Title : Enhancing Local Inclusion in Climate Transparency and Promoting Accessible Energy for Vulnerable Households in Burkina Faso"

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Abstract

Burkina Faso is actively working to establish a climate transparency framework, as required by the United Nations Framework Convention on Climate Change (UNFCCC). This involves developing mechanisms for reporting on mitigation, adaptation, and support received. The Ministry of Environment, through the Permanent Secretariat of the National Council for Sustainable Development (SP-CNDD), is the lead coordinating body. However, challenges remain in ensuring comprehensive implementation and local-level engagement. This study assesses the current state of Burkina Faso's climate transparency efforts, including the governance structure, legal instruments, reporting progress, and energy access for vulnerable households. It also examines the potential of renewable energy projects to contribute to both energy provision and greenhouse gas (GHG) emission reduction. The analysis is based on a review of policy documents, national reports (National Communications, Biennial Update Reports), and data related to energy projects and household energy access. It includes an evaluation of the level of local awareness and involvement in climate initiatives and an assessment of the cost-effectiveness of different energy solutions. Burkina Faso has made progress in developing its climate transparency framework, but faces challenges such as the limited awareness of national climate plans (NDCs) at the local level and the need to strengthen its Monitoring, Reporting, and Verification (MRV) system. Solar energy emerges as a promising option for increasing energy access for vulnerable households due to its affordability. Enhancing local participation and promoting accessible renewable energy solutions are crucial for advancing climate action and sustainable development in Burkina Faso. Further efforts are needed to strengthen the climate transparency framework and ensure its effectiveness at all levels.

Keywords : Climate Transparency, Burkina Faso, Renewable Energy, Energy Access, Local Engagement, Greenhouse Gas Emissions

I. INTRODUCTION

Reducing greenhouse gases to combat climate change is one of the world's major development challenges (Neya et al. 2020, Paris 2015; IPCC 2007;). The increase in atmospheric carbon dioxide (CO2) is cited as the main driver and cause of global warming and is attributed to human activities (Lindzen, 2009). To address these global challenges, all 195 member states of

the United Nations Framework Convention on Climate Change have committed to reducing their greenhouse gas emissions in order to stabilize the increase in global global global temperature at 2°C through their commitment materialized in the NDC in Paris in 2015. Thus, in order to ensure transparency, consistency and standardisation of information in the different systems and to better capitalise on the performance of NDCs, the Paris Agreement has provided for a strengthened transparency framework in its Article 13 and paragraph 84. An operational tool of which is the Notification and Verification System (MRV).

The Government of Burkina Faso ratified the Paris Agreement on 11 November 2016 by submitting its first NDC. But the results of the latest gas inventories, despite the energy sector being one of the 4 main sectors in the NDC, it remains the second largest emitting sector of greenhouse gases in Burkina Faso with 4,035.42 Gg CO2eq in 2015. Thus, the revision of the NDC in 2021 was an opportunity for the country to reaffirm its firm desire to drastically reduce emissions from the energy sector in view of the Burkinabe energy context characterized by: (i) a predominance of the use of biomass energies ;(ii) the country's dependence on fossil fuels; (iii) poor and inequitable access to modern energy; (iv) a very low valuation of endogenous renewable energies.

Thus, to improve energy supply and accessibility, Law No. 014-2017/AN of 20 April 2017 on the general regulation of the energy sector and its implementing texts was adopted, the purpose of which is to ensure an effective, efficient, reliable, sustainable, sufficient and sustainable supply of energy, in order to promote sustainable socio-economic development by highlighting renewable energies and the promotion of the private sector.

Burkinabe civil society, having a major role in the implementation of the NDC's actions and ensuring both citizen monitoring of government action, could not be on the move for the implementation of climate actions.

Thus, to participate in this dynamic at the national level, the consortium "ESCWA-AI and Afrique Verte Burkina Faso" has designed and is implementing the project "support for the promotion of the Nationally Determined Contribution (NDC) in Burkina Faso" in order to contribute to the decarbonization of the energy sector and facilitate access to decentralized renewable energies.

It is with this in mind that this study on transparency and the effects of NDCs on the development of and access to decentralized renewable energy systems was initiated.

The objective of this study is to better understand the monitoring of the implementation of international climate commitments at the level of Burkina Faso and to understand whether and how the NDC is implemented in a socially just way in the energy sector. It specifically aims, among other things, to (i) understand the mechanisms between the UNFCCC level, the national level (sub-national level) and the local level along organizational lines; (ii) provide an overview of the local implementation of international commitments (e.g., local climate and energy plans) and/or lack thereof and visualize the overview appropriately (e.g., labeled map of existing local climate plans); (iii) assess how and in what form (UNFCCC formats, national formats, etc.) the country systematically reports on progress in implementing committed climate action? (iv) assess whether reported progress in the implementation of climate action can be systematically

linked to climate actions implemented at the local level; (v) conduct in-depth surveys of selected renewable energy projects in the country that have the potential to represent best practices with respect to the CIDSE RES principles.

The study on the transparency and effects of NDCs on the development of decentralized renewable energy systems and access to them" on behalf of the project to support the promotion of the NDC in Burkina Faso, has involved both analytical and participatory approaches.

II. METHODOLOGICAL APPROACH

2.4. Climate transparency

To obtain information on the status of implementation of the climate transparency framework in Burkina Faso, an interview with the SP/CNDD and the Climate Transparency Capacity Building Initiative was conducted and existing documentation on the subject was collected and analysed. The discussions focused on the requirements of a compliant climate transparency framework, defined by the UNFCCC through the Paris Agreement in its Article 13, which are: (i) Existence of a National MRV Framework, (ii) Existence of an order or decree creating the National MRV Framework, (iii) Collection of reports produced and submitted to the UNFCCC (the BURs, , GOSI, NCs, audit reports and reports on support received). The analysis of the documents focused on the regularity of the submission of its documents to the convention on the one hand and on the sectors and GHGs covered in order to assess the real level of implementation of climate transparency strengthened in Burkina Faso.

2.5. Climate actions of the Energy Sector NDC

2.5.1. Identification of projects

The energy production projects included in the NDC were used as an entry point and the analyses were carried out using the main basic criteria which are: (accessibility of the energy source, sustainability of the energy source, energy production) in order to identify the projects that best meet the RES criteria to serve as a basis for the continuation of the study and following the classification diagram (Figure 1). However, the snowball method was used to identify projects that are not part of the NDC for the complement of the study.

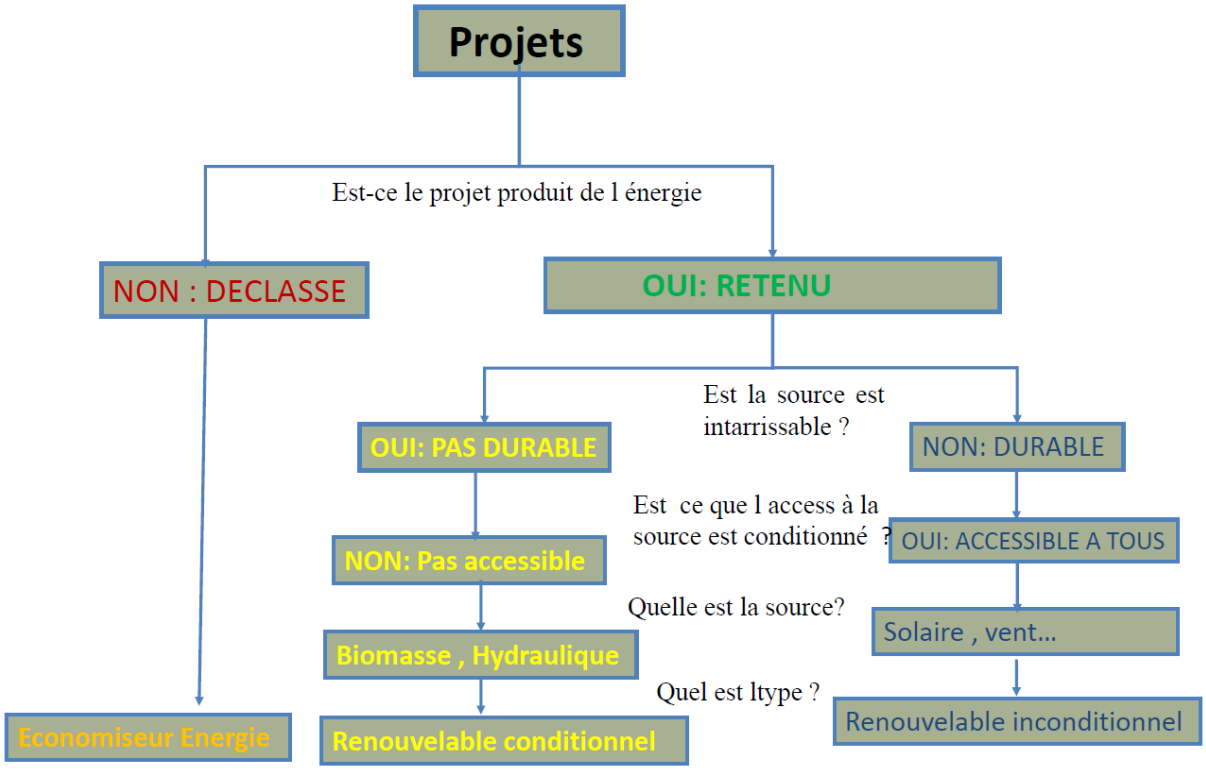

Figure 1: Classification Chart

2.5.2. Estimating the GHG emission reduction potential of projects

For environmental benefits, CO2 emissions/reductions per action will be assessed and compared. To do this, all sources of emissions and/or reductions were identified and data on activities by source were collected with the promoters of the actions or projects. Emission factors will also be identified and used to estimate the CO2 emitted, avoided or sequestered. For each project the overall cost and potential of the amount of energy produced will be collected. The GHG reduction potential per Project will be estimated using the 2006 IPCC guidelines which is based on Activity data and Formula 1 emission factors. As part of this study, the emission factors established by the World Bank and its partners in the ECOWAS region as part of the promotion of carbon credits for the renewable energy sector (Solar and Wind) will be used to quantify the GHG reduction potential.

$$PR = DA * Fe$$

With PR: GHG Reduction Potential,

DA: Amount of energy produced (Activity Data)

Fe: amount of GHGs avoided or reduced per unit of energy produced

2.5.3. Simplified marginal abatement cost

The simplified marginal abatement cost of GHG reductions from equities

The Simplified Marginal Reduction Abatement (CAM) cost of each action will be calculated using the Total Cost of each project over the amount of mitigation potential in tCO2eq to obtain the investment cost per unit of carbon reduced (USD/t CO2eq) so the different ratios will be compared with each other in order to rank the actions according to their sustainability impact in terms of GHG emissions or reductions in order to identify the actions that best contribute to economic development and are accessible to all.

$$CAM = \frac{Qe}{DA * Fe}$$ with Qe: the potential of energy produced

In the end, a traffic light system was used, from red (does not meet the criterion) to green (perfectly meets the criterion) at the level of each criterion and principle. The results of this analysis have made it possible to select a few projects as those that best meet the RES principles.

2.6. Taking the local level into account in the climate transparency process in Burkina Faso

To assess the level of participation of local authorities in the climate transparency framework, a survey of the municipal authorities benefiting from the projects was carried out. The physical accessibility factor of the municipalities was used to prioritize the municipalities to be consulted (Table 1). The selected areas are therefore linked to the areas of intervention of the selected projects. Given that the smallest unit retained in this study is the municipality, the emphasis was placed on municipal officials who have a global view of their municipality and represent their community.

Table 1: Localities and stakeholders to consult

Regions	Common	Locations	Actors to consult
Center	Zagtouli	Zagtouli	SG of the town hall, SONABEL Ouaga, beneficiaries (households, shops, etc.)
Center	Zagtouli	Zagtouli	Prefect, SG of the City Hall, SONABEL Ouaga, beneficiaries (households, trade, etc.)
Plateau Central	Nagréongo	Nagréongo	Prefect, SG of the City Hall, SONABEL Ouaga, beneficiaries (households, trade, etc.)
Sahel	Gorom-gorom	Essakan	prefect, SG of the town hall, beneficiaries (households, shops, etc.), SONABEL Dori
High pools	Bobo dioulasso	Kodéni	PDS, SG of the town hall, former mayor, CVD, customary authorities, population, **Africa Ren Kodéni**, SONABEL Bobo Dioulasso
Boucle du Mouhoun	Dedougou	Dedougou	Prefect, SG of the City Hall, CSPS Officials, Cowater, Burkinabe Rural Electrification Agency, Windiga Energie, beneficiaries (households, trade, etc.)

To do this, a questionnaire has been designed and administered, the main sections of which are; (i) knowledge of the NDC at the local level (ii) involvement of the local level in the

development and implementation of the NDC (iii) involvement in the realization of national GHG inventories (iv) participation in the implementation of the country's strengthened transparency framework.

2.7. Energy accessibility for vulnerable households

To assess the accessibility of renewable energy to vulnerable households, an analysis of the costs of minimum kits by type of renewable energy (biomass and solar) was compared and compared these costs to the general status of the messages.

III. RESULTS AND DISCUSSIONS

3.1. STATE OF PLAY OF THE IMPLEMENTATION OF THE ENHANCED TRANSPARENCY FRAMEWORK IN BURKINA FASO

3.1. 1 Governance of climate transparency

Climate transparency is defined as the state of efforts and support received in the context of a country's climate change mitigation, adaptation, financing, capacity building, development and technology transfer. In Burkina Faso, for example, the Ministry of the Environment, through the Permanent Secretariat of the National Council for Sustainable Development (SP¬CNDD), is the structure that coordinates the implementation of the United Nations Framework Convention on Climate Change (UNFCCC), and therefore that of climate transparency. In this capacity, it coordinates the development and submission of documents related to climate transparency, such as national communications (NCs) on climate change, including national greenhouse gas inventories (GHGs) and biennial update reports (BURs) or biennial transparency reports (BTRs) provided for by the UNFCCC for 2023. Also, the SPCNDD is in charge of setting up the national reporting and verification system called MRV in order to facilitate the preparation of these reports to comply with the climate transparency framework recommended by the United Nations Framework Convention on Climate Change. Although climate transparency is under the leadership of the Ministry of the Environment, the energy sector is under the technical supervision of the Ministry of Energy. With these technical agencies such as the National Agency for Renewable Energies and Energy Efficiency (ANEREE), the Burkina Faso Agency for Rural Electrification (ABER), the National Electricity Company of Burkina Faso (SONABEL), the General Directorate of Conventional Energies (DGEC), the General Directorate of Energy Efficiency (DGEE), the General Directorate of Energy Transition (DGTE) and the Regional Directorates.

3.1.2. Status of the legal instruments of the climate transparency framework in Burkina Faso

The United Nations Framework Convention on Climate Change is governed by Law 008-2014/AN of 8 April 2014 on the Framework Law on Sustainable Development, Law No. 003-2011/AN on the Forest Code and Law No. 006-2013/AN of 2 April 2013 on the Environmental Code. However, the existence of a strengthened transparency framework under the Climate Change Convention is conditioned by the establishment of a national verification reporting system by a presidential decree or ministerial order and also the establishment of a functional

and operational online MRV platform accessible to all. In view of these requirements, we note the presence of a National MRV System under construction, an online MRV platform (www.mrv-burkina.bf) and a draft decree in the process of being signed. But, given that the decree has not yet been signed; It is concluded that the country still lacks a strengthened transparency framework despite the existence of the other components

3.1.3. Status of climate transparency reporting

From 2001 to 2022, 3 NCs, 3 greenhouse gas inventory reports, and 1 BURs were produced, of which 2 National Communications were submitted to the UNFCCC, without any third-party verification report in order to assess the quality and reliability of the greenhouse gas data contained in the reports. However, the aspects on support have not yet been the subject of any production subject to validation and verification at the national level or to a certified auditor (Figure 2), yet the reports on the support received constitute one of the fundamental links of transparency in the context of the implementation of Nationally Determined Contributions (NDCs).

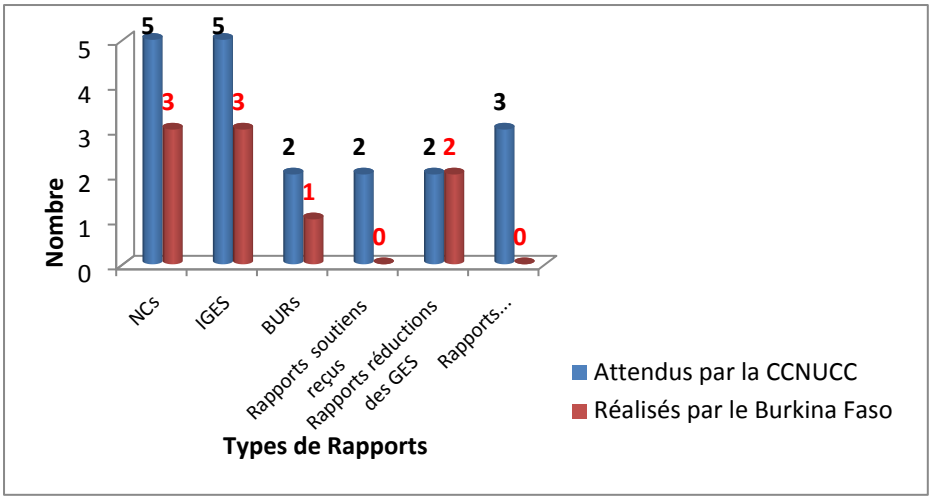

Figure 2: Status of reports produced under the UNFCCC MRV system for the period 2001-2020 in Burkina Faso

Indeed, mitigation reports allow quantitative information to be highlighted from data on emission savings and qualitative information from data on sustainability goals, coverage, institutional arrangements and activities within NAMA. This makes it possible to appreciate the efforts and effectiveness of mitigation actions in terms of reducing greenhouse gases in order to achieve the objective of the Paris Agreement, which is to stabilize the temperature increase at 2 degrees Celsius. The reports on the (MRV) support received, on the other hand, make it possible to track (i) the Financial Flows – from whom to whom, amount, type of financial instrument, private/public, new/additional. (ii) Type of support, funding, technology transfer/advice, capacity building (iii) Activities supported, type of NAMA, level of impact (sectoral, regional, etc.) and (iv) impact of actions supported, metric/non-metric indicators, indicators supports provided/support received (including technology transfer and capacity building. The implementation or reporting (MRV) mitigation and support makes it possible to assess the efficiency and effectiveness of mitigation actions through the calculation of the cost and savings ratio of GHG reductions in order to facilitate the choice of the best mitigation

actions to promote and pursue. Nevertheless, these efforts in terms of the production of NCs, IGES and BURs represent respectively 60%, 60% and 50% of the UNFCCC expectations (Figure 3)

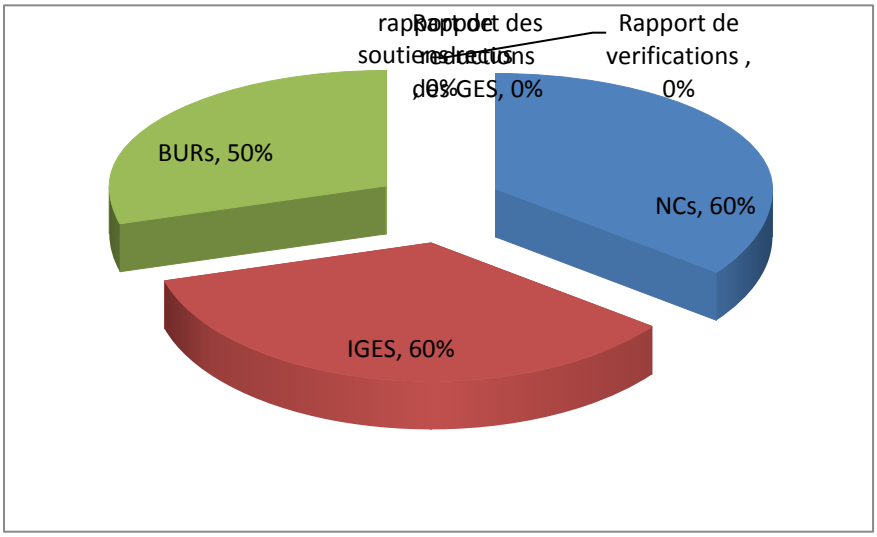

Figure 3: Production performance of IGES and BURs in Burkina Faso from 2001 to 2020 in the context of the implementation of the UNFCCC

In addition to these reports required for the moment in the transparency framework, the country developed its first communication on adaptation (AdCom) in 2021, although it is from 2023 that the AdCom will be part of the enhanced transparency reports.

3.1.3.1. Reporting Process

The preparation of the reports follows a participatory and inclusive approach following three main steps. First, a small technical team or consultants is set up to manage the technical and editorial aspects. In addition to the small technical team, a technical committee to monitor the preparation of reports, most often bringing together governmental and non-governmental technical structures, is also set up to assess preliminary reports and pre-validate them. Finally, the draft reports pre-validated by the technical committee are presented during a national workshop with all stakeholders (government, civil society, financial technical partners) for the examination of the reports and their validations. These bodies are very important because they allow the maximum contribution to be collected on the one hand to improve reporting and on the other hand allows the sharing of information on the level of greenhouse gas emissions of the country

3.1.3.2. Sectors covered by the reports

Among the main emission sectors to be covered under the UNFCCC, Burkina Faso covered three sectors in 2001: Energy, AFOLU (Agriculture Forestry) and Waste, four sectors in 2008 namely energy, AFOLU (Agriculture, Forestry, livestock), the waste sector and industry and also four sectors in 2019, namely Energy, Industrial Processes and Product Use (IPU), Agriculture, Forestry and Other Land Use (AFOLU) and Waste. From these GHG inventory reports, it can be seen that the transport sector has not been sufficiently taken into account by all the inventories, which is one of the weaknesses that the country should work to address (Figure 4).

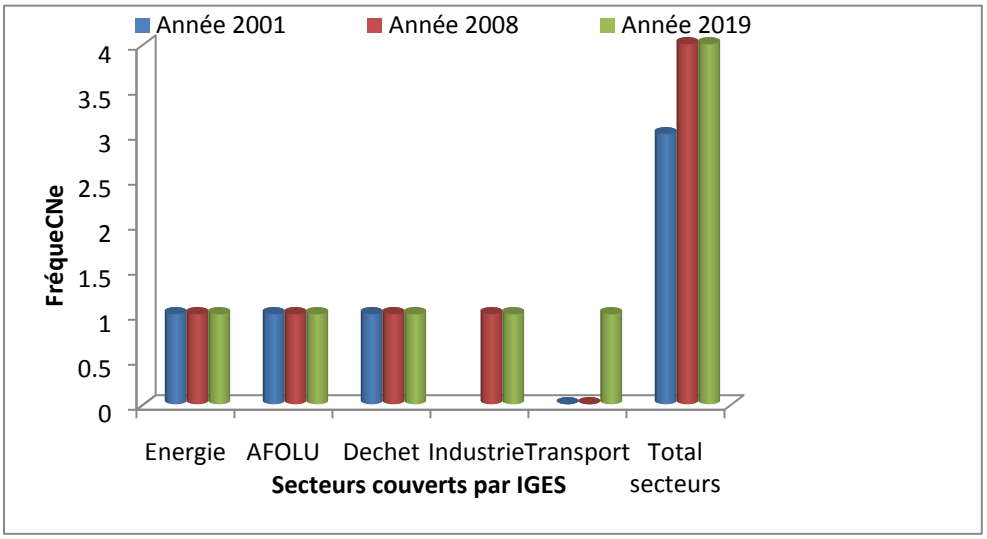

Figure 4: Evolution of the sectors covered by IGES year

3.1.3.3. Gases covered by the reports

Among the main types of greenhouse gases (GHGs) to be taken into account in greenhouse gas inventories (GHGs), which are CO2, CH4, N2O, SF6, PFCs, HFCs, NF3, the country was able to take into account three (03) (CO_2 , $N_{2O,\,CH4}$) for its GHG inventories in 2001, six (CH_4, CO2, HFCs, SF6 PFCs, N2O) for the 2008 GHG inventory and four (HFCs, CO_2, CH4, N2O) for the 2019 GHG inventory (Figure 5).

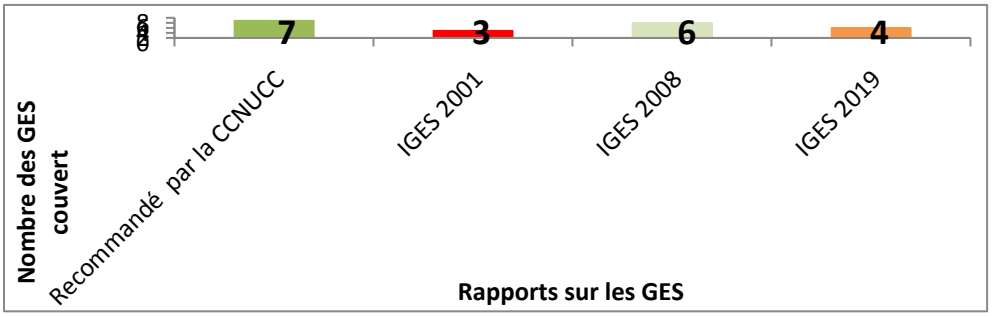

Figure 5: Evolution of greenhouse gases covered by the IGES compared to the UNFCCC recommendations

3.2 . KEY CLIMATE ACTIONS OF THE ENERGY SECTOR CDN

3.2.1.Identified projects

A total of 36 (thirty-six) priority projects were identified (Annex 1) grouped into unconditional renewable energy project, conditional renewable energy project and energy saving project (Table 2). The more or less high number of projects identified could be explained by the fact that Burkina Faso has a Law N°051 2012/AN finance law exempting solar equipment in order to promote renewable energies

Table 2: Projects classified by type of renewable energy

Project title	Promoter	Type ER
50 MWp Solar Power Plant with Battery Storage in Dori, Burkina Faso and the 155 km Kaya-Dori Evacuation Line in 225 kV	MEMC	Unconditional renewable
ZIGA Solar Power Plant	SONABEL	Unconditional renewable
Zagtouli Solar PV Plant with extension in 2021	SONABEL	Unconditional renewable
Zagtouli Solar Photovoltaic Power Plant Extension Project (17MWp)	SONABEL	Unconditional renewable
Electrification of 100 localities by 100 mini-power plants (22.6MW in total) to serve 150,000 households (Yeleen Off grid)	ABER	Unconditional renewable
WAPP Koupela Project	MEMC	Unconditional renewable
WAPP Kaya Project	MEMC	Unconditional renewable
WAPP Koupela Project	MEMC	Unconditional renewable
Acquisition and installation of 15,000 light-emitting diode (LED) street lamps to replace high-pressure sodium and mercury street lamps for public lighting	MEMC	Energy saver
Construction of solar power plants in Koudougou (20 MWp) and Kaya (10 MWp) with a capacity of 30 MWp, including the reinforcement of the 220 km grid (PASEL)	SONABEL	Unconditional renewable
Construction of the 15 MWp solar photovoltaic power plant in Essakane	SONABEL	Unconditional renewable
Construction of the 14 MWp photovoltaic solar power plant in Matourkou with 6 MWh of storage (KFW)	SONABEL	Unconditional renewable
Project for the acquisition and installation of solar equipment in public buildings	MEMC	Unconditional renewable
Construction of the 43 MWp photovoltaic solar power plant in Ouagadougou (Ouaga North-West) (Yeleen)	SONABEL	Unconditional renewable

Construction of the 6.29 MWp solar photovoltaic power plant in Dori (Yeleen) (Yeleen)	SONABEL	Unconditional renewable
Construction of the photovoltaic solar power plant in Diapaga with a capacity of 2.2 MWp (Yeleen)	SONABEL	Unconditional renewable
Construction of the photovoltaic solar power plant in Gaoua with a capacity of 1.13 MWp (Yeleen)	SONABEL	Unconditional renewable
Solar Energy Project for Off-Grid CSPS	ECED Mouhoun	Unconditional renewable
Solar Electrification of Socio-Community Infrastructure Project in 300 Rural Localities	MEMC	Unconditional renewable
Project for the acquisition and installation of efficient air conditioners to replace mono blocks in public buildings	MEMC	Energy saver
Project for the construction of a mini-solar photovoltaic power plant with storage in public buildings	MEMC	Unconditional renewable
Solar backup project	MEMC	Unconditional renewable
Project for the construction of a mini-photovoltaic solar power plant with storage in medical centers with surgical antenna (CMA)	MEMC	Unconditional renewable
Acquisition and installation of 10,500 light-emitting diode (LED) street lamps to replace high-pressure sodium and mercury street lamps for public lighting	MEMC	Energy Saver
Acquisition and installation of 3,000 light-emitting diode (LED) street lamps to replace high-pressure sodium and mercury street lamps for public lighting in the streets of Ouagadougou (PASEL)	MEMC	Energy saver
Acquisition and installation of 1,500 light-emitting diode (LED) street lamps to replace high-pressure sodium and mercury street lamps for the benefit of public lighting in the streets of Bobo Dioulasso (PASEL)	MEMC	Energy saver
Acquisition and installation of 1,500,000 light-emitting diode (LED) lamps to replace fluorescent tube lamps in households	MEMC	Energy saver
National Biodigester Program	SNV	Conditional renewable
The project to recover methane from wastewater from the wastewater treatment plant of the city of Ouagadougou	ONEA	Conditional renewable
The project to recover methane from solid waste from the landfill of the city of Ouagadougou	Ouagadougou City Hall	Conditional renewable
Biogas production from faecal sludge and agricultural residues in the Kossodo biogas unit	ONEA	Conditional renewable
Solar power plant in Dédougou	Quadran	Unconditional renewable
Solar power plant in Zano	Quadran	Unconditional renewable
Solar power plant in Kalzi	NAANGE	Unconditional renewable

Solar power plant in Bobo Dioulasso/ Kodéni	Africa Ren	Unconditional renewable
Solar power plant in Paris	Urba Solar	Unconditional renewable
Green Yellow project	Green Yellow	Unconditional renewable

3.2.2. Energy potential of the selected projects

The six selected projects offer a cumulative energy potential of around 586000 MWh, representing about 29.6 percent of the energy needs in Burkina Faso in the business-as-usual scenario (Figure 5). However, the analysis of the energy supply shows that the smallest project is the project relating to the electrification of the Social Health Promotion Centers in the Boucle de Mouhoun with about 1000 MWh expected and the largest project is that of the Kodeni solar power plant in Bobo-Dioulasso (167000 MWh).

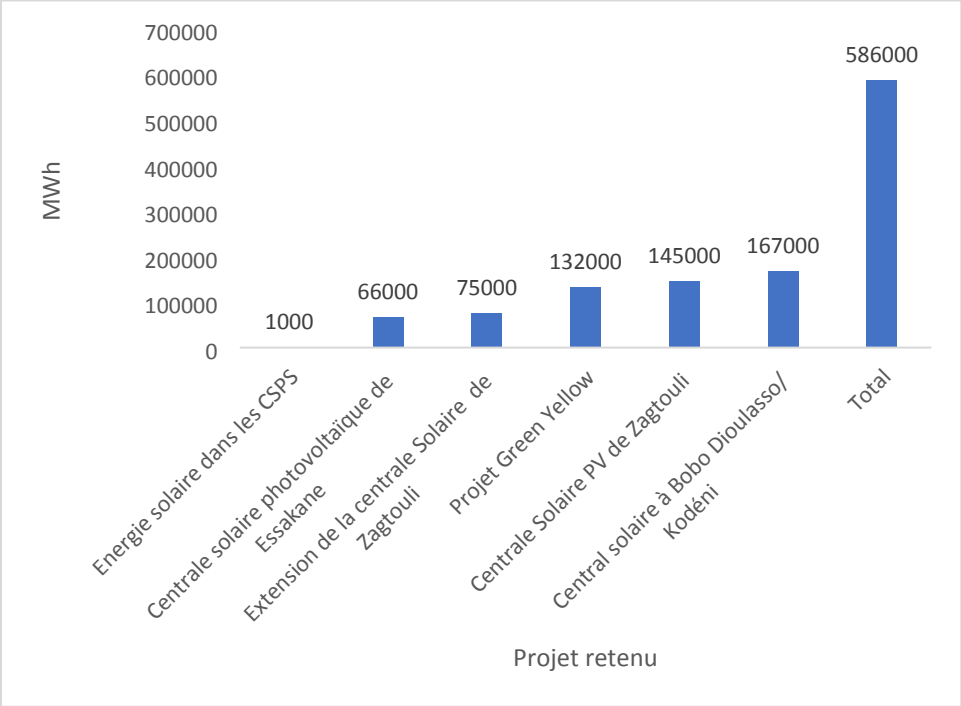

Figure 6: Energy potential of selected projects

3.2.3. GHG emission reduction potential of the actions

The greenhouse gas emission reduction potential of all six selected projects was estimated at approximately 341345 tCO2eq and representing 0.37 percent of the overall GHG reductions expected in the NDC by 2025 and 10.7 percent of the GHG reductions expected from the energy sector. (Figure 6)

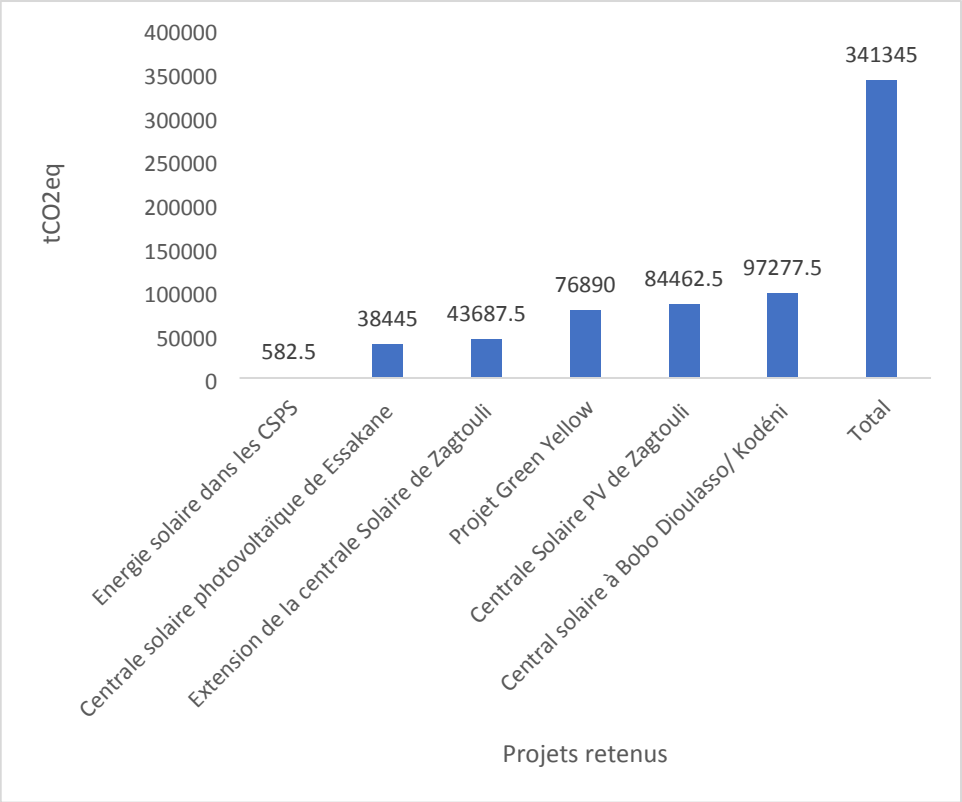

Figure 7: GHG emission reduction potential of selected projects

3.2.4 Simplified marginal abatement cost of GHG reduction from equities

The simplified marginal abatement cost makes it possible to identify projects with high potential for reducing greenhouse gases at low cost as quickly as possible. Its analysis revealed that among the selected projects, the Green Yellow projects in Nagréongo and the Kodéni solar power plant in Bobo-dioulasso are the best projects with reduction potential in the same way as the others but at low cost (Figure 7), all of which come from the private sector

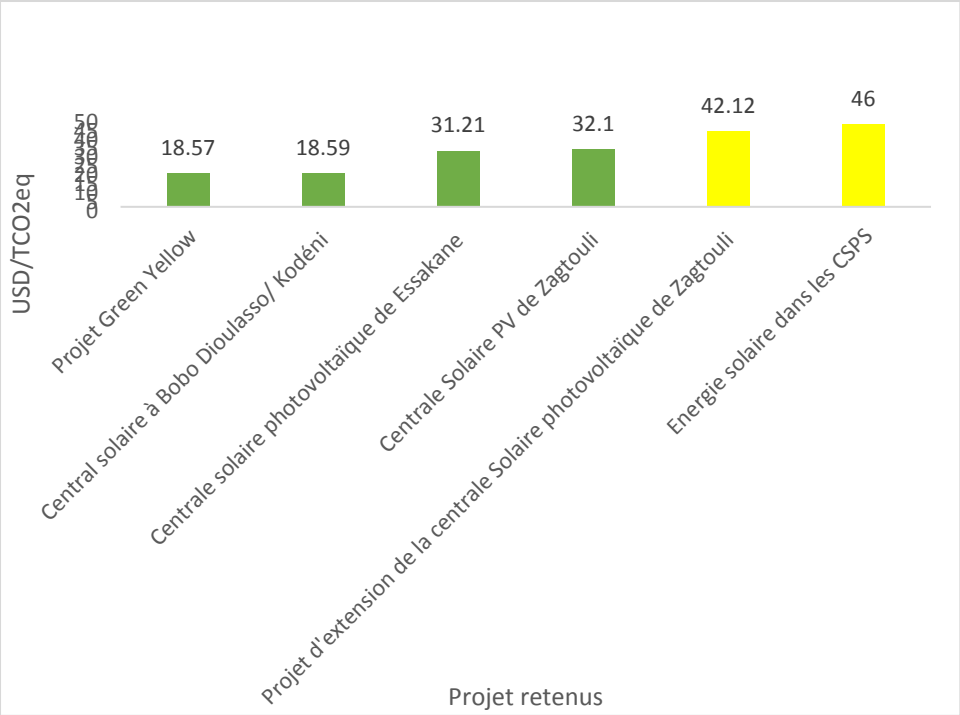

Figure 8: Marginal cost of simplified abatement of selected projects

These two projects are also among the projects that provide the largest energy offers. Thus, in view of their GHG reduction potential, their energy supply coupled with the relatively low cost of implementation seems to be the most accessible and best indicated projects in developing countries such as Burkina Faso. The use of traffic lights to characterize the following projects, the criteria provided by the International Cooperation for Development and Solidarity (CIDSE) has made it possible to obtain the following classifications (Table 3):

Table 3: Classification of projects according to CIDSE criteria using traffic lights

Region	Commune	Locations	Promoter	Selected project
Center	Zagtouli	Zagtouli	SONABEL	Zagtouli Solar PV Power Plant
Center	Zagtouli	Zagtouli	SONABEL	Zagtouli Solar Photovoltaic Power Plant Extension Project (17MWp)
Plateau Central	Nagréongo	Nagréongo	Green Yellow	Green Yellow Project
Sahel	Gorom-gorom	Essakan	SONABEL	Construction of the 15 MWp solar photovoltaic power plant in Essakane
High pools	Bobo dioulasso	Kodéni	Africa Ren	38 MW solar power plant in Bobo Dioulasso/ Kodéni
Boucle du Mouhoun	Dedougou	Dedougou	ECED Mouhoun	Solar Energy Project for Off-Grid CSPS
				Other projects

3.3. EFFECTIVENESS/STATE/LEVEL OF TAKING INTO ACCOUNT THE LOCAL LEVEL IN THE CLIMATE TRANSPARENCY PROCESS IN BURKINA FAS

3.3.1. Knowledge of the Nationally Determined Contribution

Of those interviewed, more than 71% said they were not aware of the Determined Contribution, compared to 28.5% who said they were aware of the NDC

3.3.2. Involvement in the production of national GHG inventories

Also, among interviewees, more than 71% said they had not been involved in greenhouse gas inventories, compared to 28.5% who said they had been involved

3.4.ENERGY ACCESSIBILITY FOR VULNERABLE HOUSEHOLDS

The analysis of the cost indicators of installation of the minimum kits by type of energy shows that the minimum cost for the installation of a 4m3 biodigester under agreement by the national biodigester program is 320,000 CFA francs. Also, in addition to the cost of the kit, to operate a 4m3 biodigester, you need to have about 4 tabulated or semi-tabulated cows to make at least 35kg of cow dung available per day. As for solar kits, it appears that the minimum cost for the installation of a kit approved by the National Agency for Renewable Energies and Energy Efficiency (ANEREE) is about 125,000 CFA francs, which is 2.5 times cheaper than the cost of installing a biodigester. Of these two minimum kits, the solar energy kit seems to be approaching the poverty line in Burkina Faso which is 117500 FCFA. Also, an overall observation of the environment at the household level shows a widespread use of solar kits at the level of vulnerable households, even if these kits are not ANEREE approved kits. Thus, solar energy seems to be the most accessible energy to the household with a false potential to avoid greenhouse gases for all.

4. CONCLUSION

In Burkina Faso, the climate transparency framework is still under construction and is not even known by all actors at the central level, let alone actors at the local level The NDC, which is a planning tool for the reduction of greenhouse gases at the national level, is not as well known by all local actors despite being the second generation of NDCs. However, solar energy, whose source is inexhaustible, accessible to all, coupled with the cost of the minimum installation kit of around 125000 FCFA, relatively low compared to that of the biodigester, seems to be approaching the status of vulnerable households and could be the energy model to be promoted because it also has a high potential to reduce greenhouse gas emissions. Also, the analysis of projects according to the CIDSE criteria highlights the Green Yelow projects, the Kodeni Solar

Power Plant, the Essakane Solar Power Plant and the Zagtouli Solar Power Plant as models of energy projects with high potential for electricity supply and at the same time with a high potential for reducing greenhouse gases at low cost and could be models to be popularized in the country

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