposals for investment in renewable energy

Investors choose to invest in one country rather than another because of the comparative advantages the host country offers them. In this regard, as part of the comprehensive promotion of renewable energy in Benin, certain measures and proposals can be implemented:

- Ensure tax and customs incentives for private operators interested in increased profitability in the RE sector are taken into account in the RE law;
- When the electricity code is revised, ensure measures to facilitate contractual arrangements for entry into the RE sector as well as the terms and conditions of sale and purchase of electricity are taken into account;
- Ensure there is a transparent, fast and fair mechanism for selecting private operators in the PPP law.

Benin has huge RE potential in RE to satisfy the high demand for energy. Several aspects are already in place and are creating a solid foundation for growth of the sector. To take advantage of this foundation, it is essential that parliamentarians and government take concrete actions within a short time.

A vision for Benin to be a regional and African leader in the production and use of renewable energy is desirable and possible within a short period of time. The most urgent actions are in relation to improving the environment for investors in the sector. Through the implementation of ongoing projects, it will be necessary to ensure that the required legislation is put in place within a short time.

A more ambitious vision, where every Beninese citizen will have to invest in a source of renewable energy and is paid for the energy produced, is to be taken into account and be appropriated by the parliamentarians. The first step towards realising this vision is the preparation of a feasibility study for the adoption of a feed-in tariff.

The most urgent actions are described in the roadmap (Chapter IV of this report) and organised around three major areas:

Establishing a legislative and institutional framework for the development of RE.

Comprising 5 recommendations:

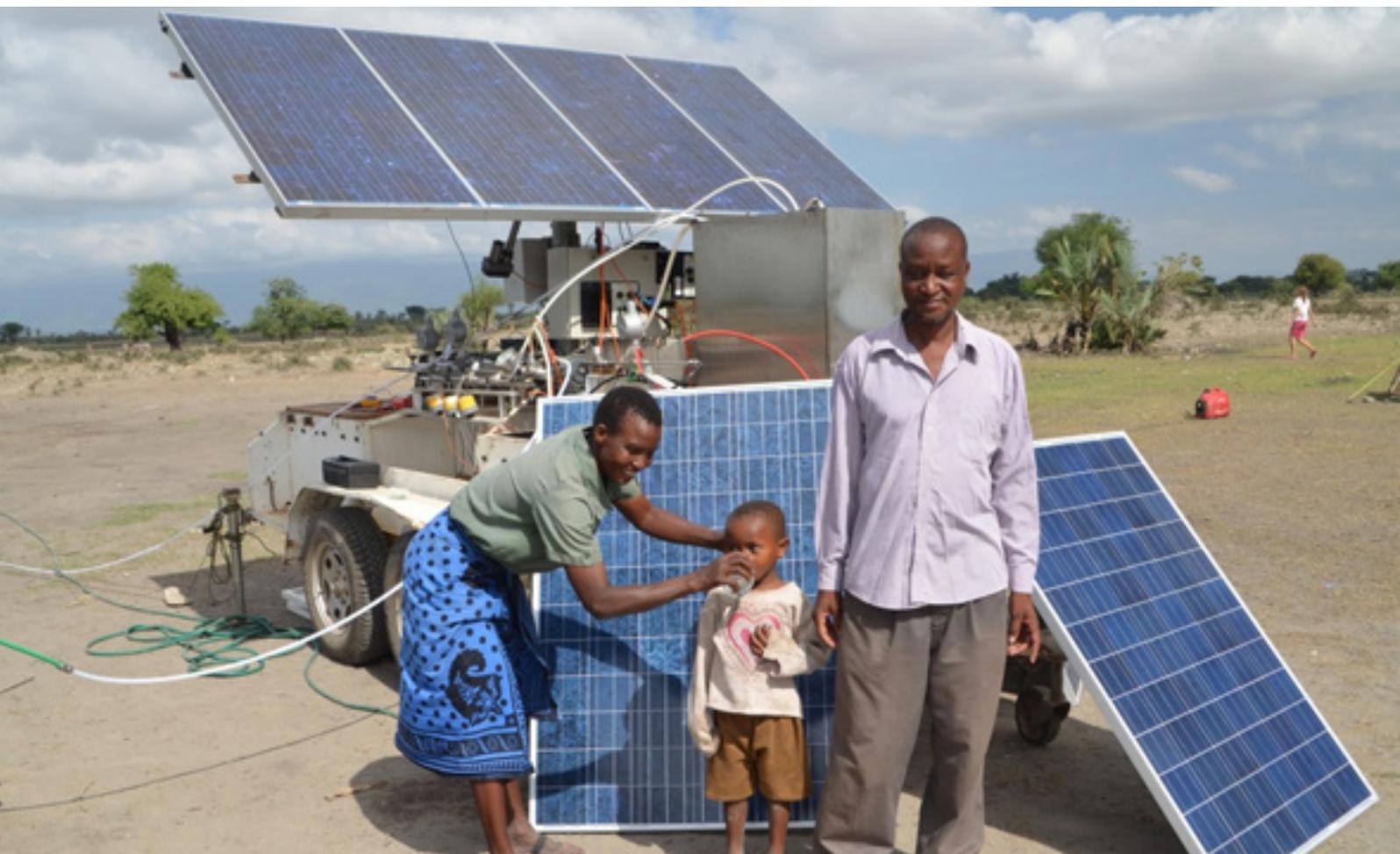
- Speed up the process for adopting the specific RE law;
- Adoption of the PPP law at the earliest opportunity;
- Propose a steering committee to revise the electricity code;
- Ensure the integration of financing for ANADER.
- Establishing a regulatory and political framework for development of RE.

Comprising 5 recommendations:

- Ask the government to draft a master plan for development of RE;
- Propose a specific budget allocation for development of RE;
- Push for an adequate framework to facilitate agreements on electricity from RE;
- Push for a feasibility study regarding sale by micro-producers.
- Creating and implementing a specific framework for promoting investment in RE.

Comprising 3 recommendations:

- Ensure incentives for private operators in the RE law;
- Ensure revision of the electricity code meets the sector's needs;
- Ensure private operator selection mechanism in the law on PPP.



4.2: Ivory Coast

Analytical summary

Throughout Ivory Coast, activities in the energy sector are shaped by the laws in the environment, water and forests, electricity, agriculture, oil and finance sectors. These laws interact to regulate interventions in each of the energy domains in Ivory Coast and to promote investment. The renewable energy sector in Ivory Coast has of late undergone gradual development in order to adapt to the development dynamics of the international framework in this sector. In fact, the new electricity code adopted by the national assembly in March 2014 recommends electricity be produced from renewable energy sources to help meet the population's electricity demand. The changes recently applied to the old forestry code of 1965, with the new code being adopted in July 2014, are also helping to improve the renewable energy sector in Ivory Coast.



Thus the national structuring of interventions in the promotion of investment in renewable energy in Ivory Coast is based on the framework of the ministries concerned with the creation of research and development centres, training and education centres, and data and standardisation centres. In this national configuration, the private players that are the professionals in the renewable energy sector, the national banks and financial institutions as well as Non-Governmental Organisations and public development partners have an important role to play in guiding national policy in the field of renewable energy.

Indeed, the objectives of the national energy policy are based on three guiding principles, which are: (i) taking into account sustainable development objectives that incorporate the fight against poverty, preserving the environment and preserving natural resources, (ii) taking into account sub-regional integration and (iii) determining the general direction of energy policy in the medium and long term (up to 2030). To do this, the government has created a number of development plans aimed at achieving the objectives.

Since 2012, Ivory Coast has, through the investment code, implemented measures to encourage investment in all business sectors. In addition to these incentives to promote investment in the renewable energy sector, the Government has enacted a fiscal schedule to the finance law of 2012, reducing Value Added Tax on solar equipment from 18 % to 9 %.

In implementing its energy policy, the Government has also launched a number of plans and programmes to improve the population's access to energy and increase investment in the energy sector. Through these, three sectors in renewable energy have been identified to participate

increasing the energy mix. It involves taking into account the potential in biomass (12,000,000 t/yr), photovoltaic solar (5.25 KW/m²/j) and hydroelectricity (1,680 MW).

The opportunities offered by the investment framework and the potential in renewable energy are reinforced by the commitment made by Ivory Coast at the 21st Conference of the Parties on Climate (COP21): to encourage investment in “Low Carbon” projects by reducing its greenhouse gas emissions by 28 % by 2030. The total level of greenhouse gas emissions in 2012¹ was estimated to be 15,964.35 kilotonnes equivalent of CO₂ and if nothing is done, this level will reach 34,253.25 kilotonnes equivalent of CO₂ in 2030. If actions are taken, the level of emissions will be 24,576.16 kilotonnes equivalent of CO in 2030.

Despite satisfactory initiatives and commitments made by the Government, private enterprises operating in the renewable energy sector in Ivory Coast face certain difficulties in carrying out their activities. Indeed, the lack of regulation covering non-electrical energy, the high cost of kWh production through generation units producing electricity from renewable energy sources, high customs duties, estimated at more than 35 % of the taxes calculated on the value of the equipment, difficult access to financing from national banks, delays in the development process for major national projects, etc., are all factors blocking investment in renewable energy in Ivory Coast.

Thus, proposals are being made to involve parliamentarians in improving and enhancing the framework for investment in the renewable energy sector in Ivory Coast. These will have to be consistent with the current parliamentary calendar and cover future parliamentary sessions up to 2020. To achieve this, it will be necessary to:

- Make the population aware of the benefits of using renewable energy to meet energy needs;
- Establish, at parliament level, a mechanism for controlling the laws on renewable energy in Ivory Coast;
- Get the government to accelerate formalisation of the process of applying standards and labels to renewable energy equipment in order to combat poor-quality equipment and equipment fraudulently entering the national territory by implementing regulatory texts;
- Propose to the government an amendment of the tax measure provided for in the schedule to the finance law no. 2011 – 480 of 28 December 2011 establishing the State budget for management 2012 such that the reduced Value Added Tax (VAT) of 9 % for imports of solar equipment be applicable to all equipment based on renewable energy technology. This amendment will consist of drawing up a list of categories of equipment in all the renewable energy technologies eligible to benefit from the 9 % reduction in tax;
- Get the government to accelerate amendment of the tariff structure by applying the Feed-In Tariff in order to encourage private investment in renewable energy in Ivory Coast;
- Encourage the government to draft a mini-grid code to regulate the management of interconnection between mini-grids;

1 Document INDC 2015-Ivory Coast

Document INDC 2015-Ivory Coast

- Encourage the government to create a “one-stop shop” for investment projects in renewable energy in Ivory Coast.
- Lobby with the Economic Community of West African States, through amendment of the Common External Tariff, for the customs duties on renewable energy and related technologies to be reduced or even eliminated throughout the sub-region.

Reminder of the objectives of the study

The main aim of this “Study on the Legislative and Institutional Framework governing Investment in Renewable Energy in Ivory Coast” is to make proposals regarding the involvement of parliamentarians in improving the legislative and institutional framework necessary to promote investment for developing the renewable energy sector in Ivory Coast.

Specifically, this will involve:

- Analysing the context, budget, opportunities and challenges of investing in renewable energy in Ivory Coast;
- Analysing the legislative and regulatory framework relating to renewable energy and identifying any discrepancies between the law and practice, but also identifying points where the legislative, regulatory and institutional frameworks could be improved. (including copies of the legislative and regulatory texts in the schedule);
- Describing the institutional framework for investment in renewable energy (including the list of state agencies in charge of renewable energy and the regulatory texts governing it in the schedule);
- Presenting the government policy on investment in renewable energy;
- Presenting a table showing the players in investment in renewable energy (public and private), including civil society organisations;
- Preparing a roadmap with recommendations for concrete activities for the parliamentarians (amendments to laws as well as new laws to create and support a better legislative, regulatory and institutional framework, budget allocations, monitoring public projects or procurement, etc.);
- Presenting the calendar of parliamentary sessions for 2015-2016 and the windows of opportunity.

Recommendations for improving investment in renewable energy in Ivory Coast

The study focuses primarily on involving the Ivorian parliamentary power in promoting investment in renewable energy in Ivory Coast. As a result, the recommendations, in order to be realistic, will have to be structured according to the Ivorian parliamentary calendar.

Information about the parliament in Ivory Coast

Law no. 2000-513 of 1st August 2000 establishing the constitution of Ivory Coast indicates that the Parliament is made up of a single chamber known as the National Assembly and members thereof carry the title of MP. The National Assembly holds the legislative power and MPs are elected by direct universal suffrage for a term of legislature of five years, renewable according to the same suffrage. The National Assembly in Ivory Coast votes the law and authorises tax. In particular, the laws of Finance determine State revenue and expenditure, and the program laws establish the objectives of its economic and social action.

The draft finance bill is put before the National Assembly from the opening of the October session.

The means of information of the National Assembly with respect to Governmental action are the oral question, the written question and the commission of inquiry. One session a month is reserved for oral questions to MPs and responses from the President of the Republic as a priority during an ordinary session. The President of the Republic may delegate the power to respond to MPs' questions to the Head of Government and ministers. In these circumstances, the National Assembly may prepare a resolution to make recommendations to the Government.

Thus, members of the Government have access to the committees of the National Assembly. They are heard at the committees' request. They may be assisted by Government commissioners.

Each year, the National Assembly of Ivory Coast meets *ipso jure* in two ordinary sessions:

The first ordinary session opens on the last Wednesday of April and lasts no longer than three months;

The second ordinary session starts on the first Wednesday of October and ends on the third Friday of December. It is during this session that the budget session takes place, in the month of December.

The Ivorian parliament therefore has 6 months of ordinary parliamentary sessions interspersed with 6 months of parliamentary recess. It must be pointed out, however, that between the two ordinary parliamentary sessions, there may be extraordinary sessions without limitation that allow for legislation on urgent matters.

The Committee for Research, Science, Technology and the Environment of the Parliament of Ivory Coast, which is one of the stakeholders in the study, will have to take internal measures to organise its intervention in the improvement of the renewable energy investment framework:

- Set up, through texts, a parliamentary network dedicated to the promotion of investment in renewable energy in Ivory Coast. Once completed, the process of setting up the network will allow parliamentarians who are members of the network to voice the views of the parliament to private and public actors, NGOs and development partners;
- Formalise, through a text, the appointment of a focal point for renewable energy at parliament level. This to centralise all the information about activities carried out in the renewable energy sector by the ministries, the private sector and the development partners directed towards Ivory Coast;

- Strengthen the capacities of the parliamentarians who are members of the network in the field of renewable energy and then undertake meetings with stakeholders in renewable energy in Ivory Coast in order to gain a better understanding of the realities in this sector.

Recommendations

As a matter of urgency, to finish off the current 2016 parliamentary session, the actions to be carried out by the parliamentarians to promote investment in the renewable energy sector in Ivory Coast are as follows:

- Make the population aware of the benefits of using renewable energy to meet energy needs;
Responsible: MPs
- Establish, at parliament level, a mechanism for controlling the laws on renewable energy in Ivory Coast;
Responsible: MPs
- Get the Government to accelerate formalisation of the process of applying standards and labels to renewable energy equipment in order to combat poor-quality equipment and equipment fraudulently entering the national territory by implementing regulatory texts;
Responsible: Ministry of Petroleum and Energy, Ministry of Commerce, Crafts and SME Promotion, Codinorm, IREN, I2T and the Directorate General of Customs.
- Get the Government to accelerate the process of improving the legal and regulatory framework with the establishment of an agreement mechanism to control and organise private operators by technologies in the renewable energy sector;
Responsible: Ministry of Petroleum and Energy, Ministry of the Environment and Sustainable Development, Ministry of Industry and Mines and Ministry of Commerce, Crafts and SME Promotion.
- Propose to the government an amendment of the tax measure stipulated in the schedule to finance law no. 2011 – 480 of 28 December 2011 establishing the State budget for management 2012 such that the reduced Value Added Tax (VAT) of 9 % for imports of solar equipment be applicable to all equipment based on renewable energy technology. This amendment will consist of drawing up a list of categories of equipment in all the renewable energy technologies eligible to benefit from the 9 % reduction in tax;
Responsible: Ministry of Economy and Finance, Ministry of Petroleum and Energy, Ministry of the Environment and Sustainable Development, Directorate General of Customs and private renewable energy companies.
- Get the government to accelerate amendment of the tariff structure by applying the Feed-In Tariff in order to encourage private investment in renewable energy in Ivory Coast;
Responsible: Ministry of Economy and Finance, Ministry of Petroleum and Energy and Ministry of Commerce, Crafts and SME Promotion.
- Encourage the Government to draft a mini-grid code to regulate the management of interconnection between mini-grids;



Responsible: Ministry of Petroleum and Energy and Ministry of Industry and Mines.

- Encourage the Government to create a “one-stop shop” for investment projects in renewable energy in Ivory Coast;

Responsible: Ministry of Economy and Finance, Ministry of Petroleum and Energy, Ministry of the Environment and Sustainable Development, Ministry of Commerce, Crafts and SME Promotion and Ministry of Industry and Mines.

- Get the Government to adopt an interministerial decree to regulate the deadlines in the procedures for awarding contracts for major national development projects in renewable energy with the obligation to link international bidders with local professionals in order to instigate the transfer of technical skills to local businesses;

Responsible: Ministry of Economy and Finance, Ministry of Petroleum and Energy, Ministry of Commerce, Crafts and SME Promotion, Ministry of Industry and Mines and Ministry of Planning and Development.

- Lobby with the Economic Community of West African States, through amendment of the Common External Tariff, for the customs duties on renewable energy and related technologies to be reduced or even eliminated throughout the sub-region;

Responsible: MPs and CEREEC

Conclusion regarding the recommendations

For the private sector and civil society, the priorities for improving investment in the renewable energy sector in Ivory Coast involve the recommendations: to enhance the professional environment, to instigate the transfer of skills and to eliminate the customs barriers to importing renewable energy equipment.

4.3: Senegal



Introduction

Energy is a pillar of the economic, social and environmental transformation expected in Africa. No country can hope for sustainable growth in order to claim development without reliable access to energy services. This is what justifies the key role reserved at this point in time for energy in the SDGs and, more specifically, renewable energy in the Paris Agreement agenda, mainly in terms of climate change mitigation. This 2015 agenda gives an operational framework to the SE4ALL initiative aimed at providing sustainable energy services to over 500 million people by 2030. Hence there are strong signs for a change of trajectory in the energy sector in order to meet sustainable development demands.

Accelerating the pace of energy transition requires investment in production infrastructures for sustainable energy services and, therefore, a solid portfolio of renewable energy and energy efficiency programmes supported by private operators. However, strong involvement of the private sector depends closely on the State establishing a legislative and regulatory framework that allows its political desire to promote renewable energy to be fulfilled.

In Senegal, this transition and the related investment are all the more necessary because the energy supply balance is predominantly biomass (52.3 %) followed by petroleum products (41.8 %) and mineral coal products (5 %). Renewable energy represents a marginal share (less than 1 %) in the country's 4069 kteo energy supply in 2012 (EIS, 2013).

The objective of the mission is to analyse how the legal and institutional framework affects investment in renewable energy in Senegal and to propose recommendations to the parliamentarians for increasing this kind of investment in their country.



This document first presents the challenges and objectives of the energy mix in Senegal, followed by an analysis of the legislative and institutional framework and, finally, proposes a road map with concrete activity recommendations for the parliamentarians of Senegal.

The hydrographic network is characterised by the existence of two major rivers which have their source in the Fouta Djallon mountains in Guinea. They are the Senegal River, 1,770 km in length and the Gambia River, 1,150 km in length, 477 km of which is in Senegalese territory. Lake Guiers, fed by the Senegal River, is a permanent freshwater reserve estimated at 600 million cubic metres.

The geographic position of the country and its natural features make Senegal a country rich in multiple types of ecosystems forming a valuable environmental capital.

Energy context

With 49 % of the final energy consumption, biomass (firewood, charcoal, bagasse and peanut shell) represents the greatest share of energy consumption, although it remains below the African average which is around 60 %. Petroleum products and electricity represent 34 % and 9 %, respectively, of the final consumption.

Sources: EIS Senegal 2013

Access to electricity remains low, which translates into low rates of electrification and large geographical disparities: urban, 89.8 %; rural, 25.7 % and national, 54.5 %.

Electricity consumption in Senegal in 2012 was 2,846 GWh, or an average consumption of 221 kWh per capita compared to 590 kWh per capita in Africa.

The total installed capacity in photovoltaic (PV) solar energy is 2.933 MWp and the total consumption is 3,727 MWh with an average growth rate of 12 % a year between 2000 and 2012.

Access to domestic fuels: Over the last decade, consumption of wood and charcoal has grown at an average rate of 3 % a year. Household practices are characterised by the coexistence of several domestic fuels: wood, charcoal and LPG. In 2013, just over 6 million cubic metres of wood was taken from forest resources to meet household cooking needs, of which 3.7 million cubic metres was used to produce charcoal and 2.3 million cubic metres firewood. As well as amplifying the environmental problems, the households' dependence on biomass for cooking also affects the health of the population.

Senegal IAP-related disease burden due to solid fuel cooking (State of the Clean Cooking Sector in Senegal, ACCESS, World Bank, 2013)

In 2012, LPG constituted almost 4.26 % of the final energy consumption by product and 7.1 % of final household consumption.

The post-2015 agenda puts the deployment of renewable energy back at the heart of the low-carbon and resilient strategies. A strong message was sent to Senegal through the promulgation of the law laying down the general principles on renewable energy and, more recently, the INDCs for making clean energy more available, accessible and affordable to all.

However, it is still going to take a lot more effort from all stakeholders with respect to regulation, financing, raising awareness and, more generally, governance of the energy sector to establish **a framework that is sufficiently conducive to investment**.

In terms of regulation, the CRSE (Regulatory Commission of the Energy Sector) is still slow to impose its leadership in its pricing prerogatives under the terms of sale or feed-in of electricity produced by the independents and self-producers in situations of excess. SENELEC's monopoly position as the only wholesale electricity buyer under the stabilisation clause of law no. 98-29 (Art. 19) is no longer appropriate in a context of increasing liberalisation with the presence of other active concession holders.

Furthermore, **the lack of a purchase price for electricity** from renewable sources, as the law governing the electricity sub-sector does not refer to renewable energy, is not likely to facilitate the regulator's task.

In terms of mobilising domestic financing, central Government as well as regional authorities allocate very little budget for the deployment of renewable energy. Hence the declared energy mix ambition is not reflected adequately by the budget of the institutions in charge of renewable energy, and even less so by the setting up of a specific fund or financing mechanism.

In terms of investment, the investment prospectus for Senegal's SE4ALL action programme represents an opportunity to develop the portfolio of projects, including the renewable energy programmes listed in the INDCs.

Recommendations:

Recommendation 1	Enforce the laws (feed-in tariff, full regulation of the sector, etc.) to create a favourable environment for investment and accelerate the energy transition
Recommendation 2	Establish a monitoring mechanism and an influence group to ensure renewable energy is taken into account in regional authority budgets
Recommendation 3	Accelerate the implementation of instruments to promote investment in the field of renewable energy (mechanism for minimising and sharing risks, financing mechanism, especially in terms of requesting finance).
Recommendation 4	Help parliamentarians manage renewable energy and climate issues through a process of empowerment
Recommendation 5	Improve awareness of “the right of access to sustainable energy”, the advantages of renewable energy and fossil fuel subsidies
Recommendation 6	Establish a mechanism for monitoring and evaluating the implementation of interventions in the renewable energy field

5: Gender and Energy: West Africa regional network on gender and energy

The West Africa network on gender and energy aims to gather Members of Parliament (MPs) across the three countries (Benin, Ivory Coast and Senegal) of the Parliamentary Action on Renewable Energy (PARE) programme. It provides a forum for MPs to share gender-sensitive knowledge and experience and develop policy actions within their own parliaments, in the energy sector in general and the renewable energy sector in particular. For each country, one or two designated MPs will act as a champion, leading interactions with other MPs, both within National Assemblies and with his/her peers in other member countries. This will enable us to identify country and context-specific opportunities and challenges as well as broader regional or international issues.

The network will draw on the existence of women's caucuses in both parliaments of Ivory Coast and Senegal to engage women MPs on the impact of energy policies on gender. Following the 2010 law on parity, the Senegal National Assembly already has almost as many men and women MPs, with 64 female parliamentarians out of a total 150 deputies (42.3%). In Ivory Coast, the newly constituted National Assembly includes 29 women out of a total of 250 MPs (11.6%) while 7 female MPs out 83 MPs (8.4%) sit at the Benin Parliament.

The West Africa regional network is particularly well positioned to take the lead on gender and energy at a parliamentary level. Building on its expertise and experience of working with the Climate Parliament and United Nations Development Programme (UNDP) as part of the PARE project, it also provides a crucial link in engaging with a broader group of women MPs. Indeed, gender dimensions in both energy and climate change, have broader ramifications to anybody with an interest in social inclusion, health, education, human and economic development, to name a few.

This network also welcomes the participation of men interested in these issues. While a strong female membership is expected, gender issues relate to both men and women and addressing them requires working together constructively for the benefit of all.

The relationship between energy, gender and climate change has already been recognised at a global policy level, including with the Sustainable Energy for All (SE4ALL) initiative and the Sustainable Development Goal 7 on affordable and clean energy. At a regional level and linking to the 2030 target for universal energy access, the recent Economic Community of West African States (ECOWAS) policy for gender mainstreaming in energy access also provides guidelines to align energy interventions with principles of gender

equality. Moreover, the policy aims to provide national energy ministries to achieve energy access goals in a way that leverages the role of women as energy users, community members, business owners, and policymakers. The program identifies several targets for mainstreaming gender in energy access :

- 100 % of public energy sector employees will have received relevant training by 2020 (and routinely thereafter);
- 50 % of energy policies will be gender-sensitive by 2020 and 100 % by 2030;
- 50 % of energy projects, programs and initiatives with government involvement will include gender dimensions in planning, implementation, analysis and evaluation by 2020, moving to 100 % in 2030.

The three PARE countries have also all recognised the links between gender, energy and climate change as part of their Intended Nationally Determined Contributions (INDCs) submitted to the United Nations Framework Convention on Climate Change (UNFCCC). The only comment would be whether it is useful (or not) to add more information on the specific policy objectives that are introduced in paragraph 5 and in particular:

- ECOWAS guidelines on gender and energy:
<http://www.ecreee.org/page/ecowas-program-gender-mainstreaming-energy-access-ecowgen>
- INDCs priorities on gender and energy.

Benin

Benin intends to achieve the nationally determined contributions by reducing the exposure of pregnant women and children under five to malaria and other diseases. The policy seeks to achieve a decrease in morbidity and mortality related to climate change.

Senegal

Senegal puts forward activities that improve the access of households to clean energy sources and measure the reduction of CO₂ emissions and biomass use in the areas of electricity generation. The country hopes to alleviate the disproportionate economic burden on women related to fuel and energy provision, and to improve the academic performance of children.

Ivory Coast

The Ivory Coast seeks to integrate the gender aspect in a range of primarily agricultural policies aimed at the development of sustainable energy solutions. Facilitating the access of farmers to new technologies for intensifying production and making it more sustainable, as well as, adapting agricultural input is expected to improve food self-sufficiency and strengthen the climate resilience of farming practices. It can also improve the purchasing power of rural communities and reduce the dependency on imports to 40% of export earnings. Likewise, facilitating the access of women to clean cooking stoves and fuels can improve health, livelihoods and generate sustainable income for women.

- Promoting women entrepreneur and small businesses for RE (through the community grid initiative).

In light of this high level development, engagement of MPs is necessary. Indeed MPs have a crucial position in both holding their government accountable while serving the needs of their constituents.

As a result a dedicated, regional network should provide a productive platform to ensure gender-sensitive policy-making for renewable energy with considerable impacts for women, men, girls and boys and significant implications for both human and economic development as well as sustainability.



5.1: An Action Plan for Gender and Energy in West Africa

The Climate Parliament, in collaboration with the United Nations Development Programme in Brussels (UNDP Brussels) organised an international parliamentary hearing on the topic “Role and responsibilities of parliamentarians in the growth of public and private investment in renewable energy” at the Radisson Blu Hotel Abidjan Airport on 12-13 April 2017. During this international hearing, parliamentarians and experts with an interest in the issues surrounding “gender and energy” came together to discuss this topic and elaborate on the relevance and effective implementation of an Inter-Parliamentary Network on Gender and Energy in West Africa.

In general, the objective was essentially to consider the benefits of launching an inter-parliamentary network on gender and energy, involving the MPs of Benin, Ivory Coast and Senegal. It is important to stress that this was a very important topic during the regional parliamentary meeting. Indeed, before the round table, all the MPs, men and women, were made aware of these issues during a plenary session where three presentations were made on this topic. This session on gender and energy in West Africa benefited in particular from the especially relevant interventions of three experts: Benedicta Mireille Comlan, Head of Gender Integration and Social Inclusion, Millennium Challenge Account Benin II; Odette Kabaya, Regional Advisor on Gender, Africa Regional Centre, UNDP, Addis Ababa, Ethiopia; and Monica Maduekwe, Coordinator for the ECOWAS Programme on Gender Mainstreaming in Energy Access, Regional Centre for Renewable Energy and Energy Efficiency of the ECOWAS (ECREEE).

The specific round table that ensued was attended, to great benefit, by eminent MPs, renewable energy experts and representatives from the private sector as well the Climate Parliament.

Attendees:

- AHIPEAUD Viviane Clotilde, Director, National Assembly of Ivory Coast
- BA, Abdoulaye, Project Engineer & CEO, COSEER, Senegal
- CISSÉ, NDèye Lucie, Member of the National Assembly of Senegal
- DIENG, Penda Seck, Member of the National Assembly of Senegal
- GENTRY Caroline, Project Consultant, Climate Parliament
- KABAYA, Odette, Regional Advisor on Gender, Africa Regional Centre, UNDP, Addis Ababa, Ethiopia
- KANE, Rosa, Member of the Green Party, Ivory Coast
- POINTEL, Sandra, Coordinator for West Africa, Climate Parliament
- BIRDI Sonia, National Assembly of Kenya
- TURCOV, Ana, Office Support Consultant, UNDP, Brussels, Belgium



This document presents the work plan of activities for implementing the regional inter-parliamentary network on gender and energy within the framework of the Parliamentary Action for Renewable Energy (PARE) implemented by the Climate Parliament and the UNDP. This first round table resulted in new ideas regarding the measures that should be taken to promote gender and energy with the MPs of Benin, Ivory Coast and Senegal and to support their parliamentary actions in their respective countries. Launching a specific network at regional level is considered particularly beneficial in order to strengthen the capacities and knowledge of the MPs at a time when there are serious contrasts in the percentage of women at National Assembly level, with 64 women parliamentarians out of a total of 150 MPs in Senegal (42.6%) compared to 29 out of 250 in Ivory Coast (11.6%) and 7 out of 83 in Benin (8.4%). Various actions and points of reflection were considered for increasing parliamentary actions and for the consolidation and official launch of the network as described below:

- Identify gender and energy advocacy champions at National Assembly level: it is important to identify, for each country, one or more champions on gender and energy to pursue this advocacy both at National Assembly level and in specific parliamentary actions. Senegal and Ivory Coast, in particular, already have a Caucus of specific women in place and it is important to involve all women given that the issues of gender and energy have impacts at all levels of society, including health and education, with implications for human and economic development. Mrs NDèye Lucie CISSÉ, 8th Vice President of the Senegalese Assembly, has been designated champion for Senegal, seconded by Mrs Penda SECK DIENG Penda, MP, President of the Committee for Urban Planning, Housing and Transport. In order to consolidate, one or two other advocacy champions will be identified within the Beninese and Ivorian Assemblies.

- Parliamentary Awareness: Parliamentary awareness needs to be raised for both women and men and a specific approach should be proposed.

- Specific contexts for each country in relation to specific national actions: It is important to consider the characteristics of each country in order to develop a national strategy. In West Africa, for example, women's representation and gender issues tend to be more advanced in Senegal and Ghana than in other countries, offering a particularly promising platform for advancing gender and energy. In Senegal, in fact, the Parity Law in Senegal promotes representation and therefore provides a favourable context for raising awareness and education regarding



gender and energy, not only among women members of the Climate Parliament, but also the whole Caucus of 64 women parliamentarians. Although this framework is particularly favourable in principle, the context of the legislative elections on 7 July 2017 does not allow for immediate mobilisation of all women in Dakar. However, this period should allow the parliamentary questions on gender and energy to be prepared in the three countries.



- Define precise parliamentary actions: It is important to work on the specific topical issues, for example solar energy contributions. All topical issues addressed within the framework of the regional parliamentary meeting, such as mini-networks, incentives on renewable energy and solar pumps, have a gender dimension that needs to be developed in order to target certain actions. For example, within the framework of creating small businesses: access to funding, capacity and preparing invitations to tender can all be potential obstacles. Parliamentary questions can be formulated to that effect.
- The Network: benefit from gender experts' knowledge and other countries' experiences: It is important to create a platform for exchange and knowledge in order to benefit from the experiences of other countries and experts on gender issues. Kenya, for example, provides some interesting lessons, not only in terms of representation and parliamentary actions, but also in terms of governmental representation and budget allocation with a view to facilitating gender equality. Electrification programmes sensitive to gender issues can also provide ways of seeing how the policies in place at local and national level do or do not take into account these issues. Encouraging contact between parliamentarians and women entrepreneurs' associations and/or consultants who specialise in gender issues will also make it possible to develop a Parliamentary Action Plan. Furthermore, it is necessary to identify the national focal points within the governments and of the ministers involved.
- Continuity of the Network: measures would have to be put into place to ensure continuity of the network once it has been launched. Indeed, although the Climate Parliament is well established with regard to renewable energy, it is important to take into consideration parliamentary changes following the legislative elections in general, but also considering women parliamentarians in particular. In Ivory Coast, for example, only two women were members of the Climate Parliament Network and they have not been re-appointed in the recently established National Assembly. In Senegal, the elections on 2 July 2017 could also bring changes. Nevertheless, the parity

law in Senegal will certainly ensure a percentage of women remain in the Assembly. It is therefore essential to raise the awareness of the 64 women and to build a nucleus allowing the exchange of knowledge and previous actions. Involving parliamentary assistants and legislative directors who do not change would also help ensure the network could be sustained regardless of electoral changes. On the other hand, in Kenya, the parliamentary networks include not only the new MPs, but also former members in order to facilitate the exchange of information.

The parliamentary actions and initiatives set out below offer different entry points for increasing parliamentary actions on gender and energy:

- Parliamentary questions on gender and energy
- Develop possible bilateral meetings within the ministries of energy by identifying the focal points
- Promote exchanges through specific meetings on gender and energy
- Raise awareness of all women MPs
- Official launch of the network

The Climate Parliament will endeavour to give particular support to MPs in their respective contexts through oral and written parliamentary questions. Within the framework of the official launch of the network, the UNDP has developed specific training tools, including an online guide and baseline on gender issues specially tailored to the needs of the MPs, to help them in their advocacy and parliamentary actions on gender and energy, benefiting local and national interests.

6: Creating a Level Playing Field: Eliminating unnecessary taxes and duties on renewable energy

6.1: *Promoting Renewables: A case for VAT and import duty exemption in West Africa*

Why is the introduction of VAT and Import Duty exemption necessary?

The promotion of renewable energy systems for energy access and energy security is a critical part of West African governments' planning. Imposing a VAT on Import Duty on renewable energy devices (which is a disincentive to uptake) is then contradictory to the larger goal of promoting their dissemination and must be considered in the larger context of climate change and energy security. Studies have shown that the high cost of acquisition of renewable energy (RE) systems is the main cause for the slow adoption of the technology. Thus removal of VAT and Import Duty on renewable energy devices and spare parts with continued reimbursement of the VAT / Import Duty input credit would encourage access to clean energy and more importantly, create a comprehensive non-contradictory incentive system where solar energy is promoted with market stimulating subsidies and tax exemption.

What is Value Added Tax (VAT)?

It is a tax on value addition at each stage. Under VAT system, a dealer collects tax on his sales, retains the tax paid on his purchase and pays balance to the Govt. Treasury. It is a consumption tax because it is borne ultimately by the final Consumer. The tax paid by the dealer is passed on to the buyer. Hence, VAT is a multipoint tax system with provision for set off of tax paid on purchases at each point of sale.

How does Import Duty or VAT Exemption help the national economy?

As compared to the global average of import duty being only 0.9% on solar panels¹, such import duty in Benin, Ivory Coast and Senegal is quite high. There is a strong case of duty reduction, as it has been generally found that an exemption or reduction in import duty or VAT on renewable energy products in developing countries has an overall positive effect on the national economy of that country. The biggest gain is in terms of creation of new jobs, and the opportunity of increased tax collection on downstream activities.

For example,

- 0.046 number of jobs are created in per kW of installation of solar systems (including direct, indirect, and induced jobs) on a permanent basis.
- 0.012 Jobs number of jobs are created in per kW fabrication and production (including direct, indirect, and induced jobs).

1 [https://www.dutycalculator.com/hs-code-duty-rate-import-restrictions/854140/solar-panels/8541.40.6020/8541.40.9029/101 8/](https://www.dutycalculator.com/hs-code-duty-rate-import-restrictions/854140/solar-panels/8541.40.6020/8541.40.9029/101%208/)

- If per worker annual wage rate is US\$3,000 for skilled persons, an annual gain on employment wages for a country in West Africa with a target of 300MW will be in the range of US\$50 million which is quite substantial. The state will collect more income tax, and at the same time the state's burden on providing unemployment benefits, free education and health, etc. will also reduce.
- If a 1kW solar panel is fixed on the rooftop (average cost US\$3000 per kW), it will increase the premium on house / building sale price by at least US\$60 per square meters of the building plinth area (more at first, but depreciating over time); the state collects more in real estate / property taxes.
- Power outage cost to the economy is quite burdensome. A University of Cambridge study in 2013², for example, has estimated that in Senegal, the total annual unmitigated cost of unsupplied electricity is US\$5548 (at 2007 price) per KW of installed capacity. So the total benefit to the economy with a 300MW solar power plant could be as high as US\$0.4 billion (at 11 % average solar efficiency) in terms of avoided cost which is roughly equivalent to 2.5 % of the GDP of Senegal. In terms of the size of the firms, the small firms loose US\$0.86 in unmitigated cost per kWh power outage, medium firms loose US\$1.21 and large firms loose US\$2.01 per kWh of power outage. These are one of the highest loss figures amongst the Sub-Saharan countries in that study.
- Availability of more power will have a cascading positive effect on downstream economic activities, e.g. opening of new milling, service, machining, garment manufacturing centres, etc. which will also create further more jobs. Considering each such new unit consumes 50kWh electricity per day, up to 25 thousand new units could be supplied reliable power for 6-8 hours a day. Direct employment benefit due to these downstream activities will be in the range of 15 thousand man years, which is quite significant for a country of the size of Senegal. Considering average wage rate of US\$0.5 per hour in Senegal for low skilled jobs, new jobs worth US\$ 18 million per year will be created.
- The above benefits are far less to the exemption on Import Duty or VAT on solar equipment. Assuming the present Import Duty is 18 % on solar panels, and there is 100 % exemption, then the presumed one-time loss to the exchequer on import of solar panels for a 300MW plant would be only US\$54 million (solar panels constitute maximum 30 % of the total cost of a solar power plant).

2 Musiliu O. Oseni, Michael G. Pollitt (2013). The Economic Costs of Unsupplied Electricity: Evidence from Backup Generation among African Firms. EPRG Working Paper 1326 Cambridge Working Paper in Economics 1351.

6.2: Precedents for Duty and Tax Exemptions in Africa

As per REN21 Status Report on Renewable Energy for 2014, import duties for renewable energy components have now been reduced or removed in Burkina Faso, which provides customs duty exemptions for solar PV and solar thermal technologies. Ghana exempts wind and solar generating systems from import duties, and Mali exempts solar panels, solar lamps, and other renewables from import levies and duties. Nigeria has placed a moratorium on import duties for renewable energy technologies. Benin, Cabo Verde, Côte d'Ivoire, the Gambia, Guinea, Guinea-Bissau, Niger, and Togo also provide full or partial exemptions from import duties or other taxes for renewable energy components.

Case Studies:

ZAMBIA

The case of Zambia is quite instructive. It currently exempts off-grid solar products — like solar lanterns — from a VAT that is typically applied to imported goods. They do this because 42.3 percent of the population lives in extreme poverty and only 22 percent are connected to electricity. Affordability of solar products is therefore critical for those living beyond the grid. The existing VAT exemption has allowed solar products to remain within the budget of low-income individuals and families. As per a report published by *Zambian solar lighting customers* who buy \$10 solar lights save an average of \$75 a year, with savings spent on food, school fees, and building small businesses.



MALI

As per a World Bank Report for 'Lighting Africa' initiative available at <https://www.lightingafrica.org/wp-content/uploads/2014/02/Mali-Supply-Chain-Mapping-Final.pdf>, exemption from the Value Added Tax (VAT) would reduce price by approximately 18%, further enhancing affordability in Mali.

GAMBIA

The Renewable Energy Act 2013 of Gambia available at <http://faolex.fao.org/docs/pdf/gam134879.pdf> provides a clear cut framework for exemptions. Section 8 of the Act makes the Renewable Energy Fund created by this Act exempt from the payment of tax. Section 14 provides for general incentives. The various sub-sections are as follows:

- 14(1) The operators of facilities using renewable energy resources, including hybrid systems in proportion to and to the extent of the renewable energy component, for both power and non-power applications, as duly certified by the Ministry, shall be entitled to the following incentives-
 - (a) duly registered projects producing electricity from renewable energy resources within the meaning of this Act shall be exempted from import tax;
 - (b) all renewable energy equipment that fulfil the eligibility criteria shall be exempted from import duty;
 - (c) duly registered projects producing electricity from renewable energy resources within the meaning of this Act shall be exempted from corporate tax for a period of fifteen years from commissioning subject to performance assessment every five years;
 - (d) duly registered projects producing electricity from renewable energy resources within the meaning of this Act shall be exempted from value added and any retail tax for a period of fifteen years from commissioning; and
 - (e) all proceeds from the sale of carbon emission credits shall be exempt from sales taxes.
- 14(2) The fiscal incentives shall apply from the coming into force of this Act.

GHANA

There is currently no duty on the import of solar household systems, but there is a lack of clarity over exemptions. As per a report published by Overseas Development Institute of the UK and other institutes, and available at http://www.sun-connect-news.org/fileadmin/DATEIEN/Dateien/New/ODI_Ghana.pdf, there has been significant level of confusion as to the duty charges on imports of solar systems which have been anywhere between 0% and 20% in the last few years. In respect of tax, a number of companies believe that there is still 18% VAT on the freighted cost of solar components coming into the country, while other companies advised that their organisation had a specific exemption. It was felt that a sector-wide exemption from VAT for quality products and less volatile policy around duty exemptions would be beneficial. Importing products was otherwise noted as relatively straightforward but with some inefficiencies around the customs process.

7: Community Grids Initiative: Rural electrification through renewable energy

Climate Parliament's Community Grids Initiative (CGI) is an innovative project designed to develop generic best-practice contracts and concession agreements governing the relationships between authorities, project developers, investors, grid utilities, communities and other players. It aims to lessen the risk involved in investment in rural electrification projects, and to mobilise rapid investment in mini-grids based on sound business models. Accompanying this chapter is an example model concession agreement, included as Appendix 1 to this toolkit.

West Africa has an alarmingly low rate of electrification. A very high percentage of people in the countries of West Africa have no access to electricity (Senegal 45%: 6 million people; Benin 75%: 7 million people; Côte d'Ivoire 74%: 15 million people). The situation in rural areas is particularly alarming (Senegal 72%; Benin 91%; Côte d'Ivoire 92%). Except for Senegal, the situation in West Africa does not compare favorably even to the rate in Sub-Saharan Africa which has an overall 32% electrification rate (17% in rural areas). Furthermore, the situation is highly adverse as compared to the global average where only 15% of the people don't have access to electricity; 30% in rural areas as per World Energy Outlook 2015, International Energy Agency.

On the other hand, the demand-supply gap for electricity is rising quite fast in these three countries. Benin's demand, for example, has doubled to 1,000 GWh in the last decade and is expected to double once again by 2024 with a CAGR of up to 9%. Likewise, in Côte d'Ivoire the demand has been growing at an annual rate of 11.7%, whereas the annual growth rate of electricity generation has been only 7.9%. Thus, even those areas which are electrified receive inadequate, very little and/ or poor quality of electricity supply and in many cases with a quality which is of little use in meeting demands for productive purposes. Poor access to electricity is not only severely impeding growth and development in these countries, but is a major threat for social peace and internal security.

Electrification through national grids is not a universal solution. National governments in West Africa have been trying a range of solutions, including extending the national grid towards the final goal of universal electrification. A national grid has several advantages, including utilization of diverse generation resources that also makes final electricity prices cheaper for the consumers. It opens up electricity trade at the regional level further adding to the grid stability and economies of scale. Further, a national grid could raise the potential of setting up very large-scale solar power generation plants (including CSP plants with in-built electricity storage for extended operation) in many West African countries where solar irradiance is world-class to rapidly provide access to electricity and eventually bringing down costs of and supply cheaper electricity to the consumers. But owing to severe problems associated with the poor financial condition of the public transmission and distribution utilities, weak managerial capacity, low generation capacity and very high aggregate commercial, transmission and distribution (ATC) losses, a national public utility grid is not the immediate solution for unelectrified areas in many of the West African countries.

Governments have initiated power sector reforms by unbundling, strengthening and/or privatizing the utilities, tariff reforms, encouraging IPP frameworks, etc. but these reforms either remain incomplete or have not adequately addressed electrification rates. Reforms have been very slow and painful, and the private investors perceive too much risk to undertake large-scale projects to address the role of national utility in terms of universal electricity access. These risks are common to low income countries and are economy-wide, so cannot be addressed by the energy sector alone. Even if most of these factors are ignored, in Senegal for example, it will take at least 20 years for the national utility SENELEC to reach every village. These nations should not wait that long.

Mini-Grids can fill the gap, and international support is available

Due to various limitations of conventional grid-based rural electrification demand for alternative models such as renewable energy-based off-grid and distributed generation solutions are gaining increasing attention globally. The International Energy Agency predicts that by 2020 mini-grids and other off-grid solutions could account for more than half the new capacity in sub-Saharan Africa. Off-grid solar lanterns and home systems are still taking the lion's share of plug and-play sales, but mini-grid developers are ramping up activity, emboldened by increasingly competitive storage options and an improving regulatory environment. According to Bloomberg New Energy Finance, the global energy storage market, for example, is estimated to reach 740 MW in 2017, up from just 245 MW two years ago, mainly being driven by decreasing costs and sound policy support in many countries. The growth of the storage market is also starting to affect emerging and frontier markets mainly in South Asia, Southeast Asia and Sub-Saharan Africa. Storage companies are now pushing forward some of the most ambitious new mini-grids and independent energy systems. All of these developments are rapidly bringing down the cost of renewable energy mini-grids making them an attractive option for policy makers across Asia and Africa.

Mini-grids can power the local economy

Mini-grids are now not just used to bring power to underserved communities, but also allow industrial sites to integrate renewable power generation and boost the resilience of their sites. Mini-grids offer a variety of applications. They range from the solar micro-grid at a nature conservancy that helps reduce diesel consumption and noise on site, to seamless operations of an agricultural facility in Rwanda during grid outages. ABB's on-site mini-grid in Johannesburg highlights both of these applications and also serves as a showcase for the technology, which ABB calls a key element of its 'Next Level' strategy in the region.

Mini-grids are already cost competitive in many places

The general notion that renewable energy powered (RE) mini-grid is a costly option has led to the lack of integration of such mini-grids in national electricity planning in most countries. The fact, however, is that such RE mini-grids are already cost competitive under many circumstances. In a detailed analysis for Tanzania, Moner-Girona and his colleagues show that current government subsidies of approximately USD 36 million annually for diesel mini-grids state-owned utilities (with a loss of 0.42 US\$ per generated kilowatt hour) exceeds the cost of replacement with solar mini-grids to serve the same amount of clients¹.

In its recent report titled ‘Energy Within Reach: growing the mini-grid market in Sub-Saharan Africa (2017)², the Rocky Mountain Institute (RMI) concludes that for a typical village of 500 households, total mini-grid energy costs are lower than the main grid up to a load size of 12 kWh/month/ household. Similarly, for such villages situated beyond 3 kms of the existing main grids, grid extension is a costlier option than a mini-grid.

Mini-grids could become more cost efficient if, in addition to domestic loads which peak during the evenings in Sub-Saharan Africa because of predominantly lighting needs, they are also connected to daytime industrial loads, such as a wood mill, flour mill, coffee washing unit in the plantations, etc. The above RMI study concludes that such 50KW load in a typical 500 household village situated approximately 13 kms away from the main grid, could yield as much as 13 per cent cost saving.

Mini-grids improve reliability and resilience

The integration of mini-grids in rural electricity network not only reduces the overall energy costs, but it also incorporates more sustainable energy, delivers demand-side efficiency and improves the reliability of power supply to support local enterprises. An internet cafe owner, for example, is more likely to opt for an assured power supplied from a local mini-grid for say 4 hours a day during peak business hours than relying on uncertain supply from the main grid. Mini-grids also offering resiliency to the local economy in the event of a loss of power from the main grid. After the recent devastation of Hurricane Matthew in Haiti, for example, the main grid lines to many regions in the south of the country took very long to come back online, renewable mini-grids were able to provide power after only 55 hours.

West Africa is catching-up on mini-grids

The governments of Benin, Côte d’Ivoire and Senegal also have recognized the potential of mini- grids, and have initiated several institutional reforms. Benin’s Agency for Rural Electrification and Energy Management (ABERME) has developed Terms of Reference for hybrid PV-diesel mini-grids. In Côte d’Ivoire, the Ministry of Energy has short- listed developers to install PV, biomass, and hybrid mini-grids under a Build-Own-Operate model, and the Senegalese Agency for Rural Electrification (ASER) has installed 107 mini-grids, totaling 1 MW of installed Solar PV capacity by mid-2014, in addition to other mini grids operators who hold a concession from ASER while the tariff is fixed by the regulatory body CRSE. Work of many development and commercial organizations on RE mini grids programs, notably GIZ, Energizing Development (EnDev), Fondazione ACRA–CCS and Yiltidi Consultancy in Senegal, and African Development Bank (AfDB)’s Green Mini Grid program,



² https://www.rmi.org/wp-content/uploads/2017/05/SEED_Report_Energy_Within_Reach_2017.pdf

Power Africa (Millennium Challenge Corporation, USAID), DFID (UK), ECREEE's ECOWAS RE Facility, European Investment Bank (EIB)'s EU-Africa Infrastructure Trust Fund, BNEF's Global Climatescope, Energia sin frontera (Esf)'s microgrid program and Schneider Electric's Access to Energy Program, etc. in Benin, Côte d'Ivoire and Senegal have created quite rich body of learnings across a range of contexts.

Although in the past, most of the mini-grid experience has been based on diesel power plants or renewables-diesel hybrid plants, lower system and batteries costs, technological advances, linkage with mobile telephony, etc. are now making solar-only mini-grids as a competitive business enterprise. Solar irradiance in each West African country is quite sufficient for mini-grids to operate across the country, and thus, offers a nationwide solution.

Despite such potential, donor support and a rich body of knowledge, the mini-grid electrification option has been used either as a temporary solution (a pre-grid electrification option) or as an inferior solution. Consequently, there has been a relatively limited penetration of mini-grids in most countries.

New institutional mechanism required to support mini-grids

A new institutional and regulatory framework to accelerate electric power supply and electrification through renewable energy mini-grids is urgently needed for the West African countries Benin, Cote d'Ivoire and Senegal. After elaborate consultation with experts, it is clear that a duly notified and adequately empowered Mini-Grid Concession Agreement Framework will fully serve the purpose.



Such a Concession Agreement framework will not need the sanction of a new law, and, therefore, it will not have to undergo the lengthy process of law making. The administrative ministries dealing with renewable energy could themselves formulate such a framework agreement and get it vetted by the national electricity regulator to utilise large scale grants/loans being offered by bilateral and multilateral organisations for rural electrification. To be successful, such an agreement must clearly demarcate the responsibilities

between different agencies of the government along with adequate authorisation of these agencies to support the Agreement. Further, the Agreement must incorporate safeguards to protect both the investors' long-term financial interest and the consumers' interest in reliable and quality power supply. Such a Community Grid Agreement framework could transform the whole electricity sector thereby ensuring not only universal electricity access but also accelerated economic growth in remote and rural areas.

The Climate Parliament is, therefore, drawing an innovative model “Community Grid Agreement” based on a cross-country experience, which is particularly suited to Benin, Cote d’Ivoire and Senegal. National governments/ ministries in these countries may use this model Agreement as a base document to kick-start the process. The Climate Parliament network of MPs will like to share the model Agreement, once it is ready, with the Minister of Energy in each country. Thereafter, the MPs would like to press their governments for its review and adoption as per the country circumstances in an expeditious manner.

Critical challenges to renewable energy mini-grids, and solutions thereof

The main challenges in scaling up mini-grids are mainly four-fold: (a) higher cost, low volume and low revenue; (b) lack of regulation and standards, (c) poor financial resources and capacity of government to support mini-grids, and (d) risk of becoming a stranded asset once the national grid reaches the mini-grid village.

In the proposed Concession Agreement being drafted by the Climate Parliament, best practices from across the world and other unique features that are suited to the local context of West African countries have been incorporated. These include: -

- *Generating higher revenue streams*

Most mini-grid models today focus on social welfare aspects (e.g. universal energy access) only. As a large share of households in rural areas can afford to buy only basic appliances and pay a nominal tariff, the operational revenue of such mini grids remain poor which means the mini grid operators continue to depend on the government for grants. Unfortunately since most governments have limited budget, such mini grid model is unable to scale up. Therefore, the Climate Parliament is proposing that the government needs to increase and expand the revenue base of the mini grids by locating “anchor” customers in their service area. These anchor customers could be refrigeration or cold-storage operators (in pic. a mango cold store in Kenya), e-service providers, etc. who have large, stable demand for power and can pay higher commercial tariff. Agricultural / food processing is growing fast in West African countries, and with that the demand for cold chain/ store is increasing rapidly in rural areas. New opportunities being created by integration of power generation with remote electronics and communication now enable more robust O&M of mini grids, thereby reducing down-time considerably and enhancing the revenue.

Such integration is also opening the scope of new e-commerce/ services in remote villages (in pic. an e-Commerce centre in Tanzania). Those high paying anchor customers are mostly absent at present, but the governments could support those “anchor” customers or their services to create a large demand for mini grids. Governments, therefore, need to shift away from a social welfare approach in rural electrification to a business approach. Decentralisation of public governments to village level will further support the business approach by opening new up-and-down services (future-ready bouquet of sellable services, e.g. a village-level Common Service Centre 3 empowered to issue birth, death, income certificates, etc., run e-Learning courses, provide remote access digital health facilities including health check-up and consultation with specialists working at national or international institutes, etc.) that can run on power supplied by the mini grid. This will ensure that larger private investment flows

in the sector and the capex and opex of mini-grids reduce considerably on account of economies of scale.

- *Building future-ready mini-grids as per national standards*

In the absence of technical standards codes for mini-grids that are necessary to ensure seamless integration with national grids as and when the national grid arrives in

the village, a mini-grid tends to work as a loose assembly of non-standardized components. This leads to suboptimal performance and operational leakages, and conjures the image of mini grid as an “inferior” or “temporary” option. Such image of mini grids hinders planners to include mini grid as an integral part of the perspective national electricity plan.

As a result, there is never a serious effort to scale-up mini grids thereby forcing the mini grid sector to operate at sub-optimal level for temporary periods. Governments do need to codify standards.

- *Creating larger markets for mini-grids and components*



Presently, the market for mini-grid components is very small as only a few mini grids are being built each year. Mini-grids have many components, e.g. PV panels, mounts, inverter, batteries, charge controllers, building/ fencing, poles, cables and system balance equipment of the system, which means there is no “single bullet” of market reform that a government can target just to benefit the mini-grids exclusively. The answer is to create a very large market for mini-grids, and since the governments don’t have sufficient funds, a robust private sector friendly institutional framework is necessary.

The proposed Agreement, which is based on a PPP (Public Private Partnership) framework and in which the private sector builds, owns and operates the mini grid till at least the time the national grid arrives in the village, addresses these concerns. As the private sector mini-grid operator’s (MGO) capex and opex are fully covered under a new business model (described below) and their investment is secured in case the national grid arrives in the village, large number of MGOs will be willing to install mini grids and expand this market rapidly.

- *Lowering financing burden on governments to support more mini-grids*

Most mini grids today are established with 100 % capital grants from governments or other agencies, whereas the operational costs (full or part) are recovered through a fixed tariff charged to consumers. This model is usually costly to the government as there is lack of expertise on the right level of capital grant to make it attractive to MGOs. In most cases, the government has to bear 100 % capex. Furthermore, the

consumers don't pay even the full opex which is why the MGOs tend to run operations in an inefficient mode. In view of these weaknesses, the Concession Agreement being proposed by Climate Parliament is based on a more efficient Viability Gap Funding (VGF) model which has proved to be successful in many countries. In the VGF model, the investors ask the Government to provide only that much grant which is necessary to establish and run the mini grid for the whole concession period (usually 25 years for solar mini grid) which is over and above the full cost revenues that the investor/operator is able to potentially mobilise from all types of consumers. Thus, there is a comprehensive ex-ante project technical and financial modelling by each potential mini grid bidders who would tend to quote the lowest VGF to be able to compete successfully. Economic efficiency, therefore, becomes integral to the VGF model of financing min grids. With growing experience of successive years of VGF auctions, governments, private sector MGOs and multi-faceted consumers' base would together be able to bring down the costs rapidly. With low fund requirement, even for the initial rounds of VGF auctions, Government can fund far large number of mini-grids each year (e.g. VGF requirement could be as low as USD 35-40,000 per robust and future ready 30 kWp Solar PV mini grid to cater to a village of 150 households, 5-6 public facilities and 8-10 micro/mini enterprises for 5-8 hours per day). Such fund requirement can be easily met with various international grants that are currently available in the West African countries.

- *Allow operators to sell energy services*

Presently, the MGOs are allowed to sell only electricity (in terms of kWh, that is electricity units, used) at specified tariff. This should be changed to allow the MGOs to sell efficient appliances bundled with electricity with the cost of financing of such appliance included in the tariff to be paid by such consumers. Such upfront financing would greatly enhance use of clean power from the mini grid for daily needs (such as lighting) and improve social and economic returns from the project. A differential tariff structure could be set for consumers to encourage the use of efficient appliances, and in such cases government may compensate the MGOs by using the 'replacement cost' logic (for example, the amount of subsidy that will be saved if a kerosene lamp or incandescent bulb is replaced with an LED bulb).

- *Expediting permissions by a "Single Window" mechanism*

Presently, the MGOs experience general frustrations with delays and bureaucracy as they must deal with many organs and less clear procedures in most countries of West Africa. The proposed Agreement addresses these concerns by creating a single window in the national utility that has all the requisite technical knowledge to administer this Agreement as a universal and stand-alone legal contract enforceable by a Law Court.

- *Organising seamless national grid integration in the future*

The most serious risk presently perceived by mini-grid operators (MGOs) is the risk that their mini-grid would become a "stranded asset" when the national grid arrives in that village. In this regard, the Chinese experience is quite instructive. China followed a phased approach to development where the local-grid was initially developed in the rural areas to cater to low demand but as demand grew, the future ready system was then seamlessly integrated to the central grid system. The

phased development strategy along with early recognition of electrification-rural development link ensured appropriate management of financial resources, initial demand creation and a self-reliant system. Therefore, in the proposed framework, instead of considering each of the modes of electrification in a standalone manner and perceiving them as mutually exclusive or competing with one another, as usually perceived in the present policy circles, electrification by mini grids has been considered as a complementary mode which is future ready to be integrated with the national grid whenever the latter is ready.

Suggested road map for action

In view of the imminent need for universal electrification in the rural areas, the Climate Parliament network of MPs in West Africa has taken up the Community Grid Agreement initiative as a priority item. Since the Agreement is a legal document in itself, it doesn't need the backing of a new law in so much as it doesn't contradict the provisions of an existent law of electricity generation and distribution. Nevertheless, it will be worthwhile that it is discussed with the potential investors and Mini-Grid Operators first, and amended accordingly.

The amended text of the Concession Agreement will then need to be vetted by both the Law Department of the Government for the legal format and the Finance Ministry for the new grant financing structure it will create and for assuring the investors of the Sovereign Guarantee for timely payment of the Viability Gap Funding (VGF) amount.

Simultaneously, action is needed on:

- Creating a sufficiently-sized corpus for the VGF constituted with bilateral or multilateral grants/ loans and government contributions.
- Selecting, empowering and strengthening the national utility or any other suitable agency to implement and/or manage the Agreement during the Concession period.
- Creating a National Standards/Code for future-ready mini-grid and its components.
- Finalising a format for Power Purchase Agreement as detailed in the Community Grid Agreement.

8: The Scaling Solar Programme

Alongside Climate Parliament's partnership with the International Solar Alliance (ISA), the PARE project has also - on a more informal basis - been advocating for broader engagement with the World Bank's Scaling Solar programme. In the following chapter, we introduce this groundbreaking initiative and explain its relevance for Francophone West Africa.



Solar power has enormous potential as an energy source in emerging markets. At the same time, the cost of solar photovoltaic (PV) technology has fallen dramatically. Solar PV can now deliver power less expensively and with more long term price certainty, than coal fired power. But many countries have struggled to develop utility scale solar power plants because of challenges that include:

- Limited capacity within the government to manage, structure and negotiate private power concessions
- Size of projects tendered by governments are small in many cases whereas navigating small and distinct power markets can deter investors
- Many countries do not have sufficiently large grids so they can only absorb only small projects which accentuates the problems of the investors in getting around permissions, approvals, licensing, etc.
- It is a usual experience that individually negotiated contracts have high transaction costs; what we need is a cluster of projects that could be aggregated into one tender.

In many countries the credit rating of the utilities and other offtakers is poor which is further exacerbated by political risks if the government is managing the contract directly; this increases the cost of capital, driving up tariffs.

To overcome the above constraints and threats, the World Bank Group has recently launched a Scaling Solar programme in collaboration with the host governments in the participating countries of Africa. The program is designed to make it easier for governments to provide solar power quickly and at low cost through competitive tendering and pre-set financing, insurance products, and risk products.

Currently, the programme is operational in the following four countries:

- **Zambia**
- **Senegal**
- **Madagascar**
- **Ethiopia**

This programme brings together a suite of World Bank Group services under a single engagement aimed at creating viable markets for solar power in each client country. The “one stop shop” program aims to make privately funded grid connected solar projects operational within two years and at competitive tariffs. When implemented across multiple countries, the program will create a new regional market for solar investment.

Given growing interest in the program, Scaling Solar is now targeting developing 1 gigawatt of solar power in the next three years. At the tariffs recorded in Zambia, this would provide African consumers with more than \$7 billion in savings compared to oil based power, which costs about 20 cents per kilowatt hour.

Scaling Solar has financing support from several partners, including USAID’s Power Africa, the Ministry of Foreign Affairs of the Netherlands, the Ministry of Foreign Affairs of Denmark, and the Infrastructure Development Collaboration Partnership Fund (DevCo).

During a regional hearing organised by Climate Parliament in Abidjan in April 2017, Ms Cassandra COLBERT, IFC Country Director for Ivory Coast, Guinea, Liberia, Mali and Sierra Leone contrasted the huge opportunities for renewable energies in Africa, particularly favoured by the decreasing of solar panels, with their low deployment on the continent. While investments remain slow, the Scaling Solar Programme enable solar power to be built in less than six months.

In particular, slow financing, high transaction costs, poor knowledge or prejudices of technical and financial partners, the lack of technological capabilities, are key challenges that Scaling Solar is seeking to address. Most notably the programme addresses countries’ weak ability to negotiate contracts, shorten negotiating time and reduce intermediaries. In that sense, the Scaling Solar programme offers standard contracts placing ‘tariffs’ at the core of negotiation between the parties. Governments negotiate with the World Bank which bring solutions to reduce or mitigate political risks. The IFC provides the financing.

As per IFC, the Scaling Solar one stop shop service can benefit not only government but also developers and international donors. Governments, for example, can negotiate lower project costs or cheaper tariffs, and are assured that the projects will get definitely implemented as per a tight time schedule. Developers benefit from a level playing field, while for donors, their assistance brings more value.

The experience so far:

ZAMBIA

In July 2015, Zambia’s Industrial Development Corporation (IDC) signed an agreement with the International Finance Corporation (IFC2, World Bank Group) to explore the development of two largescale solar projects through Scaling Solar. The competitive auction for 100MW (2x50MW) organised through the program attracted 48 solar power developers, seven of whom submitted final proposals, and the bids yielded the lowest solar power tariffs in Africa to date. A total of 73 MW of solar power has been added from Scaling Solar projects. The winning bids, achieved in the May 2016 tender, were for just US 6.02 cents per kilowatt hour and US 7.84 cents per kilowatt hour by Neoen/First Solar and Enel —the lowest prices for solar power to date in Africa, and among the lowest recorded anywhere in the world. Because these tariffs are fixed for 25 years and will not rise with inflation, they represent about 4.75.5 cents per kilowatt hour over the life of the

project—on par with recent auctions in Peru and Mexico.

Scaling Solar has also delivered on its promise of speed: Zambia's results came just nine months after the government first engaged IFC to advise on the transaction. The winning bidders—Neoen/First Solar and Enel—are expected complete the construction by October 2017. This is especially critical in Zambia, where blackouts happen daily. The two new solar power plants will increase the country's available generating capacity by 5 % and will also help to restore water levels in its dams.

Following the success of this first mandate, IDC signed in February 2017 an agreement with IFC to develop up to 500 MW of clean and renewable energy capacity through two to four projects. The first series of expected contracts will develop around 180 MW of large scale solar PV. The Request for Qualifications for Zambia's second round of Scaling Solar tenders attracted 21 potential bidders, 12 of whom have been pre qualified as having the experience, expertise, and financial resources to bid on projects to generate up to 300 MW of utility scale solar power. The Request for Proposals is expected to be sent to pre-qualified bidders soon.

Why Zambia's 6¢ is more important than Dubai's 3¢ solar tariff

Zambia's solar auction result followed a series of headline-making auctions in India, Mexico, Peru, and Dubai. In Dubai's case, the price was as low as 3 cents/kWh - the lowest price ever offered for solar power. Solar auctions are effectively a competitive bidding process to build power plants and supply a specific quantity of electricity at a pre agreed price over a specified period.

There are a few reasons why Zambia's outcome is more significant than Dubai's:

- First, Zambia's 6 cents/kWh price is fixed and will not increase for 25 years. This makes the average price in real terms an even more astonishing 4.7 cents/kWh.
- Second, there are not any implicit or explicit subsidies involved in the deal, nor does Zambia have a sophisticated and liquid financial market. The World Bank Group simply helped structure the auction based on the best global practices, taking into account local specifications and providing a guarantee to backstop the obligations of the national utility to pay for the electricity being supplied.
- Third, Zambia has about 2400 MW of mostly hydro based generation, compared to much larger systems in other countries with successful auctions. It also has a distressed macroeconomic situation coupled with weak institutional capacity in the energy sector. The World Bank's guarantee is critical to address the risks associated with these factors.

Most importantly, these results are dramatically shifting perceptions that low costs for renewable energy are unattainable in poor countries with weak institutions, underdeveloped laws and regulations, and high costs for conducting business. According to the World Bank's Doing Business report 4, Zambia ranked 98, compared to the United Arab Emirates which ranks 26th.

SENEGAL

The government of Senegal signed an agreement with the World Bank Group in February 2016 to develop up to 200 MW of solar power through Scaling Solar. According to World Bank data, just over half the population of Senegal (56.5 %) currently has access to electricity. The planned Scaling Solar projects underscore Senegal's commitment to integrate renewable energy resources into its energy mix. The prequalification round of tender for 100 MW projects have been undertaken, and 12 tenderers have been adjudged as qualified on a preliminary basis on 18 October 2016.

MADAGASCAR

For Madagascar, the third African country to join Scaling Solar, a new 3040 megawatt solar facility will help ease daily interruptions of power service. With only 540 MW of installed generation capacity, this island nation suffers from frequent power outages, and only 15.4% of the population has access to electricity. In the World Bank Group's Doing Business Report⁶, Madagascar was ranked 187 out of 189 countries regarding the difficulty, delay, and cost of getting electricity. The planned Scaling Solar project will provide a reliable alternative to expensive diesel generators, drawing on an abundant source of renewable energy.

ETHIOPIA

Ethiopia is the fourth country to join Scaling Solar. Ethiopia Electric Power signed an agreement with IFC to advise on developing up to 500MW of solar power under the initiative. Although Ethiopia has huge renewable energy potential it currently has an energy shortfall of 500MW, with over 70% of its energy coming from hydropower. Solar power will help diversify Ethiopia's energy mix and allow it to manage its water resources more effectively. This is vital bearing in mind the severe droughts that have afflicted the country. Scaling Solar will provide a quick to build, reliable complement to hydropower, drawing on Ethiopia's irradiation levels of 1500 to 200 kilowatt hours per m².

Parliamentary Actions

By their position, Members of Parliament (MPs) have a crucial role to play in guiding national energy policy, offering the opportunity to change the situation in their countries, for the benefit of their populations. Strong involvement of MPs in their government's accession to the Scaling Solar program and subsequent follow up of its implementation would allow cheaper and more transparent access to large scale solar energies by eliminating intermediaries and reducing transaction costs.

- Honourable MPs may kindly request their governments to send to the concerned local office of the International Finance Corporation, their country's willingness to join the Scaling Programme.
- In countries that have already joined the Scaling Solar Programme, the Honourable MPs may request their governments to keep them updated on progresses under the programme so that implementation of the schedule of operation under Scaling Solar (e.g. financial closure, construction of solar generation plant, connection to the grid, PPA, etc.) is completed in time.

9: Selected Parliamentary Hearing Reports

9.1: *Regional Hearing in Abidjan, April 2017*

Overview

A total of 26 elected Members of Parliament from Benin, Ivory Coast and Senegal in West Africa, and Tanzania, Kenya and Uganda in East Africa met at the Abidjan regional parliamentary hearing on 12-13 April 2017 to discuss ways in which their countries and regions could promote electricity from renewable sources in an accelerated manner. Their participation in the hearing was one of their many efforts to address the twin challenges of ensuring universal energy access and making available enough quality power for the rapid economic development requirements of their respective countries and region. The MPs were united in a common goal of combating climate change by shifting away from fossil fuels.

The hearing acknowledged that countries in both East and West Africa are poised for rapid economic development in the coming decades because of their rich natural resources, favorable demographics and overall scope for development compared to other parts of the world. The hearing also recognised that much of that growth will hinge on the availability of the power and electricity needed to catalyse industrial growth and enable everyday business activity throughout the region, and took note of the various alliances and initiatives that have been set up in the recent years to address the energy challenge of Africa.

The hearing looked into ways in which parliamentary action could unite a range of national institutions and organisations from government, business and civil society, including international development organisations that are working with a common objective of reducing poverty and enhancing growth in an inclusive manner.



These alliances and initiatives range from global alliances such as the International Solar Alliance (ISA) with which Climate Parliament has signed a Joint Declaration of cooperation, as well as Africa-specific initiatives such as the Africa Renewable Energy Initiative (AREI), the US-led Power Africa programme or Scaling Solar of the World Bank Group. They also include regional initiatives by organisations such as the ECOWAS Centre for Renewable Energy and Energy Efficiency (ECREEE) or regional interconnections being promoted by West Africa Power Pool/ East Africa Power Pool, or country specific initiatives by development partners such as the French Development Agency (AFD), the German Society for International Cooperation (GiZ), the Swiss Development Corporation (SDC) or USAID.

The Abidjan Parliamentary hearing provided a unique opportunity for the legislators to interact with key officials and experts of those alliances and initiatives, as well as representatives from the national governments and businesses. After two days of intense discussions in the plenary sessions and in the regional groups roundtables, MPs decided to pursue four main themes in their home countries. These were: joining and ratifying the International Solar Alliance and availing assistance under its “Solar for Agriculture” programme (solar pumps), joining Scaling Solar programme, launching the Community Grid Initiative of the Climate Parliament supplemented by the mini grid programme of the African Development Bank, and bringing about reforms of the VAT and import duty regimes on renewable energy equipment to make them affordable for wider and accelerated uptake. MPs have all the levers to succeed in all of these areas. They vote on legislations, taxes and budgets. They could push for new programmes and maintain oversight on budgets and programmes. Furthermore, they have direct access to the head of governments and ministers, who are accountable to them.

Climate Parliament secretariat staff will continue to support MPs in East and West Africa in their follow-up of actions agreed at the Abidjan Roundtable. Please visit www.climateparl.net or contact info@climateparl.net for more information or support.



List of Participants

Hon. Members of Parliament

BENIN

DAFIA Abiba, MP, Benin
TOGNI Cyprien, MP, Benin
BAKO Idrissou, MP, Benin
ABIMBOLA Jean Michel, MP, Benin
ADOMAHOU Jérémie, MP, Benin

CÔTE D'IVOIRE

ANIGO Affoué épouse ATTOUNGBRE, MP, Côte d'Ivoire
BONI Tano N'guessan Marie Noëlle épouse EKPONON, MP, Côte d'Ivoire
COULIBALY Famoussa, MP, Côte d'Ivoire
DIABY Nassalatou, MP, Côte d'Ivoire
KAHIBA Lambert, MP, Côte d'Ivoire
LOBOGNON AGNIMA, Alain Michel, MP, Côte d'Ivoire
SANGARÉ Yacouba, MP, Côte d'Ivoire
SORO Tiohona, MP, Côte d'Ivoire
TRAORE Adjaratou épouse COULIBALY, MP, Côte d'Ivoire
YEO Fozidé, MP, Côte d'Ivoire

KENYA

BIRDI Sunjeev Kaur, MP, Kenya
OTTICHILO Wilber, MP, Kenya

SENEGAL

CISSE Ndeye Lucie, MP, Senegal
DIENG Penda Seck, MP, Senegal
THIAM Mamadou Lamine, MP, Senegal
TOURE Papa Biram, MP, Senegal

TANZANIA

PENEZA Upendo Furaha, MP, Tanzania
SONI Jitu Vrajlal, MP, Tanzania

UGANDA

AYEBAZIBWE Justine Kasaija, MP, Uganda
BIYIKA, Lawrence Songa, MP, Uganda
AKAMBA, Paul, MP, Uganda

Analysts, Experts, Officials and Observers

Mrs. DOGO LOGBO Myss Belmonde, Representative of the President of the National Assembly of Côte d'Ivoire;
Dr Joseph EZOUA, Representative of the Director Country of UNDP
His Excellence M. Ragutahalli RAVINDRA, Ambassador of India in Côte d'Ivoire ;
His Excellence, M. Thomas Litscher, Ambassador of the Swiss Confederation in Côte d'Ivoire;
Mr. Upendra TRIPATHY, Director General of the International Solar Alliance (ISA) ;
Mr. Youba SOKONA, Vice-Chairman of the IPCC and Head of the Implementation Unit of the Africa Renewable Energies Initiative (IAER) ;
Mr. Daniel SCHROTH, Senior Energy Specialist and SE4ALL Hub Coordinator for Africa, African Development Bank (AfDB) ;
Mr. Mohamed YOUNBA SOKONA, Renewable Energy Advisor, GIZ and CEREEC (ECREEE) ;
Mr. Abdoulaye BA, Head of Mission and Technical Officer, COSEER ENERGY
Mr. Dinesh PATIDAR, President of Shakti Pumps ;
Mrs. Odette KABAYA, Regional Adviser & Team Leader / UNDP for Africa
Mrs. Bénédicte COMLAN, Project Leader, Gender and Social Inclusion (CIGIS), MCA-Benin II ;
Mrs. Monica MADUEKWE, Program Coordinator at CEREEC (ECREEE)
Dr. Souleymane BERTHÉ, Director General of the Renewable Energies Agency of Mali (AER-Mali)
Mr. David ACHI, Director of AD Solar
Mrs. Cassandra COLBERT, Country Director of International Finance Corporation Côte d'Ivoire, Guinea, Liberia, Mali and Sierra Leone;
Mr. Nicholas DUNLOP, Secretary-General of Climate Parliament
Sanjay KUMAR, Executive Director of Climate Parliament
James CORRÉ, Programme Manager of Climate Parliament
Sandra POINTEL, West Africa Project Coordinator of Climate Parliament
Caroline GENTRY, Benin Project Consultant Project Consultant of Climate Parliament
Prudence DAHODEKOU, West Africa Project Assistant of Climate Parliament
Mohamed Kerfala KOMARA, West Africa Project Assistant of Climate Parliament

Opening Session

While most countries acknowledge the threat of climate change and are taking some action, the current pace and scale of the development of renewable energy (RE) is not adequate to stop carbon dioxide emissions rising beyond the level which scientists predict will cause a devastating temperature increase. The melting of polar ice in the Arctic and Antarctic, sea level rise, coastal erosion, drought in Africa and North America and famine are just some of the possible outcomes.

This was the message from Nicholas DUNLOP, Secretary General of Climate Parliament, in his opening address to the regional hearing participants. Despite this potentially catastrophic climate situation, there is an opportunity for MPs and others to respond. It is imperative to reduce greenhouse gas emissions by retiring fossil fuels and accelerating renewable energy projects. This includes, for example putting solar panels on roofs of companies, building solar parks, mini-grids and using biomass.

Africa has the best assets for such initiatives: a high rate of solar irradiation, an advantageous wind potential, and strong hydroelectric resources in certain countries. Mr DUNLOP said Africa should learn from India's example with regards to electrification projects using RE. Climate Parliament is building a Green Grid partnership which will capitalise on the renewable energy resources from around the world to supply high demand areas with clean electricity by strengthening capacity links between countries. Mr DUNLOP explained how projects envisaged by the Green Grid Alliance could be developed in Africa.

Dunlop challenged participants to take on or get involved in RE projects and initiatives presented by experts at the hearing and not fear the threats of the oil lobby groups against the promotion of RE and the energy transition. Dr Joseph EZOUA, Country Director of co-host UNDP, emphasized the importance of parliamentarians at a meeting of this type for the promotion of renewable energy. The lack of affordable energy in Africa makes renewables vital for the sustainable development of its countries. Mse Myss Belmonde Dogo Logbo, Representative for the President of the National Assembly of Ivory Coast, having thanked the MPs for their attendance and declaring the hearing open, stressed to them that, as well as mitigating climate change, RE offer real opportunities for the development of the local economy in the form of job creation Africa is fortunate to possess enormous RE resources but in order to really promote investment in them Ms Logbo said her parliamentary colleagues should create or strengthen relevant legal frameworks. The speaker also invited the participants, mostly MPs, to help identify innovative investment strategies, to advocate for obstacles to be overcome and to communicate with the nation to ensure they are on board. This regional hearing gave MPs the opportunity to learn more about renewable energy developments in Africa and innovations around the world, but also to participate in small workshops to discuss what practical actions could be taken in each of their countries. MPs set out a series of action plans they will pursue in response to the recommendations made at the hearing. Solar pump manufacturers pledged to scale up their installation of pumps in the represented countries.

THE INTERNATIONAL SOLAR ALLIANCE

With US commitment to international climate control treaties in doubt under the Presidency of Donald Trump, voluntary agreements between countries and states seeking to establish collaborative approaches to leverage political will and private investment have become more important. The International Solar Alliance is one such agreement, a coalition of 121 solar resource rich countries located between the Tropic of Cancer and the Tropic of Capricorn to address their special energy needs and provide a platform to collaborate on addressing the identified gaps through a common, agreed approach. It has a goal of mobilizing \$1 trillion in investments by 2030.

In the first session of the regional hearing moderated by Honorable Upendo Peneza, MP from the Tanzanian parliament, Climate Parliament invited ISA's acting head to present MPs the history of the alliance so far with a view to encouraging them to persuade their countries to join or ratify (Senegal, Tanzania) their participation. Acting Director General Upendra Tripathy described the formation of ISA, listed the countries that have already signed the accord and which countries will probably sign it. Then he outlined the operation of the ISA, the next key actions, the budget, the funding sources for ISA projects, strategic partners (especially the European Union, EU), financial partners (especially the World Bank) and the location of focal points. Fifteen countries need to ratify it for the alliance to come into force.

Mr Tripathy also reviewed certain milestones in the work of the Alliance, which is headquartered in Delhi, India. These include the launch of the ISA at the Climate Summit in Paris on 30th November 2015, the joint declaration between the interim administrative unit of the ISA and the United Nations Development Program (UNDP), the World Bank and the Climate Parliament. Among actions already undertaken by the ISA: a \$1 billion loan from the World Bank to support India's ambitious initiatives to expand solar through investments in solar generation; the creation of a joint programme between India and France to make financing affordable, securing a 300 million euro loan for solar projects in Africa, the engagement of India for US\$ 2 billion for solar energy in such countries of Africa which have signed and ratified the ISA Agreement.

Mr Tripathy finished his communication by mentioning the advantages and implications that a solar programme could have for the agricultural, employment and communication sectors.

The Indian Ambassador in Ivory Coast his Excellence Ragutahalli Ravindra called on MPs to emulate the Indian renewable energy initiative in their countries. The Ambassador said the question of climate change should be taken into account when trying to meet the Sustainable Development Goals. This is how India has engaged keenly in climate change mitigation: increasing domestic financing and targeting 40% renewable energy (RE) in its energy mix. He also emphasised the important role of MPs in reforms and actions for the development of RE.

SCALING SOLAR

Another important project that the Climate Parliament MPs decided to actively pursue is the International Finance Corporation (IFC)'s Scaling Solar initiative. Ms Cassandra Colbert, Country Director for the IFC (Ivory Coast, Guinea, Liberia, Mali and Sierra Leone) said that the rapid decline in the cost of solar panels is a boon for countries that have enormous RE potential. But unfortunately this opportunity is hampered by slow financing, increasing transaction costs, poor familiarity or misinformation by technical operators and financiers about Africa, and a lack of technological capacity in African countries. The Scaling Solar programme presents one-stop solution to these obstacles.

This programme will redress the weakness of countries in negotiating agreements, reduce negotiation time (as in the case of Zambia) and cut out intermediaries. It does so by setting out standard conditions in a contract where the only element to negotiate is the tariff. Governments are free to amend the contracts to suit their needs. The contract mitigates risk, as governments deal with the World Bank group directly, minimizing political risk. The IFC funds the project.

Ms Colbert listed which countries have initiated Scaling Solar projects. These include Ethiopia, Madagascar, Senegal, and Zambia. She described the process starting from the initial request, to the financing closure and finally up to the installation of the solar plant in the country, and listed out direct benefits in terms of lowering of the tariff (project cost), reduction in project development time, strengthening transparency and building local capacity in negotiating complex contracts as the key advantages of the programme.

Climate Parliament Secretary General Nicholas Dunlop endorsed what was said by Mr Tripathy and Ms Colbert. He emphasised governments need to act at the necessary scale so that the fossil economy transitions to a clean economy in the fastest possible manner. To this end, he emphatically made three calls to action:

- Advocate for countries to sign up to Scaling Solar and join and/or ratify ISA;
- Encourage their governments to join the Scaling Solar programme;
- Sign up to initiatives to promote solar pumps.

Interesting comments were made by Hon. LOBOGNON, Hon. KAHIBA, Hon. BAKO, Hon. SONI, M. BOREAU and Mr BA) on all the presentations. The following recommendations were made:

- Ensure that the grid has the capacity to handle the intermittency of RE. As it seems most countries do not have capacity strong enough to support this kind of intermittency.
- Diversify RE options with support from the World Bank while taking into account the specific characteristics of each country.
- Identify how to limit and stabilise production costs for RE;
- Find ways to encourage countries from the North to become more involved in the promotion of renewable energy projects in Africa;



- Consider the notion of energy efficiency in RE projects;
- Initiate and replicate information, awareness and opportunities in RE to again reanimate the MPs;
- Think about a citizen awareness programme so that they have a full understanding of the climate change question;
- Involve the private sector in all key RE projects.

The next session was a panel discussion dedicated to off-grid applications and mini grid solutions for energy access. Keeping in view the high agriculture sector growth in Africa in order to mitigate widespread hunger and poverty, the focus of discussion on off-grid application was limited to solar pumping systems.

SOLAR PUMPS

ISA and Climate Parliament issued joint calls to organisations to present their commitments on installing solar pumping systems in ISA member countries in Africa as per IEC technical standards as well as with proper service guarantee. Several solar pumping systems manufacturers responded to this call, and in total commitments for installing over 99,000 solar pumps between 2017 and 2019 were presented to the Interim DG, ISA and Secretary General, Climate Parliament.

In a short presentation, thereafter, Dinesh Pattidar, President, Shakti Pumps compared the benefits of solar pumps with those running on diesel or connected to mini-grids. Solar pumps have several advantages, he said: a global efficiency close to 75-80 %, an average efficiency of 80 to 90 optimized for energy efficiency, and an independence from climate-related disasters. From the point of view of life cycle costs, solar pumps are less expensive than diesel pumps. In addition, the source of generation is located at the point of demand, minimizing transmission losses.

Mr Patidar presented case studies from Uganda, India, Bangladesh and Morocco. He also identified some of the challenges of the African situation, such as the feeble quality and efficiency of products on the market, the lack of financing for RE, poor security, lack of awareness about solar systems, etc. He also highlighted opportunities and ways to meet these challenges: the high level of irradiation in Africa; ease of fixing anti-theft devices; training of the local people by local distributors, etc. Local support is important for the building, leasing and training of local distributors and partners.

COMMUNITY GRID INITIATIVES

The rate of electrification in West Africa is very poor. The mini-grid sector will be very important to achieve sustainable development goals there, because conventional national grids take so much time to reach villages and rural communities. Thanks to declining costs, renewable energy mini-grids are now an attractive option for policy makers across Asia and Africa, experts on this panel told hearing participants: Dr. Sanjay Kumar of Climate Parliament, Dr. Daniel Schroth of African Development Bank, and Mr Abdoulaye Ba of COSEER.

Dr. Sanjay Kumar, Executive Director, Climate Parliament, outlined some of the obstacles to the development of mini-grids and offered very practical solutions the MPs should consider. He presented the outlines of a Model Concession Agreement developed by Climate

Parliament and how the Model Agreement will address many of the challenges standing in the way of a wider roll-out of community grids in Africa. A key highlight of the Model Agreement is that it does not replace any existing laws, but works in parallel with the current legal framework to bridge any gaps in the required policy infrastructure for private investors to have the confidence to embark on projects with a more certain outlook for return on investment. Adoption of the Model Agreement by a national government could, therefore, be quite quick as it will be within the domain of the executive government to approve the text of the Agreement and the procedure for its implementation.

Dr. Kumar outlined how the problems of poor financial return on mini grids emanating from low demand and low financial capacity of rural households can be addressed by creating supplementary services, identifying anchor customers such as refrigeration or cold-storage operators, e-service providers, etc. who have large, stable demand for power and can pay a higher commercial tariff. Those high paying anchor customers are mostly absent at present, but the governments could support them or their services to create a large demand for mini grids.

Mini-grids can be very expensive, as usually 100 % of upfront investment has to be funded by governments or other agencies, and sometimes consumers cannot even bear the full operational costs through a fixed tariff. In view of these weaknesses, the Model Concession Agreement being proposed by Climate Parliament is based on a more efficient Viability Gap Funding (VGF) mechanism which has proved to be successful in many countries. In the VGF model, the investors ask the Government to provide only that much grant which is necessary to establish and run the mini-grid for the whole concession period (usually 25 years for solar mini grid) which is over and above the full cost revenues that the investor/operator is able to potentially mobilise from all types of consumers. The cost to the government is, thus, reduced significantly thereby enabling the government to use the available financial resources to fund many more mini grids.

The Model Agreement also proposes the creation of a single window in the national utility that has all the requisite technical knowledge to avoid the operator having to go to multiple agencies or departments and deal with delays and bureaucracy. One of the biggest concerns for private investors in mini-grids is what happens to the asset when the national grid reaches the village. The Model Agreement presents several options in this regard, and the contracting parties could agree to choose any or a combination of them.



Maintenance of mini grids is often a problem as skilled mechanics and spare parts are not readily available in remote areas. Dr. Kumar proposed inspiration from an Indian example where the integration of V-SAT based communication technology with power electronics of the mini grid has enabled remote monitoring of the system for any fault in a precise manner and on a 24x7 basis. Dr. Kumar urged MPs to adopt the model Concession Agreement and explain it to their respective governments.

Next, Dr Daniel Schroth, Principal Energy Specialist and Coordinator for SE4ALL Hub for the African Development Bank (ADB), outlined the bank's green mini-grid programme and the Africa mini-grid strategy. Among the barriers are a fragmented market, a lack of proven economic models, inadequate regulation, weak policies or uncertainty.

To address these barriers some strategic tools have been put in place, such as raising market awareness, supporting the development of companies, political and regulatory support, and establishing some quality assurance. The expert listed the following lessons that were learned during the programme for the development of the green mini-grid market: a lack of information to conduct large studies; weaknesses in policies, a lack of political framework for the development of a green mini-grid market, and a lack of examples of specific policy instruments. In order to stimulate the market, Dr Schroth proposed some action points: finding political will for policies, regulations and support for a legal framework favourable to private investment and finding mutual agreement for a favourable environment for green mini-grids. In the African context the panelist identified five essential elements for a legal framework for mini-grids: adopting clear rules and simple licence procedures; communicating plans to enlarge the main grid network, establish laws that allow flexible tariffs, ensure an integrated energy plan, and increasing the capacity of operators and suppliers of services to roll out green mini-grids.



Dr. Schroth concluded by giving some examples of working policy frameworks for green mini-grids in Nigeria, Mali, Rwanda and Tanzania.

The next panelist, Mr Abdoulaye Ba, CEO and Expert in Renewable Energy and Rural Electrification at COSEER, gave participants an overview of his experience as a private operator in renewable energy in Senegal. Senegal has created ten large concession agreements in two or three regions instigated by requests for proposals. These concessions are for a period of 25 years. Private operators can install mini-grids in the rest of the country. Rural electrification projects are agreed after an administrative procedure. Once the project is approved, the private operator benefits from a tax and import duty exemption.

Electricity supply arrangements and payment mechanisms need to be devised. Mr Ba insisted that it is necessary for governments to encourage a public private partnership which could compensate for the lack of resources for rural electrification.

He agreed with previous speakers that mini-grids do not necessarily need a law. Existing legal frameworks already exist.

The presentations on solar pumps and community grid initiatives were well received by the MPs, who asked several questions and put forward suggestions, notably Hon SANGARÉ, Hon. TOURÉ, Hon. LOBOGNON, Hon. ADOMAHOU. These included:

- Working towards combining efforts to reduce costs or equipment intended for the production of renewable energy.
- Adequately consider and find sustainable solutions to the deficits in the legal and regulatory environment and the standardization of products in the sector.
- Ensure the support of states in mini-grid projects and recognise the profitability of mini-grids while taking account of the risks.
- Request the governments take steps to control the import of goods that are not reliable to ensure community development.
- Institute a clear and precise system of billing customers served by mini-grid providers in zones not covered by national franchises.

MPs were given updates on the current status of renewable energy development around the world, focussing on the sub-Saharan Africa region.

Keynote sessions were moderated by Yacouba Sangaré, MP at the Ivory Coast National Assembly, and M. Mohamed Youba SOKONA, Renewable Energy Adviser, seconded by GIZ to the ECOWAS Centre for Renewable Energy and Energy Efficiency (ECREEE).

Mr Sokona gave some background on the creation of ECREEE and outlined the energy situation in the ECOWAS region in terms of population, installed capacity and electricity potential. He then gave an overview of statistics on access to electricity in West Africa, and different tariffs in each ECOWAS country. Mr Sokona set out the ECOWAS goals to promote renewable energy from 2020-2030. He emphasized projects and actions from the ECOWAS Renewable Energy Policy (EREP), and the ECOWAS Energy Efficiency Policy (EEEP).

The second presentation in this introductory session was titled 'Parliamentary Action on Renewable Energy (PARE)'. It was given by Sandra Pointel, West Africa Coordinator, Climate Parliament. She introduced Climate Parliament, the only global network of legislators focussed on RE. Its Secretariat is based in the UK with a strong network of national parliamentarians and representatives in Africa, Asia, Latin America and Europe. This network has links with international institutions and platforms on renewable energy and climate.

Ms Pointel set out Climate Parliament's vision on RE. There are three parts to the potential contribution of RE: energy access, energy security and climate change mitigation.

Where progress has been made throughout the world, it is because governments have forged better energy policies, set up a mechanism of fiscal incentives and public finance and increased the budget or the promotion of RE. Further, the question of RE has been included in the political parties' manifestos. Thanks to the collaboration between Climate Parliament and national members of parliament, the factors which lead to real success are: strengthening



Sandra Pointel

the capacity and awareness of the need for RE; providing information and facts, support and research using expert studies, advocacy on different issues and exchange of know-how.

Ms Pointel then described the Parliamentary Action on Renewable Energy (PARE) project phase 1 and 2. She pointed out the most favourable regional and international framework for this programme as well as the tools and procedures made available for parliamentarians to support them in their roles and activities.

Finally, Ms Pointel outlined the role of Climate Parliament and UNDP in relation to the parliamentarians of West Africa. The action plan is primarily as follows: fiscal and import duty incentives for solar products, community mini-grids, gender and energy, the Scaling Solar programme and large scale RE. These actions cannot be realised without taking into account the national and local context, while benefiting from regional and international exchanges (joint actions, sharing of expertise, development of action plans, etc). Interesting comments were made by the Honorables Hon BIYIKA, Hon. BAKO, Hon. ADOMAHOU et Hon. YÉO on the two presentations, with the following recommendations:

- Familiarise countries (governments, parliaments and experts) on the types of financing for RE in African countries;
- Create a link or a relationship with other types of organisations to appreciate the impact of actions in the ECOWAS region;
- Develop a law specifically for grid-connected RE. For off-grid, it is sufficient to envisage steps to integrate these resources in the grid-connected RE law;
- Work towards the sustainability of achievements of MPs associated with Climate Parliament so that national elections do not render them obsolete;
- Create parliamentary groups that span all the issues;
- Find the political will for RE projects.

MPs were given a frank assessment of the feasibility of running on 100 % renewable electricity by Mr Upendra Tripathy of ISA and an overview of Africa's renewable energy programmes from Dr Youba Sokona, head of the African Renewable Energy Initiative (AREI), in the opening session of Day 2, chaired by Honorable Sunjeev Kaur BIRDI, MP of the parliament of Kenya.

Mr Tripathy said the real obstacle to achieving 100 % renewable power is the intermittency of resources: the unreliability of wind; problems with storage and balancing the grid. This target can only be reached if there is a change in perception at the policy and decision-making level. Careful planning and strategy will also be required.

Dr Sokona gave an overview of the AREI and presented general information on the African energy situation. Energy demand for the agricultural sector is growing, but both large and small enterprises have problems with their energy supplies. If the energy dilemma is solved, 50 % of

Africa's development problems are solved. AREI has ambitious goals: it aims to add another 10GW of renewable capacity by 2020 and 300GW by 2030.

To achieve the objectives of universal access to clean energy, AREI works on these principles and concepts:

- To contribute to sustainable development, any initiative must benefit African countries, and act as a tool of integration and cooperation.
- Installations resulting from publicly funded initiatives are the property of the state, the system put in place is transformative, the initiative envisages a multi-party participation and social and environmental safeguards. (concepts)

Private sector Investment in RE

One of the most pressing concerns for the development of RE in African nations is how to attract and protect private investment. Three experts gave their insights: Mr David Achi, Director of solar developer AD Solar, Dr Souleymane Berthé Director General, Renewable Energy Agency of Mali (REA- Mali), Ministry of Energy and Water, Mali and Honorable Jitu Soni, Tanzanian MP.

Mr Achi explained how the tax regime in Ivory Coast had benefitted the development of solar power companies there. There is a zero import duty on solar photovoltaic equipment, Value Added Tax (VAT) potentially reduced to 9 % on PV solar panels (in reality, this reduction remains quite elusive and it takes considerable time and effort to obtain), a new electricity code but no specific decree to implement RE and energy efficiency is planned.

Mali is perhaps the best example for other African nations to follow, as despite being part of the ECOWAS common tax and customs treaty, the country has found a way to make some exemptions on VAT and import duties that have proven very beneficial for RE. Mr Berthé explained how tax and VAT on imports of RE equipment were suspended in decree N°2014-816 /P-RM of 27th October 2014. He showed how this led to a decrease in the cost of RE equipment which then stimulated the installation of several RE projects in rural areas.

Honorable Jitu Soni presented a case study of tax exemption for R development in his country, Tanzania. MPs should facilitate the import of equipment into their countries by making concessions to private operators in terms of customs and taxes so that RE becomes accessible at a reduced cost, and opening training centres to improve the skills of local people to maintain RE products.

Gender and energy

Any programme designed to addressing the impacts of climate change should include a gender aspect, as women are disproportionately affected by climate change and their valuable knowledge and practical experience are often overlooked in policy development. Women and girls are more vulnerable to the impacts of climate change because they tend to be more dependent on agriculture, they are more prone to poverty and food scarcity and are less educated. In Africa cultural norms leave them underrepresented in decision-making,

making it difficult for them to secure better opportunities.

Policy frameworks are not sufficiently gender-responsive currently, but parliamentarians are uniquely positioned to promote gender-responsive legislation on climate change and energy.

Three speakers at the Abidjan hearing gave their views on the topic of gender in energy in West Africa: Ms Bénédicte COMLAN, gender expert at Millennium Challenge Account (MCA) II in Benin, Ms Odette Kabaya, Regional adviser on Gender, Central Africa, UNDP, and Ms Monica MADUEKWE, Program Coordinator, ECOWAS Programme on Gender Mainstreaming in Energy Access.

Ms Comlan gave an overview of the gender in energy situation in Benin, where like many African countries the different needs of men and women are not taken into account in laws, policies and development strategies. The Millennium Challenge Corporation (MCC) pact with the Benin government has a project to amend the country's gender policy document, as well as to reform policies on the production and distribution of energy, and access to off-grid electricity. Comlan said that gender and social inclusion needs to be integrated into energy policy, positive discrimination is needed to reduce inequality, and different stakeholders should collaborate to ensure better coordination and sharing of experiences.

Ms Odette Kabaya summarized the latest UNDP report on human development and gave examples of how women are held back from the energy sector. In many societies electricity is considered dangerous and so only boys and men should handle this danger. At the same time women and girls are not given training in the subject. Women are the primary users of energy in rural communities as most energy comes from traditional biomass sources such as wood, coal and agricultural waste. The following elements should be considered necessary: an analysis of men's and women's needs should precede a new technology being introduced; energy planning should take into account other aspects of human development; putting policies into practice should consider different roles; establishing a mechanism to increase and mobilise financing.

Ms Kabaya invited MPs present at the hearing to take certain actions: provide and promote political leadership required to take action; propose or modify a law to reinforce the legal framework and relative policies for the development of RE; oversee the implementation by the government of policies and defined goals.

Ms Monica Maduekwe of ECREEE gave an overview of the ECOWAS mainstreaming gender in energy project. Among the challenges are a lack of access to modern energy services, energy insecurity, the question of gender and energy poverty, climate change impacts. She also indicated some gender inequalities in access to energy in such domains as electrification, transport, availability of resources etc). ECREEE proposes the following solutions: Develop innovative development policy instruments; create a critical mass of political decision-makers and female entrepreneurs aware of gender issues, fill knowledge gaps among people working in the gender and energy sector. All levels of society should be given a general understanding of energy considerations; Initiatives and investments in energy should be non-discriminatory; integrating gender and balanced among the sexes; increasing the participation of the women in the public

sector in energy and decision-making posts.

MPs representing their respective countries but especially the West African countries forming the PARE project teamed up to devise action plans based on the discussions of the two-day hearing. Of particular interest were the following themes:

- Community grids initiative
- Financing investments in RE, gender and energy
- The green grid initiative and large-scale renewables
- Gender and energy

Benin

Benin's commitments:

- To participate in drafting the law on renewable energy with two MPs from the Network of parliamentarian partners of the Climate Parliament.
- To consider the separation/division between the law on renewable energy connected to the network and the policy document regarding off-grid.
- To ask the Minister of Energy a parliamentary question about the Scaling Solar Programme.
- To draft and send a letter to the Minister of Energy to advocate the need for Benin to follow and join the Scaling Solar programme. (The Climate Parliament, through its focal point in Benin, intends to draft the letter itself)
- To draft and send a letter to the Minister of Energy to advocate the need for Benin to join the International Solar Alliance (ISA) programme (The Climate Parliament, through its focal point in Benin, intends to draft the letter itself).
- To agree to attend the workshop that the Climate Parliament is organising for May 2017 on mini-grids with the collaboration of the Consortium Practical Actions and Innovation Energie Développement (PA-IED).



Ivory Coast

The Ivorian parliamentarians have agreed, with technical support from the Climate Parliament, to address certain actions with the government:

- Membership of the Scaling Solar programme (and all renewable energy programmes);
- Ask a parliamentary question about the need for the construction of a coal-fired power station;
- Lobby for incentives to invest in renewable energy;
- Propose tax exemption laws for renewable energy equipment;
- Ask a parliamentary question about feed-in tariffs;
- Lobby to get the government to guarantee the purchase price for the mini-networks;
- Lobby to push the government to integrate the International Solar Alliance programme;
- Lobby to push the government to have a clear policy on solar pumps.

Senegal

- Initiate a meeting with Mr Thierno Alassane SALL, Ministry of Energy and Renewable Energy Development, before the end of June 2017 to discuss the various initiatives in place to promote the growth of the sector and the current legislative framework.
- Ask a parliamentary question about what stage the government of Senegal is at in terms of taking steps to ratify the International Solar Alliance Framework Agreement and advocate for ratification of the International Solar Alliance Framework Agreement.
- Draft and ask a parliamentary question to clarify the current context of application of the third Decree implementing the Renewable Energy Policy Law no. 2010-21 (Article 8 regarding tax and customs incentives on renewable energy materials and equipment).
- Work for the issues of renewable energy, access to energy, drinking water (solar pumps, mini-networks for renewable energy) to be included political party manifestos
- Write a letter to the Minister of Energy highlighting the possibilities of solar pumps (for example, in the context of access to water and development).
- Get the Senegalese government to commit to initiatives relating to solar pumps with government incentives for developing the private sector.
- Facilitate commitment to 10,000 solar pumps for Senegal (in collaboration with COSEER for the private sector and the Senegalese Rural Electrification Agency (ASER) for clarification on regulatory issues with the support of parliamentarians regarding the government's commitment to public incentive and bilateral support issues).

9.2: Regional Hearing in Dakar, June 2016

Against the background of the Parliamentary Actions for Renewable Energy (PARE) implemented by the UNDP and the Climate Parliament, more than thirty MPs from Benin, Ivory Coast and Senegal, all of whom are members of the West Africa Climate Parliament Network assembled at a Round Table meeting in Dakar on 1 and 2 June 2016 to discuss the topic “Renewable Energy in West Africa: New context and new opportunities”. This meeting produced new ideas for parliamentary actions and measures that should be taken to promote renewable energy in the sub-region. The meeting benefited from the relevant participation of eminent personalities in politics/administration, renewable energy experts, representatives from the ECOWAS, the UNDP, the German Agency for International Cooperation (GIZ), civil society and the private sector.

Attendees:

His Excellency Mr Moustapha Niasse, President of the National Assembly of Senegal;
His Excellency Mr. Joaquin Gonzalez-Ducay, Ambassador and Head of Delegation, European Commission in Senegal;
The Honourable MPs of: Benin, Ivory Coast and Senegal (see list in the annex);
Mrs Julia Keutgen, Parliamentary Development Specialist, UNDP Brussels;
Dr Dhamir Mannai, Director for Africa and the Middle East, Climate Parliament;
Mr Antoine Faye, Senior Consultant in public policy analysis, SDIGS- Dakar; Mr. Diego Antoni, Gender Specialist, UNDP New York;
Mr Pierre N'Guessan, National Expert Consultant in RE/EE;
Mr Mohamed Sokona, Renewable Energy Advisor, GIZ and ECREEE
Mr Abdoulaye Ba, Head of Mission and Technical Studies Manager, COSER ENERGY
M. Malick Gaye, Director of Private Sector Projects, ASER;
Mrs Mary Allen, West Africa Coordinator at Practical Action;
Five representatives from the Climate Parliament.



In his welcoming speech, Mr Dhamir Mannai, the Climate Parliament's Regional Director for Africa and the Middle East, thanked the parliamentarians from the three invited countries for their participation. He expressed his heartfelt gratitude to the President of the National Assembly of Senegal, His Excellency Mr Moustapha Niasse, for agreeing to preside over the opening ceremony and inaugurate the work of the meeting. Mr Mannai focussed on the parliamentarians' key role in the renewable energy development process. To this end, he stressed that "Parliamentarians have a key role in advancing policies and legal frameworks that are conducive to the promotion and financing of renewable energy"; and this is the main reason why the Climate Parliament, in collaboration with the United Nations Development Programme, and with the financial support of the European Commission, are working together to strengthen parliamentarians' capacities in advocacy for and the monitoring of renewable energy development around the world.



Dhamir Mannai

Following her speech, Mrs Julia Keutgen, Parliamentary Development Specialist and UNDP Representative, made a statement regarding the energy situation in Africa. According to her, "Africa contributes only 4% to global energy production, yet 640 million people are deprived of electricity in that continent." This situation, she claimed, has adverse effects on health, education, employment, etc. To get out of this situation, Mrs Keutgen suggested that MPs take an interest in energy and manage it. In her opinion, a synergy of parliamentary actions is needed to help improve the situation and thus drive development.

The third speaker in this opening session was Mr Joaquin Gonzalez-Ducay, Ambassador and Head of Delegation of the European Commission in Senegal. In his speech, Mr Gonzalez-Ducay reiterated the various categories of projects that could be financed by his institution. He told the participants about a new programme that was being launched to support private investment in the renewable energy sector. In this respect, Mr Gonzalez-Ducay said that because Benin, Ivory Coast and Senegal are signatories of the Paris Declaration and have made commitments regarding renewable energy, they are automatically eligible to benefit from massive investment. To finish, the Ambassador and Head of Delegation recommended that the States improve their legislative and regulatory framework in the field of renewable energy in order to grow investment.

The opening session ended with the work inauguration speech delivered by His Excellency Moustapha Niasse, President of the National Assembly of Senegal. In his introduction, President Niasse called for the development of clean and sustainable renewable energy. In this sense, President Niasse said, "There must be substantial investment and to support the development of renewable energy, all the countries must adopt an incentive legal and regulatory framework." He went on to say, "The question of renewable energy is directly linked to that of climate and the survival of the planet. Thus, it concerns us all. The battle for renewable energy that we are fighting is both historic and vital. Accordingly, we must not limit the volume of investment to save Planet Earth."

After the opening ceremony, the work of the meeting began with a reminder of the overall objective and methodology to be adopted.

Indeed, the overall objective of the Dakar meeting was to consider the need for parliamentarians to take into account investment in clean energy in West Africa by exploring the new context and the new opportunities. In terms of methodology, for the experts and, most importantly, for the participants (MPs), it was about collaborating in a participatory approach by making proposals and observations in order better to define the actions to be taken, the targets to be reached and the players to be involved.

FIRST DAY OF WORK

Session 1: Introductory session

This session, presided over by Mrs Lucie CISSE, 1st Vice-President of the National Assembly of Senegal, comprised three (3) speeches.

The first focussed on: “Climate, energy and sustainable development in West Africa”. It was given by Mr Antoine Faye, Senior Consultant, Public Policy Analyst, SDIGS-Dakar.

In his opening remarks, Mr Faye clarified some concepts, highlighted the persistence of certain major facts and spoke about the regional realities related to electrical energy. He also discussed, in turn, the dynamics of energy transition, energy transition issues and the implications thereof for the countries of West Africa. The speaker invited the parliamentarians to embrace the new paradigm that calls for minimising of dependence on fossil fuels and for maximising of the benefits of planning and investment in renewable energy. In the same vein as the dynamics of energy transition, Mr Faye invited the decision-makers, CSOs and other stakeholders to understand and implement the Sustainable Development Goal no. 7 (SDG 7) which deals with renewable energy in a very specific way. To finish, he called for objective and critical reflection on the energy problems in order to identify real solutions to the socio-economic problems of the countries of West Africa.



The Honourables (Hon. Thiam, Hon. Koussonda, and Hon. Abimbola) made some interesting comments on Mr Faye’s speech. The exchanges produced the following recommendations:

- Implement academic and professional training policies regarding energy and, more importantly, renewable energy;
- Fight in a relevant way against impunity and corruption at the top of the State in the hope of ensuring access to energy for all and for the poor in particular;
- Galvanise a political desire truly to advance the dynamics of energy transition in West

Africa;

- Initiate and implement training policies and policies to enhance expertise in the field of renewable energy in particular;
- Bear in mind that the issue of energy transition is highly economic and technological.

The second speech of the session addressed the topic: “Sustainable Development Goals “The Role of the Parliamentarians”. It was given by Mrs Julia Keutgen, Parliamentary Development Specialist, UNDP Brussels. After having briefly discussed the 17 Sustainable Development Goals (SDGs), the speaker essentially based her speech on (3) three of the SDGs that tie in with renewable energy: (no. 5) gender equality in energy (no. 6) access to clean water and sanitation and (no. 7) access to renewable energy at an affordable price. To be more precise, she focussed particularly on goal no. 7 which is totally in line with the objectives of the Dakar meeting. In relation to this point, she argued that clean energy at an affordable price can combat poverty and inequality around the world effectively. On the role of the parliamentarians, she believed that, in relation to the SDGs, MPs need to (1) define a framework for discussion with the government about taking the SDGs into account in the budget and (2) ensure the SDGs are in fact taken into account in the budget and that they are implemented. Some interesting comments were made by the Honourables (Hon. Sangaré, Hon. Touré, Hon. Tiéha and Hon. Sy) following Mrs Keutgen’s speech. The exchanges produced the following recommendations:

- Define a framework for discussion with the government about taking the SDGs into account and ensuring they are implemented;
- Provide the MPs with a detailed document regarding the issues/concerns arising from the SDGs;
- Follow the example of Ivory Coast, which has adopted a law on sustainable development policy, as well as a work programme in parliament that is in line with the SDGs despite the deficiencies in adopting the SDGs;
- Follow the example of Senegal, which has made efforts in its budget presentation. This allows parliamentarians to monitor and control the acts of the authorising officer;
- Integrate strategies at national and even regional level for monitoring the implementation of development policies by the parliamentarians;
 - Integrate, in a quantitative way, the question of the fight against the adverse effects of Climate Change during the vote on the budget.



Julia Keutgen

The topic of the third speech was: “Gender and energy in West Africa”. It was made by Mr Diego Antoni, Gender Specialist, UNDP New York. His speech focussed on 5 points: (1) evaluation of the gender situation, (2) illustration of the problem using the case of Senegal, (3) “Gender potential”, (4) gender in en-

ergy policy, (5) feminisation of the decision, its implementation and the procedures for monitoring it. The speaker advocated that decision-makers opt more for feminisation of energy policies and their implementation. This means increasing women’s participation in the decision-making process (e.g. Senegal parliament) and supporting them in areas where they excel. To illustrate, Mr Antoni demonstrated that poverty or energy dependence is more pronounced for women and children. Two (2) million women die every year due to cooking fuels inside their homes. It should be noted that cooking fuels are responsible for 20 % of greenhouse gas emissions.

Given the relevance of the topic addressed in this speech, there were some interesting comments from the parliamentarians (Hon. Zator Mbaye, Hon. Abimbola, Hon. Sy and Hon. Penda) regarding Mr Antoni’s presentation. These exchanges produced the following recommendations:

- Take the “gender” dimension and the problems faced by young people in West Africa into account in energy policies;
- Focus more on young people’s issues because all the scourges affecting Africa today have a youth element;
- Retain ties to African cultures when dealing with issues linked to gender. This may help sustainable development initiatives get off to a good start;
- Integrate the problems of “people with disabilities” into the “gender” issue;
- Fight effectively against acts of prevarication with respect to natural and forest resources;
- Emphasise that energy is a right for women. In this sense, the MDGs need to be audited to see what they have done for women in the field of renewable energy before moving on to the SDGs.



Session 2: “Current context and national commitments”

This session, presided over by Mr Jean-Michel ABIMBOLA, Member of the National Assembly of Benin, comprised speeches from four (4) consultants on country cases. The first three speakers talked about the topic: “The state of play and national commitments regarding climate and renewable energy”. Each expert reviewed progress so far in implementing the commitments made by the states of Senegal, Ivory Coast and Benin within the framework of the Intended Nationally Determined Contributions (INDCs). The experts were: for Senegal, Mr Antoine Faye, Senior Consultant, Public Policy Analyst, SDIGS-Dakar; for Ivory Coast Mr Pierre N’Guessan, National Expert Consultant in Renewable Energy and Energy Efficiency; and for Benin, Mr Prudence Dahodékou, Consultant.

The three presentations demonstrated that the energy and transport sectors are those which produce more greenhouse gases (GHGs), although the extent of the phenomenon varies from one country to another. In all three countries, measures have been planned and/or implemented to mitigate or reduce greenhouse gas (GHG) emissions

on one hand and to adapt to the effects of climate change on the other. The majority of these measures are based on the period from 2016 to 2030 and focus primarily on providing the populations with access to electricity at an affordable price, increasing the use of renewable energy, improving deliverability and agricultural competitiveness, and improving urban sanitation. All in all, it should be stressed that Senegal and Ivory Coast are further along in terms of effectively implementing the Intended Nationally Determined Contributions, so much so that Senegal has moved on from INDCs to NDCs (Nationally Determined Contributions). Benin is lagging behind a little for various structural and economic reasons.

After the country experts, Mr Mohamed Sokona, Renewable Energy Consultant, GIZ and ECREEE, spoke about the topic: “SE4ALL national action plans of the ECREEE and ECOWAS”. In relation to this topic, Mr Sokona made a brief presentation regarding regional policy on renewable energy and energy efficiency which was adopted by the Summit of the Heads of State and Government of ECOWAS, in July 2013 in Abuja, whereby the Economic Community of West African States’ Centre for Renewable Energy and Energy Efficiency (CEREEC or ECREEE) is coordinating implementation of the ECOWAS renewable energy policy (REP) and the ECOWAS energy efficiency policy (EEP). He then outlined the regional objectives of the REP and the EEP. On this point, Mr Sokona shared some experiences and good practices in promoting renewable energy (RE) and energy efficiency (EE) in the ECOWAS region, which was very enlightening and informative.

In turn, the Honourables Sangaré, Karamoko, Touré and Adomahou shared their thoughts on the presentations made by the various experts. The exchanges produced the following recommendations:

- Create parliamentary networks in each country to defend the climate, the environment and sustainable development;
- Create a list of each country’s national and regional potential for producing renewable energy;
- Implement parliamentary mechanisms in each country for monitoring and evaluating the commitments made in the INDCs.

Session 3: “Initiative for community grids”

This session, presided over by Mr THIAM, Member of the National Assembly of Senegal, comprised speeches from two (2) speakers. The first was given by Mr Malick Gaye, Director of Private Sector Projects, Senegalese Agency for Rural Electrification (ASER). His talk was about: “Legislative, regulatory and political frameworks for community grids”.

In his speech, Mr Gaye first described the historical situation of rural electrification in Senegal. In this respect, he mentioned the exclusivity of financing for rural electrification by the State, the installation of electrical infrastructures in the west of the national territory, the higher rate of Senegalese villages still in darkness (more than 70 %), etc.



Faced with this situation, the Senegalese State made some strategic decisions. Mainly this involved establishing the Senegalese Agency for Rural Electrification (ASER) in order to accelerate the development of rural electrification and open itself to the market. It also decided to create a framework more conducive to Public-Private Partnerships. The speaker laid out the achievements in terms of rural electrification in Senegal, while emphasising the various ongoing programmes. He described which programmes are intended to strengthen Senegal's energy independence. He also explained the legislative and regulatory framework as well as the mini-grid policies relating to rural electrification in Senegal. Each time, Mr Gaye emphasised the achievements and, most importantly, the social benefits of implementing the rural electrification programme.

The second speech in this session was given by Mr Abdoulaye Ba, Head of Mission and Technical Studies Manager, COSER ENERGY. The topic of his speech was: "How does a 100 % renewable energy community grid work?"

Mr Ba began his speech with a brief description of how his organisation, the "Sahelien Renewable Energy Consortium" (COSEER), is set up and how it works. He then explained the various solutions offered by his organisation in the field of RE. They include solutions without batteries that are ideal for large cities and solutions with batteries for electrifying isolated/rural sites. In a rather technical exposition, Mr Ba went on to explain the process for implementing and operating hybrid solar mini-power stations. He finished off his speech by discussing a few examples of mini-power stations that have been implemented all over Senegal.

After these speeches, three parliamentarians made comments. They were the Honourables Soro, Dally and Touré. Their exchanges resulted in the following recommendations:

- Identify and implement incentives to attract private investors for better development of renewable energy;
- Implement a very "light" and diligent mechanism to facilitate the procedures for approving private operators interested in developing renewable energy.

SECOND DAY OF WORK

Session 1: "Financing of investment in renewable energy"

The first session of the second and final day featured two speeches, presided over by the Honourable Venance Tieha, Member of the National Assembly of Ivory Coast.

The topic for the first speech was: "Which policies to encourage public and private investment?" This topic was presented by Mr Mohamed Sokona. The speaker reviewed in turn (1) the ECOWAS' agenda on private and public investment, (2) the objectives of the REP and the RE connected to the utility networks. He also talked about (3) the policies of the States in terms of promoting RE in the ECOWAS region. He ended his presentation by giving an overview of the political instruments for developing RE in the ECOWAS region. In conclusion, Mr Sokona reminded the



parliamentarians of the need to strengthen the support mechanisms relating to the price and quantity of electrical energy products, strategic investment and production.

The second speech was given by Mrs Alexandra Norodom, Programme Officer, Climate Parliament. The topic of her speech was: “Case study: India”. Through this speech, Mrs Norodom focussed on the key success factors of the Climate Parliament Group in India. One of the key factors is advocacy for increasing the budget of the (Indian) Ministry of New and Renewable Energy (MNRE) from 0.6 % to 1 % in the Union Budget. Another key factor is successful advocacy for creating a carbon tax with the MNRE managed by the National Clean Energy Fund (NCEF). The speaker also mentioned some very relevant parliamentary tools and procedures, namely: the parliament’s interpellation of the government, advocacy with the ministries and stakeholders involved, and effective involvement of the media. Mrs Norodom finished by sharing some ideas for successful investment in renewable energy. She suggesting strengthening capacities and raising awareness regarding renewable energy needs, providing accurate and transparent information and data, supporting research and expert studies, targeted and focussed advocacy at different levels and platforms, and the exchange of expertise.



Following the presentations by Mr Sokona and Mrs. Norodom, the Honourables Sangaré, Dally and Touré shared their thoughts. Their exchanges resulted in the following recommendations:

- Get the countries of the sub-region to adopt concession contracts for renewable energy;
- Identify possible solutions to avoid feed-in tariffs for RE being higher than those for fossil fuels;
- Restructure the Common External Tariff (the ECOWAS CET) to bring it in line with the policies for adopting incentive laws for private investments in the RE field.

Session 2: “Feed-in tariffs”

The second session featured presentations by three speakers. It was presided over by the Honourable Jérémie Adomahou from the National Assembly of Benin.

The first presentation was co-presented by Mr Kader Diop, Head of the Planning and Monitoring/Evaluation Division (National Renewable Energy Agency - ANER) and Mr Malick Gaye, Director of Private Sector Projects, Senegalese Agency for Rural Electrification (ASER). Their speech covered the topic: “What are feed-in tariffs?”

Following a brief presentation of the structure of their relationship, the two speakers explained the notions of Purchase and Feed-In. They described the different procedures by which SENELEC negotiated transfer prices for electricity production with each private operator. They went on to emphasise the role

of the electricity regulation authority in setting the feed-in price for electricity in Senegal.

With respect to feed-in tariffs in community grids, the speakers first made, and then illustrated, the distinction between independent power producers, household producers and mini-grid operators. According to the speakers, the last category is best illustrated by the ERIL Project (Local Rural Electrification Initiative) run under the guidance of the Senegalese Agency for Rural Electrification (ASER), which deals with setting the prices and other conditions of operation for this project.

The second and final speech of this session was given by Mrs Mary Allen, West Africa Coordinator at Practical Action. She spoke about the topic: “Financial aspects of community grids”. In her speech, Mrs Allen first endeavoured to explain the concept of mini-grids. She also described the strengths her organisation, Practical Action, has built during its 35 years’ experience implementing mini-grid projects around the world. Then she adequately emphasised the conditions, the various schemes and examples for creating and implementing sustainable and scalable business projects in the field of community mini-grids. Mrs Allen also spoke about the tariff structure and the possibilities of grouping companies to increase productivity. The speaker ended her discourse by mentioning examples of successful projects in Zimbabwe, South Africa and Malawi.

The parliamentarians, namely the Honourables Abimbola, Sangaré and Sy, made comments following the three speakers. The main recommendations to result from their exchanges were as follows:

- Establish a tax on the export of minerals extracted from African soil and subsoil to support the cost of equipment related to the development of renewable energy;
- Create engineering schools to ensure the transfer of technology;
- Create training courses in RE in existing African universities to make sure Africa has expertise available;
- Learn from the Jordanian renewable energy development model with exclusive financing from foreign technical and financial partners.

Session 3: Exchange and sharing plenary

This final session saw presentations by two groups. Supported by the Experts James Corr  and Antoni Di go, the first group’s task was to consider women’s actions in RE development.

After some amendments, the results of the thoughts shared by the Senegalese MPs (there was only one Ivorian MP) produced the following intentions:

In the short term:

- Draft and disseminate a report on the conclusions of this Dakar meeting on RE;
- Organise a workshop to raise awareness among the 64 women in parliament in Senegal as well as other women parliamentarians in Ivory Coast and Benin;
- Organise an international seminar on good practices.

In the medium term:

- Create a pool of parliamentarians (men and women) to urge governments to act by putting questions about current issues to governments.

The task of the second working group, moderated by Dr Mannai and supported by Mrs Keutgen and Mr Sokona, was to outline a 2016-2016 parliamentary action plan on RE for each country. Three lines of thinking were favoured: 1) actions to be carried out within the framework of the 2016 budget, 2) actions to be carried out within the framework of the 2017 finance law and 3) questions to the government.

Actions to be carried out within the framework of the 2016 budget:

- Meetings with government authorities in charge of climate and sustainable development;
- Advocacy for signature of the Paris Agreement;
- Involvement of civil society, strengthening of the public-private partnership, advocacy for adoption of a regulatory framework for RE.

Actions to be carried out within the framework of the 2017 finance law:

- Adoption of a legal framework for promoting RE (appropriation of material;
- Removal of barriers, tax incentives;
- Option for alternative measures);
- Adoption and strengthening of the relevant institutional framework.

Questions to the government:

- Ask about the state of play following COP21;
- Questions (oral or written) on current issues, interpellations of the government.

Finally, Dr Dhamir Mannai and Mr James Corr  expressed sincere thanks on behalf of the Climate Parliament to the Honourable MPs and to the various experts and participants who contributed to the success of the Dakar regional meeting.



10: Suggested Parliamentary Questions

1. GENERAL QUESTIONS APPLICABLE TO ALL THREE COUNTRIES

Gender and Energy

Dear Minister,

Given the importance of gender mainstreaming and of Government plans within the agriculture sector, we, as Parliamentarians, would like the Government to include the issue of gender in its energy policies/programmes in order to tackle inequality. Consequently, we would like to ask the Government to answer the following questions:

1. What is the Government's strategy to achieve the objectives of the ECOWAS Programme on Gender Mainstreaming in Energy Access?
2. At present, does your ministry have a gender focal point? If so, what role do they play in drafting energy projects/policies? If not, do you plan to appoint one and when?
3. Are there strategies for creating synergies between your ministry and the ministry in charge of gender and social affairs in developing sectoral policies?
4. Do you think that renewable energy needs specific legislation on to address the gender imbalance?

Value-Added Tax (VAT)

Dear Minister,

Given the continuous decrease in the costs of renewable electricity generation technologies (photovoltaic, concentrated solar power, wind, biomass, hydropower, etc.); and given the abundant supply of under-exploited renewable energy sources in our country, we would like the Government to speed up the development of renewable energy. This development will require an incentive framework. Consequently, we would like to ask the Government to answer the following questions:

1. Is the government familiar with the exemption for solar equipment introduced by the government of Mali, and could it be replicated here?
2. What is the State's policy and strategy on standardising and incentivising investment, particularly on VAT and import duty in the renewable energy and energy efficiency sectors?
3. What special tax measures aimed at supporting investment projects in the renewable energy and energy efficiency sectors are there in the investment code?
4. What is the current percentage of renewable energies in the energy mix?

General Tax Code

Dear Minister,

With the pressing need of electrification for everyone in rural areas (our communities), the

network of parliamentarians in the Climate Parliament would like the Contract Out Rural Power Supply initiative to be treated as a priority. This Contract deals in particular with the four major issues facing mini-networks today:

- (a) higher costs, lower volumes and income,
- (b) a lack of regulation and standards,
- (c) low government financial capacities and resources to support the mini-networks, and
- (d) the risk of becoming a stranded asset once the national network reaches the village using the mini-network?

We would like to ask the Government to answer the following questions:

1. What is the Government's strategy, policy, and programme for supporting mini-networks and stand-alone solar solutions in rural areas?
2. What is the Government's opinion of the Climate Parliament's initiative of contracting out in order to develop mini-networks?

SCALING SOLAR

Dear Minister,

Your Excellency, our country has not yet joined the Scaling Solar Programme and this is why we, as Parliamentarians, want and suggest that the Government become party to this ambitious programme in view of what has been achieved in other countries.

To see our country join this ambitious programme, we would like to ask:

1. In spite of the provisions that our country is taking to promote solar energy, given the technical assistance services, pre-approved financing, insurance and guarantee instruments, record period of two years for completing the project (bids, building a plant, and generating cheap and sustainable solar energy) that is offered by the Scaling Solar Programme, could we ask Your Excellency if the Government intends to become party to this ambitious programme? If so, within what time frame? If not, why not?
2. Your Excellency, in view of the energy deficit affecting our country, what energy capacity do we need? Also, what energy capacity could be asked of the Scaling Solar Programme? What other benefits could such a programme bring to the Ivorian population?

BUDGET

It is on the basis of all these aspects that we would like to ask the Government some specific questions:

1. What are the details of the budget allocated to the energy sector in [year]?
2. What is the annual budget specifically allocated to the development of the renewable energy sector?
3. Should the budget allocated to this sector be increased in order to enable our country to develop its renewable energy and energy efficiency sectors efficiently and effectively, and consequently fulfil its commitments under the Paris Agreement?

2. SPECIFIC QUESTIONS APPLICABLE TO COTE D'IVOIRE

21 IMPLEMENTATION DECREES

Questions

Dear Minister of Petroleum, Energy, and Renewable Energy Development:

Given the continuous decrease in the costs of renewable electricity generation technologies (photovoltaic, concentrated solar power, wind, biomass, hydropower, etc.); and given the vast potential of under-exploited renewable energy sources in our country;

We, Ivorian Parliamentarians, would like the Government to speed up the development of renewable energies in Côte d'Ivoire. This development needs a comprehensive and feasible legislative and regulatory framework.

Since 2012, measures have been taken by the Government to improve investment in all sectors of activity in Côte d'Ivoire and, more specifically, to facilitate investment in the enormous potential of biomass energy, solar energy, and small-scale hydropower. The opportunities offered by investments in and the potential of renewable energies are underscored by the commitment undertaken by Côte d'Ivoire at the 21st Climate Change Conference in Paris (COP 21) to encourage investment in low-carbon projects by reducing its greenhouse-gas emissions by 28 % by 2030, involving, among other things, an energy mix made up of 16 % renewable-energy-based projects (excluding major dams). However, the private companies operating in the renewable energy sector in Côte d'Ivoire are facing some issues in the performance of their business.

During 2015 and 2016, with the support of several of our partners such as the European Union, the UNDP, and the Climate Parliament, we organised several meetings focusing on themes related to development in the renewable energy sector. These meetings were organised between Parliamentarians as well as between Parliamentarians and stakeholders in the sector in order to discuss factors for improving the investment climate within the sector. One of the key points slowing investment in renewable energies is the lack of implementation documents for Law No. 2014-132 of 24 March 2014 on the electricity code. And as we have already mentioned, the Ministry received assistance and advice from the Union European on drafting the aforementioned implementation decrees. In all, there are 11 implementation decrees, 4 inter-ministerial orders, and 6 ministerial rulings.

On 12 October 2016, the Council of Ministers held at the Presidential Palace presided by His Excellency Mr Alassane Ouattara, President of the Republic and Head of State, passed six (6) key decrees:

Decree which replaces and abrogates decree no. 2014-291 of 21 May 2014 on the terms and conditions of contracting out operations related to the production, transportation, dispatching, importing, distribution, and marketing of electricity;

Decree setting out the operating terms and conditions of selling electricity produced by independent producers, or surplus electricity produced by self-producers; Decree dissolving the National Regulatory Authority for the Electricity Sector (ANARE); and another Decree determining the organisation and functioning of the National Regulatory Authority for the Electricity Sector in Côte d'Ivoire (ANARE-CI); the regulator's new structure and roles;

Decree determining the rules for setting and revising electricity sale and purchase tariffs, as well as rules for network access and energy transit;

Decree setting out the terms and conditions of production operations concerning the distribution and marketing of electricity.

On and following the Council of Ministers held on 3 November 2016, a seventh decree was passed setting out the terms, conditions, and obligations for implementing energy control.

These decrees, pursuant to Law no. 2014-132 of 24 March 2014 on the Electricity Code, are a very important step towards the objective of completing the legislative and regulatory framework for electricity production from renewable energies. Nevertheless, the remaining legislative texts (4 decrees, 4 inter-ministerial orders, and 6 ministerial rulings) are necessary for implementing the two areas covered by this law, namely renewable energy and energy efficiency.

We would also like the Government to support these implementation texts by drafting a code that is more conducive to the development of mini-networks and stand-alone solar systems (kits) with appropriate management systems, the setting up of a single office overseeing investment in renewable energies, committing to sub-regional involvement with the aim of abolishing customs duty on renewable energy technology equipment, and the implementation of awareness-raising programmes with the general public to encourage best practices in meeting energy consumption needs.

Consequently, we would like to ask the Government to answer the following questions:

1. What is the State's strategy and programme for completing and publishing all of the legislative and regulatory framework texts in order to be able to formally launch the sector?
2. What is the State's policy and strategy on incentivising investment in the renewable energy and energy efficiency sectors?
3. What tax and budgetary measures are aimed at supporting investment projects in the renewable energy and energy efficiency sectors?
4. What tax and budgetary measures are aimed at supporting the newly created ANARE-CI?
5. What is the Government's strategy, policy, and programme for supporting mini-networks and stand-alone solar solutions in rural areas of Côte d'Ivoire?
6. What are the specific programmes and the special contribution of energy efficiency and renewable energy projects within the framework of the implementation of the COP 21 Paris Agreement?

Appendix 1: Community Grids Initiative Model Concession Agreement

The following is a model contract designed to help lower capital costs by reducing the perceived risk of investing in village mini-grids. It achieves this primarily by laying out a framework to govern the relationship between the project developer and the national electricity utility, and explicitly pre-empts and deals with the eventuality that the national grid might be extended to cover the location of the mini-grid. It will, of course need to be adapted according to the specific national and local circumstances wherever it is intended to be used. It should also be checked by legal practitioners in the country of use before deployment. For advice, please contact sanjay@climateparl.net.

**Establishment, operation and maintenance of (number of installations)
renewable energy based village minigrids in (administrative area) of
(name of region/ country)**

**This Concession Agreement (“Concession Agreement”) is made on this ____ day of
_____ by and between:**

The(**Designated Agency**), [Abbreviated Name], having its Head office at
(full address of the company), [hereafter referred to as the “**DA**”, which expression shall mean and include
its successors and assigns] of the **FIRST PARTY**, through it’s duly authorized representative, who is duly
authorized/empowered to sign and execute such documents/deeds.

AND

..... **Name of the Concessionaire** [Abbreviated Name of the Concessionaire] a company
incorporated under provisions of (name of the relevant Company Law) having its registered office at
..... (full address of the concessionaire), [hereinafter referred to as “**Concessionaire**” which expression
shall unless repugnant to the context include its successors and permitted assigns, of the other party.

WHEREAS:

- A. The DA is the national/a regional agency of (name of the country/ region), and is engaged in aspects of supply of power, which includes generation and/or procurement, transmission and supply of power to various consumers in (name of country/ region).
- B. The DA is duly empowered by the [Ministry of Energy] and [Ministry of Finance] of the Government of (name of the country) to sign this Agreement on behalf of the Government of(name of the country).
- C. The Government of(name of the country) desires to establish mini-grids based on power from renewable sources in an initial number of villages (“**RE Mini grids**”) in ... (regional location of the villages) on a Build, Own, Operate and Transfer (“**BOOT**”) basis in order to supply power to various types of consumers in those villages in the most cost-efficient, reliable and environment friendly manner.
- D. The Ministry of Energy has floated a Tender for the above work of establishing RE Mini grids on a BOOT basis, after calling for Expression of Interest (EOI) and shortlisting prospective bidders, for which they have now received multiple participation offers.
- E. The Ministry of Energy, after evaluation and having satisfied itself that the Concessionaire has the requisite expertise, experience and resources to establish the prescribed number of RE Mini grids

as per the prescribed standards and in timely manner, and having satisfied itself that the request of the Concessionaire for the Viability Gap Funding (VGF) is the most reasonable and least cost option to the Government, has issued a LOI to the Concessionaire for entrusting the establishment of RE Mini grids initially in ... number of villages the details of which are given in Annexure-1.

- F. The Parties hereto are required to enter into the Concession Agreement being the present to record the terms, conditions and covenants of the Concession.

IT IS AGREED AS FOLLOWS:

ARTICLE I: DEFINITIONS AND INTERPRETATIONS

- (a) **“Additional Costs”** shall mean the additional capital expenditure and/or the additional operating costs or both as the case may be, which the Concessionaire would be required to incur as a result of Change in Law.
- (b) **“Affected Party”** shall have the meaning ascribed to the said term in Article ...;
- (c) **“Agreement”** or **“Concession Agreement”** shall mean this Concession Agreement to establish the right of the concessionaire to build, own, operate and transfer the RE minigrid/s;
- (d) **“Applicable Laws”** or **“Law”** shall mean all laws, acts, ordinance, rules, regulations, notification, guidelines or bye-laws in force and effect, including Electricity Rules, as of the date hereof and which may be promulgated or brought into force and effect hereinafter in [country] including judgments, decrees, injunctions, writs or orders of any court of record, as may be in force and effect during the subsistence of this Agreement and applicable to the Project/the Concessionaire;
- (e) **“Applicable Permits”** shall mean all clearances, permits, authorizations, consents and approvals required to be obtained or maintained by the Concessionaire under Applicable Law;
- (f) **“Appointed Date”** shall mean the date of execution of this Agreement;
- (g) **“BOOT Value”** is equal to capital investments i.e. net of depreciation computed on ‘straight-line’ basis as per the rates specified in the Agreement and shall have the meaning ascribed to the said term in Article ...;
- (h) **“BOOT”** shall have the meaning ascribed to the said term in Recital C;
- (i) **“Commencement Date”** shall have the meaning ascribed to the said term in Article ...;
- (j) **“Concession”** shall have the meaning ascribed to the said term in Article ...;
- (k) **“Concessionaire Event of Default”** shall have the meaning ascribed to the said term in Article ...;
- (l) **“Concessionaire Preliminary Notice”** shall have the meaning ascribed to the said term in Article ...;
- (m) **“Concessionaire’s Proposal to Rectify”** shall have the meaning ascribed to the said term in Article...;
- (n) **“Concession Period”** shall have the meaning ascribed to the said term in Article...;
- (o) **“Contractor”** shall mean any Person with whom the Concessionaire has entered into/may enter into any material contract in relation with the Project;
- (p) **“Construction Works”** shall mean all works and things required to be constructed by the Concessionaire, pursuant for the purpose of commencement and operation of the Plant;
- (q) **“Consumers”** shall mean all categories of persons, including but not limited to households, commercial and social enterprises, business, offices including working place of government, local government, parastatal or municipal organisations and the facilities run by them, micro and mini industries, community institutions and public facilities that are located wholly or partially within the Project village/s.
- (r) **“Drawings”** shall mean all of the drawings, designs, and documents pertaining to the Project in accordance with the Project Requirements;

- (s) **“Effective Date”** shall mean the last date for commencement of operations by the Concessionaire as defined in Article ...;
- (t) **“Encumbrance”** shall mean any encumbrance such as mortgage, charge, pledge, lien, hypothecation, security interest, assignment, privilege or priority of any kind having the effect of security or other such obligations and shall include without limitation any designation of loss payees or beneficiaries or any similar arrangement under any insurance policy pertaining to the Project, physical encumbrances, claims for any amounts due on account of taxes, electricity, water and other utility charges and encroachments on the Project Facilities;
- (u) **“Expiry Date”** shall mean the date 25(twenty-five) years from the Commencement Date;
- (v) **“Final Termination Notice”** shall mean the termination notice issued in accordance with Article ...;
- (w) **“Fixed Costs”** include cost of project development, generation plant, storage systems (batteries or other storage devices), inverters, information and communication systems, distribution network, cost of availing debt including interest charges, fixed taxes and fees including fees on infrastructure, land etc. Further, fixed costs shall also include management costs, company overhead and transaction costs, and such other costs which will be there even if the RE Mini grid is not operating. Overheads and transaction costs include costs for administration, coordination, social and technical problem solving, accounting, reporting (to donors, lenders and authorities), and hospitality to guests.
- (x) **“Force Majeure Event”** shall mean an act, event, condition or occurrence as specified in Article ...;
- (y) **“Force Majeure Period”** shall mean period during which the Force Majeure Event continues;
- (z) **“Good Industry Practice”** shall mean the exercise of that degree of skill, diligence, prudence and foresight in compliance with the undertakings and obligations under this Agreement which would reasonably and ordinarily be expected of a skilled and an experienced person engaged in the implementation, operation and maintenance or supervision or monitoring thereof of any of them of a project similar to that of the Project.
- (aa) **“Government Agency”** shall mean Government of (name of the country), Government of (name of the region), any provincial government or governmental department, commission, board, body, bureau, agency, authority, instrumentality, court or other judicial or administrative body, central, state, or local, having jurisdiction over the Concessionaire, the Site/Project Facilities or any portion thereof, or the performance of all or any of the services or obligations of the Concessionaire under or pursuant to this Agreement;
- (ab) **“Material Adverse Effect”** shall mean a material adverse effect on (a) the ability of the Concessionaire to exercise any of its rights to perform/discharge any of its duties/obligations under and in accordance with the provisions of this Agreement and/or (b) the legality, validity, binding nature or enforceability of this Agreement;
- (ac) **“Material Breach”** shall mean a breach by either Party of any of its obligations under this Agreement which has or is likely to have a Material Adverse Effect on the Project and which such Party shall have failed to cure.
- (ad) **‘Mini Grid’** is defined as a system having a RE based electricity generator (with capacity of 10KW and above), and supplying electricity to a target set of consumers through a Public Distribution Network (PDN). Mini-grids operate in isolation to the electricity networks of an existing power distribution company (PDC), but can also interconnect with such grid to exchange power. If connected to such a grid they will be termed as grid connected mini grid.
- (ae) **“Minimum Assured Load”** shall have the meaning as ascribed in Article ...;
- (af) **“Parties”** shall mean the parties to this Agreement and “Party” shall mean either of them, as the context may admit or require;
- (ag) **“Power Purchasing Agreement”** means the associated agreement stipulating the arrangements for the supply of electricity generated by the RE Mini grids to the DA or a Power Distribution Company (PDC) as the case may be, and the purchase of that electricity by the DA or PDC once the RE Mini grid is

connected to the Utility grid.

- (ah) “**Preliminary Notice**” shall have the meaning ascribed to the said terms in Article ...
- (ai) “**Project**” shall mean design, financing, construction, operation and maintenance of the RE Mini grid in accordance with the provisions of this Agreement;
- (aj) “**Readiness Certificate**” shall mean the certificate issued by the Concessionaire certifying, inter alia, that, the Concessionaire has constructed all the facilities associated with the RE Mini grid and obtained all the necessary approvals so as to enable supply of power to various types of consumers in the project villages.
- (ak) “**Renewable Energy Mini grid (RE Mini Grid)**” shall mean such mini grid whose generator is powered by renewable energy sources such as solar, biomass, wind, small hydro or other notified sources and can have diesel-based generator as a backup, and has a Public Distribution Network (PDN) to supply power to consumers within the Project village. RE Mini Grid will also include system based on hybrid power, that is a combination of renewable energy resources (like those that of solar-wind, solar-biomass, solar-hydro etc.).
- (al) “**Scope of Work**” shall have the meaning ascribed to the said term in Article ...;
- (am) “**System Design**” means the electrical design of the RE Mini grid that may carry AC (Alternating Current) or DC (Direct Current) load or its combination at a voltage level that is appropriate for the present and future needs of the Project villages during the Concession period. The System Design shall also include additional features to enable the RE Mini grid to connect to the PDC grid as and when the PDC grid is extended to the Project village/s.
- (an) “**Tax**” shall mean and includes all taxes, fees, cesses, levies that may be payable by the Concessionaire under the Applicable Law;
- (ao) “**Termination Date**” shall mean the date on which this Concession Agreement will be terminated in accordance with this Concession Agreement;
- (ap) “**Termination Notice**” shall mean the notice of Termination by either Party to the other Party, in accordance with the applicable provisions of this Agreement.
- (aq) “**Termination Payment**” shall mean the payment to be made by a Party to the other Party in case of termination of this Concession Agreement in terms hereof;
- (ar) “**Utility**” shall mean a power distribution company (PDC) or an agency so authorised by the national/ regional electricity regulator to establish electricity grid at the national or sub-national levels and sell power to the consumers in its catchment/s, and which term shall include its successors and assigns;
- (as) “**Vacant Possession**” means delivery to concessionaire, of possession of the lands constituting the Site and access road to the site free from all Encumbrances and the grant of all rights of access and use and all other rights appurtenant thereto.
- (at) “**Variable costs**” means the running charge for operation, maintenance and management depends on the demand and includes costs of fuel, oil, maintenance costs that depend on plant runtime/ output, load-dependent technical (conversion) losses in inverters, copper losses of transformers, in storage devices, energy-related taxes and fees, local operation costs, customer relationship costs, etc. Local operations costs include charges for operating the plant, billing and collecting money from consumers, maintaining and cleaning, guarding the plant, fixed technical losses like self-consumption of inverters, storage devices, and losses in transformers etc. Customer relationship costs include costs that are allocated by the Concessionaire in consultation with the DA to resolve customer grievances, tend dissatisfaction in the community, and for training purposes on safe and efficient use of services.

ARTICLE II: OBLIGATIONS OF THE CONCESSIONAIRE

The DA has agreed to award the work of establishing an initial ... (number) of RE Mini grids to the Concessionaire. The Concessionaire shall carry out the required scope of work. In addition to and not in derogation of any of his other obligations under this agreement, the Concessionaire shall have the following obligations:-

1.1 Approvals

- 1.1.1 The Concessionaire shall be responsible for designing, constructing, developing, establishing, financing, operating and maintaining the Project as per the local, regional and national laws of the country.
- 1.1.2 The Concessionaire shall obtain necessary authorizations, and Consents/approvals from various departments as may be required for the Project. The DA shall issue recommendation letters as and when required, and facilitate approvals, without any financial burden to the DA.
- 1.1.3 The Concessionaire shall build and operate the Project in villages as mentioned in Annexure-1 where the required land is provided to the Concessionaire free of cost by the government or its agency or the local community for the entire period of this Agreement; the Concessionaire is, however, free to lease land from private persons to run the Project as per own convenience.
- 1.1.4 *Environmental Clearance:* The Concessionaire shall ensure that from the Commencement Date till the Concession Period or the Terminate Date, whichever is earlier, the processes employed in the construction, operation and maintenance of the Plant including post closure maintenance thereof shall conform to the laws pertaining to environment, health and safety aspects, policies and guidelines related thereto. The Concessionaire shall obtain and maintain from time to time all necessary clearances or any other similarly empowered Government agency and for this purpose concessionaire shall carry out and fulfill the necessary requirements as stipulated and applicable and implement appropriate environment management plans in respect of the Plant. The DA shall issue recommendation letters as and when required without any financial burden to the DA.

1.2 General Obligations

- 1.2.1 The Concessionaire shall observe and comply with all its obligations set forth in this Concession Agreement and all the terms mentioned in the participation offer invited for the Project.
- 1.2.2 The scope of work ("**Scope of Work**") to be performed by the Concessionaire is as follows: -
- (a) The Concessionaire shall be responsible for financing, designing, drawing, fabrication, supplying, providing, erecting, constructing, testing & commissioning of the Project on BOOT basis.
- (b) The Concessionaire shall own, operate and maintain the Plant for a period of 25 (twenty-five) years ("**Concession Period**") from the Commencement Date.
- (c) The Concessionaire shall be responsible for setting up of all the units as required to operate this facility as per its own design and the DA shall not be obligated to provide any financial or other such support.
- (d) Prior to establishment of the Plant, the Concessionaire shall carry out a detailed study and analysis of the renewable energy sources available within the limits of the Project village/s and shall ensure that the RE Mini grid/s will be operated as per the features and characteristics of the renewable energy sources available within the limits of the Project village/s.
- (e) The Concessionaire shall allow designated officers of the DA to visit the facility in line with the operating conditions of the RE Mini grid. The Concessionaire will advise and update the DA regarding the operation of the Plant and the Project.
- 1.2.3 The DA in consultation with the Utility shall get any of applicable Utility charges and fees towards the development and running of the Project, etc. waived.
- 1.2.4 The Concessionaire shall bear all the expenses, charges and deposits for water supply utilised during the operation of the RE Mini grid. The DA shall facilitate the necessary supply as required from time to time of water provided to the Concessionaire. And Concessionaire shall have the option to make its own arrangements if it so desires.
- 1.2.5 The Concessionaire shall, at its own expenses, carry out all the necessary statutory and regulatory tests and submit the required reports to the relevant government/ regulatory bodies.
- 1.2.6 The Concessionaire shall ensure that the plant should run at an yearly average of no less than 80 % of total plant capacity.
- 1.2.7 The stamp duty, registration charges and other costs pertaining to this Concession Agreement shall be borne by the Concessionaire.

- 1.2.8 The Concessionaire shall complete the erection, testing and commissioning of the Plant within 12 (Twelve) months from entering into this agreement in case of Solar Photovoltaic (PV) based RE Mini grid, and 18 (Eighteen) months in case of the mini grid based on other renewable sources or their hybrid.
- 1.2.9 The whole work shall be carried out in strict conformity with the provisions of good engineering practices and local standards. The Concessionaire shall ensure that the work is executed in the most proper and best workmanship during the BOOT period.
- 1.2.10 The Concessionaire shall, at its own cost and expense, hold and keep current insurance required for the normal course of business, and as detailed in Article For clarity, insurance shall be only for the space occupied by The Concessionaire, covering its equipment and activities within the designated space of the site.
- 1.2.11 The Concessionaire shall be responsible for the strict compliance of and shall ensure strict compliance by his sub- contractor employees and agents, all labours and other, of rules or regulations having the force of law affecting the relationship of employer and employee between the Concessionaire/sub- contractor and their respective employees.
- 1.2.12 The Concessionaire shall comply with all the rules and regulation of the local authorities for protection of health and sanitary arrangements of all those directly or indirectly employed on the work of this agreement. The Concessionaire shall adhere to safe working practices and guard against hazardous and unsafe working conditions and shall comply with standard safety rules.
- 1.2.13 It shall be the Concessionaire's responsibility to protect its employees and workers against accidents on work. The Concessionaire shall thereby indemnify the DA against any claim for damage to persons or property resulting from and in course of work undertaken by the Concessionaire, or its agents, associated with the performance of the Agreement.
- 1.2.14 The Concessionaire shall be solely responsible for the security of the RE Mini grids during the construction, Operation & Maintenance and the entire BOOT period.
- 1.2.15 The Concessionaire shall be responsible to obtain auxiliary fuel and other supplementary goods for running the RE Mini grids.
- 1.2.16 If so specified, the Concessionaire shall, in terms with Article 10.2, transfer the possession of the entire Project (land and machinery) to the DA or an agency nominated by the DA upon expiry of the Concession Period of 25 years, and the DA or such nominated agency shall pay the BOOT value to the Concessionaire within a period of 3 (three) months of the handing over of the Project to the DA or such nominated agency.
- 1.2.17 The Concessionaire shall bear all the present taxes, levies and duties arising out of this Concession Agreement. Any future additional taxes shall be settled by mutual agreement between both parties.
- 1.3 Repair and Maintenance Work of the plant:** The Concessionaire shall design and plan and schedule the repair and maintenance works in a manner such as to create least disruption to electricity supply beyond what has been agreed with the consumers at all times during the concession. Concessionaire shall provide the consumers advance notice of any planned repair or maintenance work of any of the project facilities provided however, no such notice would be required in the event of any unplanned repair or maintenance caused by an emergency or accident or any such unforeseeable event. Similarly, the DA will advise the Concessionaire of any events or issues of which they are aware, that might impact on the operations and/or repair and maintenance of the plant.
- 1.4 Web Site:** The Concessionaire shall maintain a web site that provides the relevant details of the RE Mini grids and the process that it operates in such reasonable detail, under the Commercial-In-Confidence conditions, etc, as would enable awareness about the Project operations to any person accessing the web site.
- 1.5 No Breach of Obligations:** Notwithstanding anything contained herein, the Concessionaire shall not be considered to be in breach of its obligations under this Concession Agreement nor shall it incur or suffer any liability if and to the extent performance of any of its obligations under this Concession Agreement is affected by or on account of any of the following:
- (a) Force Majeure Event;
- (b) DA Event of Default;

- (c) Compliance with the instructions of the DA or the directions of any Government Agency other than instructions issued as a consequence of a breach by the Concessionaire of any of its obligations hereunder;
- (d) Closure of the Plant or part thereof with the approval of the DA.

ARTICLE III: OBLIGATIONS OF THE DESIGNATED AGENCY (DA)

The obligations of the Concessionaire to establish the Project and commence operation of the Plant are subject to the DA fulfilling its obligations under this Concession Agreement as listed below under this Concession Agreement:

1.1 Land

- (a) *Land Allotment:* Subject to option exercised by the Concessionaire, the DA shall be responsible to make land available to the Concessionaire for the Project within a period of 3 (three) months of signing this Agreement, in line with their bid submission but the t
- (b) Title to the land does not in any way transfer to the Concessionaire or provide collateral for the project. Upon the site(s) being made available the Concessionaire shall, subject to the provisions of the Agreement, have the right to enter upon, occupy and use the same and to make at its costs, charges and expenses such investigation, development and improvements in the sites as may be necessary or appropriate to implement the Project and provide the Project Facilities in accordance with the provisions of this Agreement.
- (c) The Concessionaire shall have the right to the use of the sites in accordance with the provisions of this Agreement and for this purpose, it may regulate the entry into and use of the same by any third party.
- (d) The DA, or its agents agree to comply with the access arrangements and operating conditions put in place by the Concessionaire for the safe and efficient operation of the Plant under the terms and conditions of the Agreement.
- (e) The land may not be included as capital contribution from any party associated with the Project.
- (f) The DA as the owner and lessor, shall remain responsible for the costs associated with the ownership of their own assets in the Project villages, e.g. rates, insurance, etc. and is liable for any reasonable repairs, maintenance and other costs incurred during the normal course of business of the project.
- (g) The DA shall continue to ensure access to the site for the entire BOOT period, including rejection of zoning applications or development approvals that may hinder access.

1.2 Peaceful Possession –

- (a) The DA hereby represents and warrants that: The Project Site:
 - (i). Have been acquired through the due process of law; or
 - (ii). Belongs to or has been leased to or is vested in the DA, and that the DA has full powers to hold, dispose of and deal with the same consistent, inter-alia, with the provisions of this Concession Agreement and that the Concessionaire shall, have no liability regarding any compensation payment on account of land acquisition or rehabilitation/resettlement of any Persons affected directly and/or indirectly thereby.
- (b) The Concessionaire shall, subject to complying with the terms and conditions of this Concession Agreement, remain in peaceful possession and enjoyment of the Project Site during the Concession Period. In the event the Concessionaire is obstructed by any Person claiming any right, title or interest in or over the Project Site or any part thereof or in the event of any enforcement action including any attachment, distraint, appointment of receiver or liquidator being initiated by any Person claiming to have any interest in/charge on the Project Site or any part thereof, the DA shall, if called upon by the Concessionaire, defend such claims and proceedings and also keep the Concessionaire indemnified against any direct loss or damages which the Concessionaire may suffer, on account of any such right, title, interest or charge.

1.3 General DA Obligations

- (a) The DA shall observe and comply with all its obligations set forth in this Concession Agreement and all participation required for the Project.
- (b) A specialized, fully staffed and empowered “RE Mini grid Support Cell” in the DA will support the Concessionaire in the implementation of this Agreement, and act as the national nodal agency (NNA) for support to the RE Mini grids across the country in so much as it will also be the repository of information, best practices and expertise in various aspects of RE Mini grid establishment, operation and maintenance, including financing, transfer of RE Mini grid to other entities for operation and maintenance, and management of stressed assets.
- (c) The DA shall extend support to the Concessionaire for obtaining required licenses and equipment for the Project. The Utility shall waive off all and any of applicable charges towards the operation of the Plant during the life of the Project.
- (d) The DA shall, as soon as possible and in an expeditious manner, sanction and approve all the plans and drawings submitted by the Concessionaire, including but not limited to building plan, specifications of civil work, specifications of civil and electrical work, etc.
- (e) The DA shall provide to the Concessionaire, and/or facilitate the procurement of, the required documentation, including but not limited to certificates and confirmations as may be required by the Concessionaire for the purpose of claiming any exemptions or incentives from any Government authority, without any financial implications to the DA. In this regard, the DA shall support the Concessionaire receive timely instalments of the VGF from the prescribed wing of the Government and as per the schedule and manner specified in the LOI issued to the Concessionaire by the Ministry of Energy.
- (f) The DA shall provide necessary facilitation for an effective working relationship between the Village Community, as represented by the Village Energy Committee (VEC), and the Concessionaire for the smooth implementation of the Agreement.
- (g) The DA shall design and provide to the Concessionaire the Reporting Format, and the Concessionaire shall file returns in the Reporting Format at the prescribed intervals before the DA and any other regulatory agency prescribed by the DA.
- (h) The DA shall develop and install a Remote Monitoring Protocol that shall be aligned and linked to the Project IT system established by the Concessionaire.
- (i) The DA shall establish a system of Third Party Audit, and identify an Auditor to undertake a detailed audit of the Project at the prescribed intervals. The Draft Report of the Audit shall be made available to the Concessionaire for comments, clarifications and rectification, after which the Auditor shall prepare the Final Audit Report that shall be filed with the Concessionaire, the DA and the Ministry of Energy. The Concessionaire shall, within a period of three months, provide a detailed reply to the concerns and objections raised in the Audit Report and/ or file a detailed compliance report or the plan of compliance to be completed within a reasonable period of time. It will be open for the Ministry of Energy to impose such penalty or issue such directions that are reasonable to ensure compliance to the objections raised in the Audit Report as well as redesign the Concession on new Terms and Conditions as are acceptable to the Concessionaire. The cost of the audit shall be borne by the DA, and the Ministry of Energy shall reimburse the same.
- (j) In the event of the national, regional or local grid extending to any of the Project sites, the DA shall arrange to provide the Concessionaire with grid connectivity at the agreed site. The DA shall therefore get the Concessionaire exempted from payment of any charges towards the grid connectivity with regard to cable laying, road cutting and other such charges.
- (k) The DA agrees to get executed a Power Purchasing Agreement between the Concessionaire and a suitable power distribution company (PDC) as a pre-requisite and a requirement for the full and complete performance of the Agreement.
- (l) The DA agrees that the absence of an agreed Power Purchasing Agreement between the Parties is considered a Material Adverse Effect under Article ... of this Agreement.

1.4 Power Purchasing Agreement

- (a) The DA recognizes that this Agreement requires a complementary Power Purchasing Agreement (PPA) in conditions as specified in Article .
- (b) A PPA between the Parties is required for the execution of this Agreement and the effective performance of the Project, as it specifies and regulates the supply and disbursement of the electricity generated by the Project, and that the purchase of the electricity generated under the Project by the PDC at the agreed rate, is critical to the financial viability of the Project and thereby the achievement of the objectives of the Project.
- (c) That the details of the supply of the electricity to the PDC and purchase of the electricity by the PDC will be set out in the PPA.
- (d) The DA agrees that any variation to the PPA must be agreed between the parties as a condition of the performance of each agreement.
- (e) The DA undertakes to ensure the maintenance of a PPA between the Concessionaire and the PDC, as a requirement of this Agreement.

ARTICLE IV: OBLIGATIONS OF THE VILLAGE ENERGY COMMITTEE

- 1.1 The Local Government Institution (name.....) or a Project Village shall constitute a Village Energy Committee (VEC) or designate an existing village-level institution as VEC, to facilitate the establishment, operation and maintenance of the RE Mini grid by the Concessionaire, and to provide long-term commitment to the Project.
- 1.2 The VEC shall have the following obligations:
 - (a) The VEC will work with the Concessionaire to develop and maintain the Project.
 - (b) Responsibilities of the VEC can include the following (but not limited to):
 - (i). Developing a plan and identifying households interested in getting a connection;
 - (ii). Ensuring connections for households on a priority basis, and quality of power supply;
 - (iii). Facilitating regular payment of tariffs;
 - (iv). Protection of the equipment;
 - (v). Curbing theft of power;
 - (vi). Facilitating resolution of dispute or grievance(s), if any, and others; and
 - (vii). Overall Supervision.

ARTICLE V: CONCESSION

- 1.1 **Grant of Concession:** Subject to and in accordance with the terms and conditions set forth in this Concession Agreement, the DA hereby grants and authorizes the Concessionaire following rights, in addition to the right to finance, design, drawing, fabrication, supply, provide, erect, construct, test, commission, operate and maintain the Project and to exercise and/or enjoy the rights, powers, benefits, privileges, authorizations and entitlements as set forth in this Agreement:
 - (a) To receive all fiscal incentives and benefits accruing in respect of or on account of the Project.
 - (b) To facilitate the movement of material; including building construction materials, plant and machinery, spares and consumables from the supply locations to the Project Site.

1.2 Concession Period:

- (a) The Concession hereby granted is for the period of 25 (Twenty Five) years commencing from the Commencement Date and ending on the Expiry Date (the “Concession Period”) during which the Concessionaire is authorized to design, finance, construct, operate and maintain the Project in accordance with the provisions hereof. Provided that in the event of termination of this Concession Agreement, the Concession Period shall mean and be limited to the period commencing from the Commencement Date and ending with the Termination Date.
- (b) The DA may agree to extend or renew the Concession after the expiry of the Concession Period for such period as may be mutually agreed to and on such terms and conditions as mutually agreed upon, subject to approval of competent authority of the DA. However, any such extension shall be co-terminus with the lease agreement for the land.

5.3 Rights Associated with Grant of Concession: Without prejudice to the generality of the foregoing, the Concession hereby granted to the Concessionaire shall include without being limited to, and shall entitle the Concessionaire, without requiring any further authority or authorization from the DA, to enjoy following rights, privileges and benefits in accordance with the provisions of this Concession Agreement and Applicable Laws:

- (a) to design, engineer, finance, procure, install, commission, operate and maintain the Plant either itself or through such Person as may be selected by it; overall responsibility for the entire project during the entire concession period is the responsibility of the Concessionaire.
- (b) Upon commissioning of the Plant, to manage, operate and maintain the same either itself or through such Person as may be selected by it; overall O&M responsibility for the entire project during the entire concession period is the responsibility of the Concessionaire.
- (c) to borrow or raise money or funding required for the due implementation of the Project and mortgage, charge or create lien, or encumbrance on the whole or part of the Plant; (Without mortgaging the Project Land)
- (d) To obtain the materials and services required for enabling the construction of the Plant, with all costs.
- (e) Exclusively hold, possess, and control the Project Site, in accordance with the terms and conditions of the lease agreement executed between the Concessionaire and the DA, for the purpose of the due implementation of this Project, in accordance with the terms of this Concession Agreement.
- (f) The Concession and this Concession Agreement will be aligned with the Power Purchase Agreement with the PDC and the Revenue generation models (as outlined in Article ...) required for the performance and execution of this Agreement.

1.4 Revenue Generation Model: The Concessionaire will be allowed all just and reasonable sources of revenue, grants, subsidies and other forms of financial and fiscal incentives in addition to the VGF so as to ensure the long-term sustainability of the Project. For maximization of revenue, the Concessionaire shall:

- (a) *Align Demand with Supply:* The Concessionaire will establish a system to accurately assess demand as well as develop demand of various categories of consumers, and match it with supply efficiently so that it is able to sell as much power that can be generated from the system in order to lower the tariffs, stabilize the revenue flow, reduce inter-se conflict between consumers and ensure the Project’s financial and social viability.
- (b) *Electricity tariff:* The Concessionaire may design an appropriate tariff for the electricity supplied as determined by accounting capital costs, cost of finance, operating expenses, replacement costs (including that of the energy storage system, if any) and return on investment. The Concessionaire may operate varied models offering different service levels and tariffs to different consumers mainly categorized in to two - energy tariff and power tariffs:-
 - (i) Energy tariffs will depend on the actual electricity consumed (measured in KWh units), and works with a pre-payment (pay-as-you-go model) or post-paid mechanism. The additional cost of meters and operational costs of meter reading, billing etc. shall be added to the Energy Tariff, and the

Concessionaire will also define an upper bound on the amount of electricity that one consumer is allowed to contract.

- (ii). Power or Fixed tariff based on the anticipated power use, which in turn will be determined by the maximum power made available for the consumer (on Watt basis).
- (c) The Concessionaire may set different tariffs (both for Energy tariff and Power / Fixed tariff) for different consumer types (e.g. households, institutions, enterprise etc.), and set a higher level tariff for some consumers (e.g. commercial and industrial establishments) to be able to cross-subsidize the households.
- (d) The Concessionaire may also set Stepped progressive tariff so as to charge a low tariff for the initial KWh (or W) and a higher tariff for consumption beyond. For some categories of consumers (e.g. households below poverty line), a lifeline tariff may be fixed which will be a subsidized tariff providing basic service needs and the same may be offset against a higher tariff for some categories of consumers (e.g. commercial and industrial).
- (e) The Concessionaire may also set differential tariff according to time of day, mainly for load scheduling.
- (f) In case there is surplus power available after meeting the Contracted load in a project village, the Concessionaire may sell electricity in a flexible structure where tariff changes according to electricity demand or power demand, inducing usage when surplus power is available.
- (g) *Connection Charges:* The connection charge should cover the cost of providing the connection (poles, wires etc.) through the mini grid from the mini grid main line to the consumer, and it should be such that it is able to induce a commitment from consumers. However, in the case of households below poverty line the Concessionaire will spread the connection charge by reducing the upfront fee and allowing the payment of the balance over a certain commitment tenure.
- (h) *Grants and Subsidies:* The Concessionaire shall be allowed to receive available grants and subsidy support from government and non-government organisations and bilateral and multilateral development or financial institutions, including upfront capital funding or grant, low interest loans, generation-based or operational incentives, etc., essentially to support the market for RE-based mini grid development. The DA shall provide all the requisite certificates or documents to the Concessionaire, and shall proactively provide facilitation support to the Concessionaire to help access grant, subsidies or cheaper capital from international development or financial institutions in this regard without financially burdening itself.
- (i) *Add-On Services:* In view of IT-based infrastructure being integral for reliable operation of the RE Mini grid and the Concessionaire's obligation to establish a robust IT-based operation and control system for the Mini grid, the Concessionaire shall be allowed to run ancillary services, such as Internet Shop, IT-Learning Centre, Distance Learning, Telemedicine Centre, Document Repository Service, e-Governance Services offered by the Government to general public (e.g. e-Tax, filing of challans and returns, issue of public certificates such as Birth and Death certificate after approval by the competent authority, etc.), etc. on payment of suitable fee as per the prevalent norms in that area/ region.
- (j) *Other Services:* The Concessionaire shall be allowed to run other renewable energy based ancillary services in conjunction with the mini grid such as solar heating for industrial processes (air drier for food processing, water heating, textile processes, paint shops, etc.), farming (e.g. solar irrigation pumps), community services (e.g. community kitchen), etc. at a suitable location and at a charge in consultation with the VEC. The Concessionaire shall be exempted from paying any fee to the DA or to a Government agency in this regard.

1.5 Principles of tariff fixation: Subject to the above broad guidelines the following principles shall be adhered by the Concessionaire to fix the tariff for consumers:

- (i). Should be transparently set.
- (ii). Should be fixed for at least one year to avoid frequent changes.
- (iii). Should not give more than 16 % return on equity if it is a business venture
- (iv). Should cover cost of storage system (battery etc.) replacement

- (v). The tariffs shall be displayed prominently in the village for everyone's information
- 1.6 Use of Suitable Technology:** Without prejudice to the generality of the foregoing, the Concessionaire shall have the right to develop the Plant using such technology that it considers suitable and commercially viable for the purpose of implementing the Project, in accordance with the terms of this Concession Agreement. It is acknowledged that it is the intention of the Concessionaire to use the technology associated with the concept of an integrated renewable energy based generation, storage and distribution system, including hybrid system, and that the Concessionaire shall have the right to modify, adopt, upgrade or change the technology, from time to time, based on actual operations of the Plant and the requirements of the Project.
- 1.7 Acceptance of Concession:** In consideration of the rights, privileges and benefits conferred upon the Concessionaire, and other good and valuable consideration expressed herein, the Concessionaire hereby accepts the Concession and agrees and undertakes to perform / discharge all of its obligations in accordance with the provisions hereof.
- 1.8 Concessionaire's Right to carry Project through SPV:** The Concessionaire shall have the right to execute, construct, implement, erect, construct, operate, own and maintain the Project through a Special Purpose Vehicle ["SPV"] created by the Concessionaire.
- 1.9 Clean Development Mechanism (CDM):** The Concessionaire shall use its best endeavors to register the Plant for carbon credits or any such mechanism under the aegis of the United Nations Framework Convention to Climate Change. In order to create economies of scale and also enhance the reliability in terms of the MRV processes set up under the aegis of the UNFCCC, the DA shall allow similar projects by other Concessionaires to be aggregated and all the expenses associated with this process and the income generated therefrom shall be shared in a 50-50 basis between the Concessionaire/s and the DA.
- 1.10 Financing Arrangements:** - The Concessionaire shall be entitled to avail certain financing facility from banks or financial institutions both domestic and international ("Lender") for the purpose of the Project and accordingly the Concessionaire shall be entitled to create any sort of Encumbrance on the Project and/or the project facilities, except the Project Land, in favour of the Lenders for availing the financing facility.
- 1.11 Performance and Technical Standards**
- 1.11.1 Service Performance Norms:** The projects should meet the following minimum standards of service performance:
- (a) Provide connection to all willing domestic consumers within its vicinity on a priority basis,
 - (b) Provide power supply to all domestic consumers for a minimum period of 5 hours if demanded so, during the critical hours of the day (mornings, evenings and night) or during the compulsory, critical or peak hours as defined under a national/ provincial policy in this regard. The Concessionaire shall, however, endeavor to provide power supply to the domestic consumers as per their choice exceeding 5 hours.
 - (c) Deploy the remaining capacity for commercial and productive loads, but at least 30 % of the load should be domestic.
- 1.11.2 Components and Sub-systems** All the components of a mini grid such as a charge controller, inverter, storage system (batteries, pumped storage or any other form of storage), cables, circuit breakers, junction boxes, PV panels (in case of SPV plants) etc. shall conform to the technical requirements and quality standards specified by the (National Standards Authority/ Ministry of, Government of).
- 1.11.3 Public Distribution Network (PDN):**
- (a) If there is an existing PDN constructed by the DA or any other agency in the Project villages, the same shall be handed over to the Concessionaire on signing of this Agreement for the purpose of distributing electricity to the consumers and its operation and maintenance as per the prescribed technical standards.
 - (b) In case there is no existing PDN in a Project village, the Concessionaire will construct a new PDN, and operate and maintain it for the whole Concession period. The design (sizing) of the PDN in the RE Mini grid shall depend upon the aggregate connected (and anticipated for the Concession period) demand

of various consumers subscribed to the Project, and not on the sanctioned load which is the norm for the design of a Utility grid. For this purpose, a norm of minimum 250W shall be followed for each household and a minimum of 500W for others so as to ensure smooth interconnectivity as and when the Utility grid arrives in the Project area. However, the Concessionaire may exercise the option of a modular design in consonance with sound business principles.

- 1.11.4 *Safety*: The Concessionaire shall strictly adhere to the minimum technical norms for the construction of generators and PDN (poles, cables, JB's, service connections etc.) for mini grids which in turn will ensure the safety requirement for the construction of the RE Mini grids as prescribed for mini grids by the (the competent authority, e.g. Central Electricity Authority). If there is no such prescription for mini grids, the Concessionaire shall make all endeavors to conform to the technical standards of a system of the size of the RE mini grid in a Project village, its capacity to connect with the Utility grid in the future, and online monitoring. The competent authority shall in the meantime, but within a maximum period of six months of the signing of this Agreement, finalise the Safety and other Technical Standards after taking into account the status and design of the RE Mini grids established or being established by the Concessionaire.
- 1.11.5 *Interconnection with Utility grid*: The Concessionaire or the DA may arrange to connect a RE Mini grid in a Project village with the national or regional grid of a PDC in the future to allow sale of excess power by the Concessionaire to the PDC and/ or for supply of power from such grid to the RE Mini grid beyond designed load of the RE Mini grid or in case of breakdown or undersupply of power from the RE Mini grid to the connected or new consumers. Existing regulations and technical standards for connectivity of the Distributed Generation Resources/ Independent Power Producers shall be followed in such cases. The (Competent Authority, e.g. National Electricity Authority), however, shall endeavor to develop and prescribe specific guidelines or cause the adoption of a guideline that is specifically suited for a RE Mini grid. In case of interconnection, the PDC shall establish a system to ensure islanding/isolation of the RE Mini grid from the PDC grid to the satisfaction of (Competent Authority, e.g. National/ Provincial Electricity Regulator).
- 1.11.6 *Coexistence of Utility Grid and the Concessionaire Grid*: Considering that parallel existence of the Utility grid and mini grids will be quite a common occurrence in the country in the future, the following norms shall be adhered to by all Parties to safeguard the mini grid projects and investments while the Utility should offer flexibility and choice to the Concessionaire:
- (a) In areas where the Utility grid pre-exists, all consumers up to the maximum load of the RE Mini grid shall stand migrated to the RE Mini grid for which the PDC will issue village-wise list in consultation with the VEC, but in the following order of preference: domestic, social institution (public school, health centre, civic facilities, etc.), local government/ parastatal offices, and finally commercial establishment (other offices, shops, village enterprise, etc.).
 - (b) be allowed to exercise one of the following options (that is once the PDC grid arrives) and shall also be allowed to migrate to another option after one complete year of exercise of the previous option:
 - (i) "Open Market": Continue supplying to its consumers and exist in parallel with the PDC grid; or
 - (ii) Continue to supply to its consumers as if in Open Market option, and sell excess or unsold electricity to the Utility grid at the interconnection point and draw power from the PDC grid if required; or
 - (iii) Supply all electricity generated to the Utility grid at the interconnection point.
 - (c) The tariff in the case of co-existence of the PDC and RE Mini grid Concessionaire in a Project village will be determined as follows:
 - (i). The Concessionaire shall be allowed to charge a tariff mutually determined with the consumers in consultation with the VEC and shall be fixed for a year, if operating in an open market option;
 - (ii). For the existing consumers of the PDC not migrating to the RE Grid and for any future consumers of the PDC grid, the Concessionaire may be given the first option to act as a Distribution Franchisee of the PDC on usual terms and condition;
 - (iii). Power may be sold by the Concessionaire from the RE Mini grid to the PDC as per the Power Purchase Agreement outlined in Article xxx

- (iv). Power may be sold by the PDC to the Concessionaire for distribution within the Project villages as per the tariff determined by the (competent authority, e.g. the National/ Provincial Electricity Regulator) for distribution franchisee in other similar areas;
- 1.11.7 *Exit Options:* The DA shall support the Concessionaire exit the Project in case there are material changes on the ground in terms of infrastructure or its planning and or the extant regulations or policies on the basis of which this Project has been designed and the Concessionaire has bid for the Project. The following general guidelines shall be adhered:
- (a) The Concessionaire may be allowed to exit the Project in the following conditions, and on payment of the BOOT Value of the Project or part thereof by the DA (or, any other agency) to the Concessionaire, as determined by a mutually identified Certified Assessor or an Auditor:
 - (i). when the PDC grid connects with the village, and makes a written expression of interest to take over the Project or part thereof and the Concessionaire agrees to it within a reasonable time limit not exceeding three months of such written expression of interest; or
 - (ii). at the end of the Concession period.
 - (b) On payment of the BOOT Value all the assets and liabilities of the Project shall stand transferred to the DA (or, any agency specified by DA), and the Concessionaire will deem to have exited the Project. Provided, the handing over and taking over of the Project shall be performed in such a manner so as not to cause any disruption of supply of power to the consumers for which both the DA and the Concessionaire shall be jointly and severally responsible before the competent authority (e.g. National/ Provincial Electricity Regulator).
 - (c) The Concessionaire may have a choice to exercise exit option in compliance with the terms and procedures of any policy or regulation that may be stipulated by the Government or the regulators in the future in accordance with the National Tariff Policy, etc. and in such cases the interested Concessionaire shall convey the exit option both to the DA and the regulator. The DA shall play an enabling role by administering the overall exit process, and for this purpose the DA shall follow the general guidelines on support-mechanism to the Concessionaires that shall be developed by the DA in due course.
 - (d) The Concessionaire shall also be entitled to claim compensation, as may be mutually decided between the DA and the Concessionaire, for losses related to project (“**Appropriate Compensation**”) as may arise directly or indirectly from the DA Event of Default.
 - (e) In the event the DA refuses or is unable to pay the BOOT value as required, the Concessionaire shall retain the Plant; and the Concessionaire shall also be entitled to claim compensation, as may be mutually decided between the DA and the Concessionaire, for losses related to project (“**Appropriate Compensation**”) as may arise directly or indirectly from the DA Event of Default.
 - (f) The DA shall, within a period as mutually agreed upon for days from the date when the Appropriate Compensation is decided, pay the Appropriate Compensation to the Concessionaire.
 - (g) Notwithstanding anything contained herein, the DA shall not be entitled to take the Plant unless and until it has paid the BOOT Value and the Appropriate Compensation to the Concessionaire.
 - (h) Notwithstanding anything to the contrary contained in this Concession Agreement, an Exit pursuant to any of the provisions of this Concession Agreement shall be without prejudice to accrued rights of either Party including its right to claim and recover money, damages and other rights and remedies which it may have in law or contract. The rights and obligations of either Party under this Agreement, including without limitation those relating to the Exit Payment, shall survive the Exit but only to the extent such survival is necessary for giving effect to such rights and obligations.

ARTICLE VI: OTHERS

- 1.1 **Capacity Building:** The Concessionaire shall depute the Project staff of requisite level to take part in the Capacity Building programme run by the DA or the Ministry of Energy for mini grid operators, renewable energy developers, hybrid systems, ICT for Smartness, grid inter-connectivity, monitoring, system maintenance, etc. free of charge. The DA and the Ministry shall endeavor to run at least two such capacity building programmes for each RE Mini grid Concessionaire in the country at the national level.

- 1.2 Innovation:** The Ministry of Energy shall endeavor to run an Innovation Programme for the RE Mini grid operators with a suitable reward system for the innovators. The innovators shall be encouraged by the Ministry of Energy in a suitable manner and subject to the Intellectual Property Rights to share the innovations with all mini-grid operators including this Concessionaire.
- 1.3 Dispute Resolution:** Unless prohibited by any applicable law in force all claims, disputes, difference, or questions of any nature arising between parties of this Agreement, whether during or after the termination or expiry of this agreement shall be referred to Arbitration. Both the parties mutually agree and confirm that the arbitration proceedings shall be held in the city, at a mutually agreed venue, and shall be conducted in the Language.
- 1.4 Insurance:** Concessionaire shall at its cost and expense, obtain and maintain, during the term, all such insurances (in addition to those mandated by Applicable laws or required by the Lenders) as may be required as per Good industry practices. The insurance shall be comprehensive and shall cover damages caused by the project facilities to the DA/ PDC's property or damage to any third property/ person. The aforesaid insurance policies shall be in force by making timely payment of premiums and submitting the copies of the insurance policies to the DA/ PDC every year. The Concessionaire shall indemnify and keep indemnified the DA/ PDC against all losses and claims for injuries or damaged to any person or property whatsoever which may arise out of or in consequence of the construction & maintains of the project facilities & against all claims, demands, proceedings, damages, costs, charges & expenses whatsoever respect of or in relation thereto. The Concessionaire shall cover all the personnel required to operate and maintain the project facilities with an insurance cover against accidents as required under extant rules and regulations.
- 1.5 Un-insurable Risks:** If during the Concession Period, any risk which has been previously insured becomes un-insurable due to the fact that the insurers have ceased to insure such a risk and therefore insurance cannot be maintained / re- instated in respect of such risk, the Concessionaire shall not be deemed to be in breach of its obligations regarding insurance under this Agreement.
- 1.6 Insurance Proceeds:** Subject to the provision of the financing documents and unless otherwise provided herein, the proceeds of all insurance policies received shall be promptly applied by Concessionaire towards repair, renovation, restoration or reinstatement of the project facilities of any part thereof which may have been damaged or destroyed. Concessionaire may designate the lenders as the loss payees under the insurance policies or assign the insurance policies in their favor as security for the financial assistance provided by them to the project.

ARTICLE VII: REPRESENTATIONS AND WARRANTIES

- 1.1 Representations and Warranties of the Concessionaire** The Concessionaire represents and warrants to the DA that:
- (a) it is duly organized, validly existing and in good standing under the laws of (name of the country);
 - (b) it has full power and authority to execute, deliver and perform its obligations under this Concession Agreement and to carry out the transactions contemplated hereby;
 - (c) it has taken all necessary corporate and other action under Applicable Laws and its constitutional documents to authorize the execution, delivery and performance of this Agreement;
 - (d) it has the financial standing and capacity to undertake the Project;
 - (e) this Concession Agreement constitutes its legal, valid and binding obligation enforceable against it in accordance with the terms hereof;
 - (f) the execution, delivery and performance of this Concession Agreement will not conflict with, result in the breach of, constitute a default under or accelerate performance required by any of the terms of the Concessionaire's Memorandum and Articles of Association;
 - (g) No bribe or illegal gratification has been paid or will be paid in cash or kind by or on behalf of the Concessionaire to any person to procure the Concession.
- 1.2 Representations and Warranties of the DA:** The DA represents and warrants to the Concessionaire that:
- (a) The DA has full power and authority to grant the Concession;

- (b) The DA has taken all necessary action to authorize the execution, delivery and performance of this Concession Agreement;
- (c) This Concession Agreement constitutes the DA's legal, valid and binding obligation enforceable against it in accordance with the terms hereof;
- (d) The DA has all the valid rights and title to transfer land, machinery, equipment, tool and network, under this Project and under the Lease Agreement to the Concessionaire free from all sorts of Encumbrances;
- (e) There are no suits or other legal proceedings pending or threatened against the DA in respect of the Project

ARTICLE VIII: MISCELLANEOUS

- 1.1 Governing Law and Jurisdiction:** This Concession Agreement shall be governed by the laws of the country. Courts at (place) will have jurisdiction over all matters arising from this Concession Agreement.
- 1.2 Amendments:** - This Concession Agreement together with the Schedules constitute a complete and exclusive set of the terms of the Agreement between the Parties on the subject hereof and no amendment or modification hereto shall be valid and effective unless agreed to by both the parties hereto and evidenced in writing.
- 1.3 Interest and Right of Set Off:** - Any sum which becomes payable under any of the provisions of this Concession Agreement by one Party to the other Party shall, if the same be not paid within the time allowed for payment thereof, shall be deemed to be a debt owed by the Party responsible for payment thereof to the Party entitled to receive the same. Such sum shall until payment thereof carry interest at prevailing prime lending rate by a major public sector bank plus 2 % per annum from the due date for payment thereof until the same is paid to or otherwise realized by the Party entitled to the same. Without prejudice to any other right or remedy that may be available under this Concession Agreement or otherwise under law, the Party entitled to receive such amount shall also have the right of set off. Provided the stipulation regarding interest for delayed payments contained in this Article 8.3 shall neither be deemed nor construed to authorize any delay in payment of any amount due by a Party nor be deemed or construed to be a waiver of the underlying breach of payment obligations.
- 1.4 Waiver**
- 1.4.1** Waiver by either Party of any default by the other Party in the observance and performance of any provision of or obligations under this Concession Agreement:
- (a) shall not operate or be construed as a waiver of any other or subsequent default hereof or of other provisions or obligations under this Concession Agreement;
 - (b) shall not be effective unless it is in writing and executed by a duly authorized representative of such Party; and
 - (c) Shall not affect the validity or enforceability of this Concession Agreement in any manner.
- 1.4.2** Neither the failure by either Party to insist on any occasion upon the performance of the terms, conditions and provisions of this Concession Agreement or any obligation hereunder nor time or other indulgence granted by a Party to the other Party shall be treated or deemed as waiver/breach of any terms, conditions or provisions of this Concession Agreement.
- 1.5 Survival Termination of this Agreement:**
- (a) shall not relieve the Concessionaire or the DA of any obligations already incurred hereunder which expressly or by implication survives Termination hereof, and
 - (b) except as otherwise provided in any provision of this Concession Agreement expressly limiting the liability of either Party, shall not relieve either Party of any obligations or liabilities for loss or damage to the other Party arising out of or caused by acts or omissions of such Party prior to the effectiveness of such Termination or arising out of such Termination.
- 1.6 Notices** Unless otherwise stated, notices to be given under this Concession Agreement including but not limited to a notice of waiver of any term, breach of any term of this Concession Agreement and termination of this Concession Agreement, shall be in writing and shall be given by hand delivery, recognized international courier, mail, telex or facsimile transmission and delivered or transmitted to the Parties at their respective addresses set forth below:

- (a) If to the DA: (full correspondence address of the DA). And If to the Concessionaire: (full correspondence address of the Concessionaire). Or such address, telex number, or facsimile number as may be duly notified by the respective Parties from time to time, and shall be deemed to have been made or delivered
- (b) in the case of any communication made by letter, when delivered by hand, by recognized international courier or by mail (registered, return receipt requested) at that address, and, when transmitted properly addressed to such telex number or facsimile number.
- 1.7 Severability:** If for any reason whatsoever any provision of this Concession Agreement is or becomes invalid, illegal or unenforceable or is declared by any court of competent jurisdiction or any other instrumentality to be invalid, illegal or unenforceable, the validity, legality or enforceability of the remaining provisions shall not be affected in any manner, and the Parties shall negotiate in good faith with a view to agreeing upon one or more provisions which may be substituted for such invalid, unenforceable or illegal provisions, as nearly as is practicable. Provided failure to agree upon any such provisions shall not be subject to dispute resolution under this Concession Agreement or otherwise.
- 1.8 No Partnership:** Nothing contained in this Concession Agreement shall be construed or interpreted as constituting a partnership between the Parties. Neither party shall have any authority to bind the other in any manner whatsoever.
- 1.9 Language:** All notices required to be given under this Agreement and all communications, documentation and proceedings which are in any way relevant to this Concession Agreement shall be in writing and language.
- 1.10 Exclusion of Implied Warranties etc.:** This Concession Agreement expressly excludes any warranty, condition or other undertaking implied at law or by custom or otherwise arising out of any other agreement between the Parties and any representation by any Party not contained in a binding legal agreement executed by the Parties.
- 1.11 Counterparts:** This Concession Agreement may be executed in two counterparts, each of which when executed and delivered shall constitute an original of this Concession Agreement but shall together constitute one and only the Concession Agreement.

IN WITNESS WHEREOF THE, PARTIES HAVE EXECUTED AND DELIVERED THIS AGREEMENT ON THE DAY OFMONTH YEAR, AT (PLACE)

SIGNED SEALED AND DELIVERED

Authorized Signatories

(Signature)

Name:

Designation:

(For the DA)

(Signature)

Name:

Designation:

(For the Concessionaire)

In the presence of Authorized Representatives :

(Signature)

Name:

Designation:

(Ministry of Energy)

(Signature)

Name:

Designation:

(Ministry of Finance)

Appendix 2: Glossary

Baseline Studies: Studies on the legislative and institutional frameworks governing investment in renewable energy for Senegal, Côte d’Ivoire and Benin.

Briefing Papers: These documents outline the background of a particular issue and propose solutions - usually for MPs or other policy makers.

Cross-party Parliamentary Groups: Climate Parliament’s networks within national parliaments.

Energy Transition: A long-term structural change in energy systems, leaving behind fossil energy in favour of renewable energy.

Feed-in Tariff: A payment made to households or businesses generating their own electricity and feeding it into the national electricity grid.

Green Grid Alliance: Climate Parliament’s initiative providing high-level leadership across the world, enabling countries to share ideas and best practice on green grids and work on new financing mechanisms such as Green Grid Bonds.

Greenhouse Gases (GHGs): Atmospheric gases that absorb and emit radiant energy within the thermal infrared range. This process is the fundamental cause of the greenhouse effect.

International Solar Alliance (ISA): An intergovernmental agency comprising more than 121 countries, aiming to work for the efficient exploitation of solar energy to reduce dependence on fossil fuels.

Mini-grids (sometimes referred to as a micro-grids or nanogrids): A set of small-scale electricity generators and energy storage systems connected to a distribution network that supplies electricity to a small, localised group of customers and operates independently from the national transmission grid, ranging in size from a few kilowatts (kW) up to 10 megawatts (MW).

Nationally Determined Contributions (NDCs): A term used under the United Nations Framework Convention on Climate Change (UNFCCC) for reductions in greenhouse gas emissions that all countries that signed the UNFCCC were asked to publish in the lead up to the 2015 United Nations Climate Change Conference held in Paris, France in December 2015.

Parliamentary Action on Renewable Energy: This is a project jointly implemented by the United Nations Development Programme and Climate Parliament, with the support of the European Commission, the Danish Ministry of Foreign Affairs and Swiss Agency for Cooperation and Development. It seeks to leverage the parliamentary power to promote the development of renewable energy.

Parliamentary Hearings: Meetings bringing together members of parliament, experts, governments, donors and civil society from Sub-Saharan Africa to share experiences on renewable energy policy and help MPs strengthen their respective national frameworks. They also provide platforms for parliamentarians to exchange information on appropriate strategies to effectively bring to force the laws that have been adopted but not yet implemented.

Photovoltaic (PV): The conversion of light into electricity using semiconducting materials that exhibit the photovoltaic effect.

Renewable Energy: Energy that is generated from renewable resources, which are naturally replenished on a human timescale, such as sunlight, wind, rain, tides, waves, and geothermal heat.

Rural Electrification: The process of bringing electricity to remote areas. Electricity is used not only for lighting and household purposes, but it also allows for mechanization of many farming operations, such as well-pumping, threshing, milking, and hoisting grain for storage.

Scaling Solar: A program recently launched by the World Bank Group in collaboration with several African governments to overcome obstacles associated with the development of large scale solar power. The program aims to make it easier for governments to obtain solar power quickly and cost-effectively through competitive bidding and pre-arranged financing, insurance products and risky products.

Solar Pumps: Often used in remote areas where it is cost prohibitive to run traditional AC powered water pumps or to provide water to off-grid homes. Solar water pumping systems are also used to pump water for livestock and crop irrigation in remote locations.

Value Added Tax (VAT): a tax on the amount by which the value of an article has been increased at each stage of its production or distribution.

West African Parliamentary Network on Gender and Energy: Aims to gather Members of Parliament (MPs) across Benin, Ivory Coast and Senegal. It provides a forum for MPs to share gender-sensitive knowledge and experience to develop policy actions within their own parliament, the energy sector in general and the renewable energy sector in particular.

