



*Au service
des peuples
et des nations*



Project: Integration of Greenhouse Gas Emission Reductions in Niger's Rural Energy Service Access Program (PRASE-FEM)

Terminal Evaluation Report

December 2016

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Acronyms

ANFICT:	National Agency for Local Authority Funding (<i>Agence Nationale de Financement des Collectivités Territoriales</i>)
CDP:	Community Development Plan, prepared by each rural community and used to develop the architecture of Niger's rural development strategy (PRSD)
CNME:	National Multisectoral Energy Committee (<i>Comité National Multisectoriel Energie</i>)
CO₂:	Carbon dioxide, one of the leading contributors to climate change; the term is also used, generically, to refer to greenhouse gas emissions
DERED:	National Directorate for Renewable and Domestic Energy (<i>Direction des Énergies Renouvelables et des Énergies Domestiques</i>)
DSOs:	Delegated service operators
EC:	European Commission
ECOWAS:	Economic Community of West African States
EF:	ACP-EU Energy Facility
EOP:	End of project
ES/RDS:	Executive Secretariat of the Rural Development Strategy
ESDP:	Economic and Social Development Plan
FA:	Improved stove (<i>Foyer amélioré</i>)
GHG:	Greenhouse gas
IPP:	Imported petroleum products
LPG:	Liquefied petroleum gas
MDGs:	Millennium Development Goals
MEPRED:	Mainstreaming Energy for Poverty Reduction and Economic Development into EU Development Assistance (see http://www.mepred.eu/)
MES:	Modern energy services
MFP:	Multifunctional platforms
MME:	Ministry of Mines and Energy
PASE:	Program for Access to Energy Services of the ACP-EU's Energy Facility, carried out in parallel with the GEF proposal

PMAEPS:	Program to supply drinking water on a small scale via photovoltaic systems (<i>Programme de Mini Adduction d'Eau Potable par Système Photovoltaïque</i>)
PRASE:	Rural Energy Service Access Program (<i>Programme national de Référence pour l'Accès aux Services Énergétiques</i>)
PRASE-FEM:	Global Environment Facility-PRASE proposal to reduce greenhouse gas emissions
PRSD:	Poverty Reduction Strategy Document
PSC:	Project Steering Committee
PUDC:	Emergency Program for Community Development (<i>Programme d'Urgence de Développement Communautaire</i>)
RDS:	Rural Development Strategy
RET:	Renewable Energy Technologies
SDGs:	Sustainable Development Goals
SEFA:	Sustainable Energy Fund for Africa
SME:	Small- and medium-sized enterprises
SNASEM:	National Strategy for Access to Modern Energy Services
SUNREF:	Sustainable Use of Natural Resources and Energy Finance (<i>Stratégie Nationale d'Accès aux Services Énergétiques Modernes</i>)
TCC:	Technical Consultative Committee
TSE:	Specific tax on electricity (<i>Taxe spécifique sur l'électricité</i>)
UMO:	Implementation unit (<i>Unité d'implémentation</i> , units at the community level that manage the DSOs and the deployment of energy services)
WAEMU:	West African Economic and Monetary Union
WSSD:	World Summit on Sustainable Development

Project identification

Country: Republic of Niger

Project title: Integration of Greenhouse Gas Emission Reductions in Niger's Rural Energy Service Access Program

Project number: PIMS 4119 (ID FEM 3796) Award 00061591 and Output 00078086

Project's umbrella Country Program Action Plan (CPAP) program: Capacity-building for the sustainable management of natural resources.

Title of the intervention: Improving access to energy services and promoting renewable energy.

Project's umbrella program impact: populations participate in the sustainable preservation of the environment and natural resources, including water

Program officer: Mahamane Elhadji Lawali, UNDP Niger

Project focal point: Ibrahim Hassane

Implementing Partner: Ministry of Energy and Petroleum (ME/P)

Responsible party: National Directorate for Renewable and Domestic Energy (DERED)

Execution modality: NIM/NEX

Overall project cost at the start of the project in 2012 (US\$): US\$5,468,182 of which US\$1,768,182 allocated by the GEF, US\$200,000 by UNDP and US\$3,500,000 expected in co-financing from other partners.

Areas of intervention: National (institutional and strategic supports) and the Commune of Safo (Maradi region) (operational interventions).

Partners: the project's main partner is the PASE-Safo, with funding from the European Union.

Executive Summary

1. Evaluation framework

The general objective of the Integration of the Reduction of Greenhouse Gas Emissions in Niger's Rural Energy Service Access Program is to: *"promote low-carbon emission solutions to improve access to both energy and modern energy services. Its target beneficiaries include: the populations of the rural Commune of Safo (Maradi region, Madarounfa department), the State and communal actors/decisionmakers and the private sector."*

It one of the first three projects¹ implementing Niger's PRASE² and includes six components: C1) – Institutional capacity-building to reduce greenhouse gas emissions (GHG) under the national Rural Energy Service Access Program; C2) – Reducing GHG emissions in the provision of energy services to decentralized collective infrastructure (including health, education and water); C3) – Reducing GHG emissions in the provision of energy services to productive infrastructure (agriculture and multifunctional platforms); C4) – Reducing GHG emissions in the provision of domestic energy services; C5) – Capitalization and consolidation of actors' capacity and achievements in the area of GHG emissions; and, C6) – Project management.

The four years of project activities launched in 2013 (2013-2016). The goal of this terminal PRASE-FEM evaluation is to assess the achievement of the objectives and draw lessons that can improve the sustainability of the benefits and promote overall improvements in UNDP programs. The evaluation will also identify the project's achievements to be consolidated and capitalized on to continue to scale the experiences of the PRASE-FEM project. In other words, based on the investigation, the evaluation is to provide programmatic guidelines for scaling the project nationally.

The evaluation mission was conducted from 27 November – 15 December 2016, with meetings in Niamey and in the project's area of influence. The analyses and findings are summarized below.

2. Results of the project analysis and evaluation

Regarding implementation of the recommendations included in the end-August 2015 mid-term evaluation:

- After the logical framework and the priority activities were redeployed, the activities were refocused, which contributed to achieving the results;
- Component 5 was deleted and most of its remaining activities and resources were assigned to achieving Component 1 results (Building institutional capacity), specifically to develop and validate the main tools for governing rural electrification and rural residents'

¹ The first three PRASE projects are: PRASE-FEM, PASE Safo and the project to electrify 50 villages.

² National Rural Energy Service Access Program (the national response to the White Paper prepared by the Economic Community of West African States (ECOWAS) and the WAEMU on energy service access).

access to modern energy services (including institutional, legal and regulatory frameworks and operating and pricing schemes for energy services). To that end, tools and a governance guide were developed based on high-quality studies;

- An exit strategy was developed (information transmission, coordinating and guidance system), but little progress was made because of a lack of synergy between ANPER (a new actor slow to come on the scene) and the DSOs/Commune of Safo. However, the women's management committees (WMCs) performed quite in terms of managing the multifunctional platform (MFP).

- Although international technical assistance for analysis and coaching on developing and validating the sectoral governance tools was not mobilized, the project team and UNDP performed this role. A monitoring-evaluation unit and an ANPER cooperation framework could be considered for a program to scale the achievements more broadly.

2.1 Project relevance

In terms of Niger's economic, energy and environmental approach and in accordance with the international agenda on climate change and resilience, PRASE-FEM is relevant and meets the needs and expectations of the beneficiary populations and targets. It is in line with the objectives of the Economic and Social Development Plan (PDES, 2012-2015+), the National Strategy for Access to Modern Energy Services (SNASEM, validated in 2006) and current regional and global initiatives, such as: (i) Inclusive Green Growth of the United Nations Economic Commission for Africa (UNECA); (ii) food security (FAO); (iii) the United Nations' Sustainable Energy for All (SE4All); (iv) the various Climate Conferences (COP); (v) the Regional Initiative for Sustainable Energy of the West African Economic and Monetary Unit (WAEMU); and, (vi) the White Paper prepared by the Economic Community of West African States (ECOWAS) and the WAEMU.

The project's challenge is to lift approximately 70,000 people out of poverty using Renewable Energy Technologies (RET) – low-carbon technologies – and contribute to achieving the SDGs. The project also addresses nine of the 13 SDGs: no poverty, zero hunger, good health and well-being, access to quality education, clean water and sanitation, affordable and clean energy, decent work and economic growth, climate action and reduced inequalities.

2.2 Quality of the design of the action

The project includes 12 intermediate results grouped into five components (see above, C1, C2, C3, C5 and C6) and the following general objective: *to promote low-carbon emission solutions to improve access to both energy and modern energy services*. Using an integrated approach, it seeks to transform rural communities by developing its targets' and beneficiaries' capacities by training human resources, setting up infrastructure providing access to sustainable energy services, implementing functional consultation frameworks, supporting the development of economic activities that use energy services and capacity-building among national actors. The project design is strong in this regard in that it takes into account support actions and cross-cuttings aspects linked to the gender approach and the environment.

However, the indicators used to monitor and evaluate the project are not all SMART, which hampers the monitoring and evaluation of the implementation of certain project components.

With regard to institutional and regulatory concerns, the project has used high-quality studies to develop energy governance tools, beyond the support and capacity-building for State and

private structures. These tools, implemented via decrees applying the new electricity code, should ensure that Niger makes the qualitative leap to an appropriate, environmentally-friendly energy transition that improves living conditions for rural populations. Suggestions have been made in this regard to the main stakeholders.

In terms of the populations and other beneficiary partners (the Safo village government, schools and health centres), they have taken real ownership of the project's installations. Further, the revenue-generating activities emerging around the multifunctional platforms and water points can contribute to women's empowerment.

Ultimately, the quality of the design of the PRASME-FEM project could be improved, with fewer risks in the context of a wider-reaching program, first on a regional and, subsequently, a national scale.

2.3 Implementation efficiency

With the exception of Eco Act, which did not meet its commitments (US\$800,000, or 14.63% of total financing), GEF and UNDP funds (US\$5,468,182, of which US\$200,000 from UNDP, US\$1,768,182 from the GEF and US\$800,000 from the Government of Niger) were mobilized smoothly, without interruption of the activities and at an average disbursement rate of approximately 100%. Despite this obstacle (lack of Eco Act participation), which will likely have a negative effect on the expected results, the project coordination, working with the UNDP supervision team, demonstrated its adaptability and met the deliverables timeline (power provided by the multifunctional platforms and access to electricity thanks to the photovoltaic facilities), particularly in terms of components C2 and C3. Together with high-performing technologies, those components are driving integrated rural development in the Commune of Safo. Thus, the resources, although limited, were used efficiently.

Relationships among the Ministry of Energy, the project coordination and the UNDP Country Office are strong. Each party has played its role efficiently, working with the CNME (National Multisectoral Energy Committee), at least for the period during which facilitation was needed at this level.

2.4 Effectiveness

The trends noted in the mid-term evaluation report were confirmed at the end of the project, as noted in the table of outcome indicators. Thus, the level of activities and results is:

- i) **Highly satisfactory** for Components 2 and 3 regarding the provision of equipment and infrastructure for accessing energy services for productive uses (including solar pumps for irrigation and multifunctional platforms as women-managed, rural micro-enterprises) as well as social ones (electrification of schools and health centres);
- ii) **Satisfactory** for the component addressing socio-organizational engineering and literacy of the WMC (Women's Management Committee) of the MFPs (Multifunctional Platforms); and
- iii) **Unsatisfactory** in terms of technical training for the energy services' beneficiaries/users and for all of the Component 1 results in terms of institutional capacity-building and implementing the DSO, the system's Gordian knot.

This evaluation does not address Component 4 because it was shifted to the PASE Safo project.

To date, the expected results from Components 2 and 3 have been achieved at a level above 100%. However, to ensure that the facilities are sustained – particularly after-sales service - the

DSO must be closely involvement. The achievements in the area of electrification infrastructure and the populations-targets' access to the promised energy services thus still need to be consolidated and sustained. The Component 1 result has been executed at 80%, in the hope that the government will take appropriate measures to implement the texts and recommendations noted in the governance tools that the project developed. Component 4 was executed at least 50%, given the synergy between PASE-Safo and PRASE-FEM before the latter was implemented and the development results of improved stoves.

A review of the Objectively Verifiable Indicators (OVI) shows that the results of the main components (C1, C2 and C3) were achieved, but that the government has yet to consolidate Component 1. In short, the project's goal has been achieved overall in light of the positive transformation underway in its area of influence, specifically, *“reduced carbon emissions in the energy sector in Niger and access to modern energy services for approximately 70,000 rural residents, thanks to the project.”*

Component 5 has been properly executed, for now, but the extent of ownership, capitalization and consolidation of the achievements cannot be determined until several months post-project have passed. The 100% disbursement rate for Component 6 shows that it was executed properly, unlike many projects in Africa. In addition, the audit reports do not identify any management failings, which is a plus for the project and the UNDP Country Office.

2.5 Outcomes and measurable impacts

Based on discussions with the populations and the targets, the project's benefits are both positive and measurable (see illustrations in the Annex). Thanks to the renewable energy equipment that provides power or ensures access to electricity, the project is a model of rural integrated development. It uses a low-carbon approach to meeting basic needs and, even, to supporting revenue-generating activities in line with the SDGs: milling cereal, market gardening, providing electricity to school and health facilities, ensuring the cold chain to preserve medicines, supplying domestic hot water and enabling revenue-generating activities that support women's empowerment. One challenge remains to be met: sustainability – in terms of the maintenance of the equipment and after-sales service. This is related to the size of the market - the more infrastructure installed, the likelier it is that an operator will make an effort to maintain these facilities – which seems to indicate that despite the results achieved through this pilot phase, the government and its partners must take steps to mainstream the approach.

2.6 Viability and outlook for sustainability

Of course, the DSO's financial statements were not reviewed, but it does have considerable experience in the area of village water supplies and is working hard to identify financial partners. This also implies that it has managerial capacity. However, its involvement in ensuring the sustainability of the modern energy services is still limited. Given its strategic position in the local energy system, as of the third year, the DSO should have been able to experiment with an approach to billing for services rendered and a maintenance system in order to develop a municipal energy market. Even if the DSO's results indicators are inadequate, the interviews confirmed a desire to address concerns about the project's viability and sustainability. With this in mind, the mission provided advice on submitting business plans to the green funding windows that are in greatest demand today. They include the green finance label of the Agence Française pour le Développement (AFD), known as SUNREF (Sustainable Use of Natural Resources and Energy), and the Sustainable Energy Fund for Africa (SEFA), a multi-donor

trust fund administered by the African Development Bank (ADB). These two windows are presented in Annexes 4 and 5.

3. Lessons and recommendations

3.1 Main lessons

The five main lessons (or experiences) drawn from this project evaluation are as follows:

- PRASE-FEM is a very relevant project in line with the economic guidelines of the Government of Niger and all of the global initiatives that the Government supports, including the SDGs, SE4ALL and COP. However, the implementation of certain project components revealed problems in terms of effectiveness.
- While only two-thirds of the planned resources were mobilized, the funds raised were used carefully and the technical execution rate is strong. This shows that the project's management unit, working with the UNDP's supervision services, has developed strong managerial and adaptive capacities.
- Despite the overall satisfactory results, the project has pilot project status, which covers only one commune (70,000 residents) of the country's 268. It should be scaled up nationally, which would also provide additional experience with regard to the country's cultural diversity.
- Despite this pilot project status, the populations and the target beneficiary groups responded enthusiastically to the improved living conditions resulting from the energy services delivered to meet needs in the areas of health, education and revenue-generating activities, with indications of women's empowerment around the multifunctional platforms. From this perspective, the project is a success story. Its achievements need to be consolidated, looking to meet the demand for biofuel from neem oil, expand animal traction (already well-introduced in the commune) and promote the biogas potential of livestock.
- The project is making changes in beneficiaries' daily lives, particularly those of women who are launching income-generating activities through the multifunctional platforms. The beneficiaries' ownership of the ERTs and expansion of the DSO's business into rural electrification and the low-carbon energy services access market segment thus constitute project achievements and assets that should be pursued and enhanced.

3.2 Main recommendations

The four main recommendations of this evaluation are as follows:

Recommendation 1: Ministry of Energy (ME):

To improve Niger's energy governance, the government should adopt the texts proposed by the project and take appropriate measures and initiatives to increase rural residents' access significantly to modern, low-carbon energy services. To that end, the roles of the ANPER and the CNPE should be strengthened, creating synergy among the institutions cooperating in rural electrification and pooling resources.

Recommendation 2: PRASE-FEM:

In consultation with the grassroots actors in the Commune of Safo, PRASE-FEM should consider installing a neem- and jatropha curcas-based biofuel production plant, which could contribute further to women's empowerment and generate income for young people. The National Solar Energy Centre (CNES), the West African Science Service Centre on Climate

Change and Adapted Land Use) and the School of Mining, Industry and Geology (EMIG) should be involved.

Recommendation 3: Government and UNDP:

The Government and UNDP should develop, as soon as possible, a similar PRASE-FEM II program. It should be scaled to other suitable areas of the country, integrating animal traction and biogas promotion for clean cooking and lighting.

Next, a feedback workshop on this new program should be held in Maradi, to include the relevant technical and financial partners and the country's potential DSOs. The agenda should include visits to the success stories in the project's area of influence.

Recommendation 4: DSO

The DSO should continue to provide energy services and supervise the WMCs and the young people in preparing funding requests for revenue-generating activities based on the project's achievements and submit them to the SUNREF/AFD, SEFA/ADB and other windows. It should focus first on the renewable energy services market in the Maradi region.

Acknowledgements

The PRASE-FEM terminal evaluation mission was conducted under appropriate resource and organizational conditions, although a national consultant was not hired because the process did not generate suitable applicants. Fortunately, this was more than compensated for by the valuable assistance of Abdoul Aziz Moussa, Technical Assistant to the PRASE-FEM Coordinator. The proper classification of the key documents, both at the project and UNDP, the availability of the appropriate managers and the discussions were also very helpful.

We would thus like to thank the main managers involved in the project, specifically:

- Nassourou Bello, DERED Director, temporarily replacing Issa Maidaji, Director General for Energy, on mission;
- Lawali El Hadji Mahamane, UNDP Energy and Environment Program Officer and his team;
- Ibrahim Hassane, PRASE-FEM Coordinator and his employees.

We also thank all of the members of the rural Commune of Safo, particularly the Mayor and the Delegated Services Operator.

Introduction

Niger is a landlocked Sahelian country. Its total area is 1,267,000 km², three-quarters of which is desert. The soil is generally poor and potential farmland, estimated at 15 million hectares, represents less than 12% of the country's total land area. The soil, mostly dunes, is minimally productive and very sensitive to wind and water erosion.

Niger's population is estimated at 17,807,117 (2013), 83.8% of which is rural. The population is distributed unequally across the country and earns most of its income from agriculture and livestock. The population is predominantly female (50.6%) and young (more than 45% under 20 years). According to the 2012 general population and housing census (RGPH), the population growth rate is 3.9%, one of the highest in the world.

In Niger, energy services in the rural environment involve the traditional non-renewable, inefficient use of local biomass for cooking, heating and lighting and lighting solutions that include candles, batteries and kerosene. The energy deficit for lighting, power sources and modern cooking has negative socioeconomic and environmental impacts for sustainable development. The poor feel the consequences most severely, as they devote a significant share of their meagre income to meeting their basic energy needs. The result is also negative for small informal entrepreneurs, because they cannot work or conduct activities that requires energy. Consequently, they are deprived of all opportunities to pursue viable economic development.

The electricity access rate, which is rising slowly across the country, was 9.5% in 2013, compared to 6.5% in 2003, with major gaps between urban and rural areas (respectively, 47% and 0.4%).

The PRASE-FEM project was launched in this context. It is in line with the Country Program Action Plan (CPAP 2009-2013), which reflects the implementation template of the Cooperation Program between Niger and the United Nations Development Programme (UNDP). The CPAP 2009-2013 was composed of capacity-building programs focused on the following three areas: (i) quality governance, crisis prevention and recovery, (ii) poverty reduction and accelerated achievement of the WDGs, and (iii) sustainable development of natural resources.

The PRASE-FEM project is the first phase of Niger's Rural Energy Service Access Program (PRASE) and should make a significant contribution to achieving the WDGs.

Designed on a multisectoral basis, PRASE-FEM seeks to promote low-carbon solutions to improve access to energy and energy services for the poorest Nigeriens. Given the multiple actors involved, it should improve synergies and consultations among the State's public services (water, energy, agriculture, health and education), their departments and agencies, local municipalities, NGOs, the private sector and other actors. Given the isolation and distance of the project's zone of influence and today's energy and climate issues, PRASE-FEM was conceived as a development model appropriate to conditions in sub-Saharan Africa, with Renewable Energy Technologies (RET) in line with the WDGs (now SDGs). This is clearly one of the goals of the Nigerien government. In addition, the project is in line with the government's objectives to reduce poverty in rural areas, with support from the GEF-UNDP.

1. Goal of the evaluation

The terminal evaluation complies with UNDP and GEF evaluation policy and planning requirements. A 2015 mid-term evaluation and 2016 terminal review are mandatory and, thus, required to measure the achievement of the main PRASE-FEM PIMS 4119 (ID FEM 3796) project outputs and outcomes.

In accordance with the TORs, the evaluation's objectives are to assess the achievement of the project's objectives and to draw lessons that can improve the sustainability of its benefits and promote overall improvements in UNDP programs. The evaluation will also identify the project's achievements to be consolidated and capitalized on in order to scale the experiences of the PRASE-FEM project (achievements to be taken into account in developing a national Energy Services Access Program). In other words, the evaluation team, led by the international consultant, is to provide programmatic guidelines to scale the project to the national level.

2. Scope of the evaluation

The PRASE-FEM PIMS 4119 terminal evaluation was requested by the UNDP country office and conducted in accordance with the directives set forth in the document, Guidance for Conducting Terminal Evaluations of UNDP-Supported, GEF-Financed Projects.

This terminal evaluation of the PRASE-FEM project covers the period January 2013³ (the project's actual launch date) to December 2016 (the end of GEF financing and scheduled closing date). The consultant team carried out missions in Niamey and Maradi region (Madarounfa department) at project sites in the rural Commune of Safo.

3. Methodologies

The methodological approach was based on a documentary review and group and individual interviews with target individuals representing the main stakeholders involved in drafting, implementing and monitoring the PRASE-FEM project. The team used a purposive, non-random sampling method. It involved selecting individuals to be interviewed based on the data and information needed to address the evaluation questions in the evaluation matrix. In addition, the secondary data collected and the individuals chosen for the interviews were also guided by the requirement to triangulate data and information.

5.1 Documentary review

The consultant-evaluator reviewed various background documents addressing the national and sectoral policies. The project coordination and the UNDP provided many project-related reports, specifically, implementation and monitoring reports, studies and statutory documents (project document or financing agreement, progress reports). A list of these bibliographic references appears in Annex 3.

³ The PRASE/FEM activities were initially scheduled to launch in September 2011, but were delayed because of political events. As a result, the project launch meeting was held on 12 December 2012.

5.2 Interviews

Interviews began with a briefing meeting in Niamey with the energy/environment program officer, the PRASE-FEM project coordinator and the latter's assistant.

Other interviews were held in Niamey with the institutional managers involved in the project. Additional interviews were then held in the Commune of Safo, where the evaluation team met with the mayor, the school superintendent, managers of integrated health centres, women's management committees of the multifunctional platforms, and others. The list of interviewees may be found in Annex 4.

5.3 Analytic framework

The analytic framework adopted relies on classic evaluation criteria, which are presented explicitly in the mission's terms of reference:

- **relevance:** project design and analysis of the results framework/logical framework;
- **effectiveness:** progress toward achieving the results;
- **efficiency:** project implementation and adaptive management; and,
- **sustainability:** financial socioeconomic and environmental risks that could threaten the program's sustainability, institutional framework and governance.

Other criteria were also taken into account, including:

- **Financing/cofinancing:** main financial aspects of the project, specifically the share of cofinancing planned and obtained;
- **Integration:** extent to which the project integrated successfully with UNDP priorities, including poverty reduction, improved governance, prevention of natural catastrophes and recovery in their wake and focus on gender issues;
- **Impact:** extent to which the project had impacts or made progress toward them; and,
- **Conclusions, recommendations and lessons:** the conclusions will be based on evidence from the terminal evaluation, in light of the outcomes. Recommendations will be presented in the form of brief proposals aimed at key interventions. The experiences will be presented as successes or lessons learned, which will be the basis of successful project scaling.

5.4 Evaluation questions

The process will involve listing, identifying and analysing the actions and activities executed under the PRASE-FEM project. The following questions will be asked:

- What is the level of execution of the planned activities?
- What are the accomplishments and shortfalls?
- What difficulties and constraints did the project encounter?
- What human, material and financial resources were used?
- Who are the direct and indirect beneficiaries?
- Were gender, environmental, capacity-building and results-based management taken into account during implementation?

- Were national partners and development partners involved?

5.4 Limitations and corrective measures

The main limitation was the lack of a national consultant because the process did not generate suitable applicants. Fortunately, this was more than compensated for by the valuable assistance of Abdoul Aziz Moussa, Technical Assistant to the PRASE-FEM Coordinator. The proper classification of the key documents, within the project and UNDP, the availability of the appropriate managers and the discussions were also very helpful.

5.5 Mission Schedule

Days	Activities
Sunday 27/11/2016	Consultant arrival
Monday 28/11/16	Consultant and UNDP team meeting
Tuesday 29/11/2016	Consultant and project team meet
Wednesday 30/11/2016	Consultant reviews documents and organizes the field mission
Thursday 1/11/2016 – Tuesday 6/11/2016	Consultant/ project team visit the Commune of Sofa
Wednesday 7 – Sunday 11 December 2016	Write draft report and present main conclusions and recommendations
Tuesday 15 December 2016	Submit final report

Table 1: Mission Schedule

I. National and international context of the formulation and implementation of the PRASE-FEM project.

Niger's socioeconomic context, like that of the other ECOWAS member countries, is characterized by high levels of poverty, which particularly affect rural areas. Reducing poverty and socioeconomic inequalities is one of Niger's national priorities. The Government is committed to pursuing efforts to reduce poverty and inequality by prioritizing those sectors in the rural environment that provide the greatest benefits to the most impoverished and vulnerable groups (see Strategies for Accelerated Development and Poverty Reduction, currently being implemented).

The major challenge facing the Government of Niger is to contribute to sustainable food and nutritional security by strengthening agro-sylvo-pastoral industries at every link in their value chain (production, processing, preservation and marketing). The Government's priorities converge in the area of implementing effective "pro-poor" strategies, first, on behalf of the most economically vulnerable populations (the unemployed, women, children in difficulty and rural households) by improving targeting and greater social equity in distributing the benefits of economic growth and mining.

These challenges and priorities have major repercussions on the demand for energy from the rural sector in general and from agriculture, broadly speaking, particularly in terms of access to power (mechanization), electricity and modern fuel. All are included in the PRASE, first, and in relation to the Sustainable Energy for All (SE4All-2030) initiatives, second.

The main strategic and programmatic frameworks underlying electrification in Niger over the last 10 years are the: i) Energy Policy Declaration, July 2014; ii) National Strategy for Access to Modern Energy Services (SNASEM), validated in 2006; iii) Rural Energy Service Access Program (PRASE, 2010-2018); iv) Emergency Program for Electricity Supply for Niamey in 2011; v) Government Declaration of General Policy (DPGPM of 16 June 2011); and vi) Economic and Social Development Plan (PDES, 2012-2015).

Many of the tools needed for proper governance of the electricity sector are lacking; specifically, those needed for the development of rural electrification, including institutional and regulatory frameworks and operating and pricing schemes.

The electricity access rate, which is rising slowly across the country, was 9.5% in 2013, compared to 6.5% in 2003, with major gaps between urban and rural areas (the access rate in urban areas is 47% on average, compared to 0.4% in rural areas).

Niger is a member of many sub-regional organizations (including ECOWAS, WAEMU, the Permanent Interstate Committee for Drought Control in the Sahel (CILSS), and the Niger River Basin Authority (ABN)). It is also a member of the African Union (AU) and the United Nations (UN). Niger has committed to the Millennium Development Goals (MDGs), the ECOWAS/WAEMU Regional White Paper on access to modern energy services (ASE), the WAEMU Common Energy Policy (PEC) and the global initiative, Sustainable Energy for All by 2030. It also participates in all global climate and sustainable development initiatives

(specifically, mitigating climate change by reducing greenhouse gas emissions and adapting to climate change).

As economic poverty is correlated with energy poverty, which is characterized by the lack of or limited access to modern energy services, on 12 January 2006, the Member States of ECOWAS and WAEMU decided to draft a White Paper on access to energy services for rural and peri-urban populations in order to achieve the MDGs (adopted by the ECOWAS/WAEMU Heads of State on 12/1/2006 in Niamey (Decision A/DEC.24/01/06) and to pursue an ambitious regional policy to increase their populations' access to modern energy services. The objective of this policy was to provide access to modern energy services to at least half of the population by 2015; that is, to 36 million additional households and more than 49,000 additional towns and villages in the ECOWAS region. This entails a quadrupling of the number of persons served in 2005.

The United Nations Development Programme (UNDP), as an ECOWAS strategic partner in providing access to modern energy services for rural and peri-urban populations, provided support to all ECOWAS member countries (including Niger) to achieve these objectives.

The Government of Niger translated this shared goal of the ECOWAS Member States into a national vision by adopting a Rural Energy Service Access Program (PRASE), approved on 7 April 2009 and adopted on 4 January 2010 (by Presidential Decree No. 2010-004/PRN/MME).

PRASE was designed as a cross-cutting, umbrella program that builds on the DSRP, is intended to be long-term, and seeks to gradually cover the entire country, based on strong accountability from national and local actors. It constitutes Niger's response to the regional process that ECOWAS initiated in 2005 and its contribution to implementing the White Paper on access to energy services for rural and peri-urban populations to achieve the MDGs.

Niger has also committed to two new global initiatives, Sustainable Energy for All (SE4ALL) and the Green Climate Fund. The former has set three key objectives to be achieved by 2030: 1. Achieve universal access to modern energy services (electricity, power and domestic cooking fuel); 2. Double the renewable energy share to achieve a target of at least 30% renewables in the energy mix; and, 3. Double the overall rate of energy efficiency (with more efficient equipment and production and consumption methods). The pro-sustainable development and pro-climate objectives and actions seek primarily to: 1. mitigate climate change by reducing greenhouse gases (GHG); and 2. adapt to climate change to address or mitigate its effects.

The UNDP, which is supporting the Government of Niger in its efforts to eliminate poverty, sharply reduce inequality and exclusion, and support sustainable development, conducted its interventions through the Country Program Action Plan 2009-2013 (CPAP 2009-2013), built on three priority programs: (i) Capacity-building for quality governance, crisis prevention and recovery, (ii) Capacity-building for poverty reduction and accelerated achievement of the WDGs, and (iii) Capacity-building for the sustainable development of natural resources. The Project to Integrate the Reduction of Greenhouse Gas Emissions into Niger's Rural Energy Service Access Program (PRASE-FEM), which is the subject of this mid-term evaluation, is connected to Program 3 of the CPAP 2009-2013 and to the Resilience Program of the current CPAP (2014-2018).

This is the national, regional and global context in which this evaluation was conducted.

II. Project content

2.1 Project goal and objectives

The project goal is to reduce GHG emissions through low-carbon development and access to modern energy services.

The project seeks to promote low-carbon solutions to improve access to both energy and energy services. The project was design to remove certain barriers (mentioned in the Prodoc) and enable a rapid transformation of the low-carbon energy markets in rural Niger. Each component will address one or more categories of barriers.

The objective of the PRASE-FEM is to provide support and build the necessary capacity at the national level to support implementation of the PRASE nationally, with an emphasis on low-carbon development solutions by providing access to low-carbon modern energy and by easing basic demand for fossil fuel.

To that end, PRASE-FEM will demonstrate the advantages of the approach chosen via direct implementation in a specific rural community, the Commune of Safo. Achieving this objective will contribute to achieving the project's objective, which is to reduce energy-related CO2 emissions in Niger.

2.2 Project components

The project initially included five components. Two were implemented nationally, covering the entire country (1 and 5), while the three others (covering district energy services for domestic production) involved a pilot project for a large-scale demonstration of the PRASE model within the rural community of Safo. This two-pronged approach sought to create the conditions for implementing the PRASE program at the national level, while demonstrating its viability and advantages through actual application, with the lessons from the field components informing thinking on the national components. Those, in their turn, should support decision-making for a better approach in the field.

To recap, the project's components are:

- Component 1: Building institutional capacity and strengthening the regulatory framework
- Component 2: Providing low-carbon solutions for integrated rural services
- Component 3: Providing low-carbon solutions for production services
- Component 4: Providing low-carbon solutions for domestic energy services
- Component 5: Building and taking advantage of local capacity to provide energy services in rural environments.

It should be noted that Component 4 is not covered in this evaluation because it is addressed under the PASE-Safo, in synergy with PRASE-FEM.

A sixth component, related to project management, was considered.

2.3 Budgetary planning

The table below summarizes the funds the project received between 2013 and 2014 and the corresponding rate of disbursement. The rates are all close to 100%, which indicate the project team's management abilities and its mastery of the annual work plans and procedures in effect.

PRODOC Budget (US\$)				Expenditures (US\$)			
Year	GEF	UNDP (Trac)	Total	Years	GEF	UNDP (Trac)	Total
Year 1	484,500	60,000	544,500	2013	318,838.98	43,050.57	361,889.55
Year 2	458,182	47,500	505,682	2014	454,529.56	113,040.75	567,570.31
Year 3	428,000	45,000	473,000	2015	449,731.89	72,288.38	522,020.27
Year 4	397,500	47,500	445,000	2016	516,966.66	26,236.30	543,202.96
Total	1,768,182	200,000	1,968,182	Total	1,740,067.09	254,616.00	1,994,683.09
				% /Budget PRODOC	98.41	127.31	101.35

Table 2: Budget and expenditure summary

2.4 Changes made during implementation

A US\$800,000 shortfall was observed during implementation after Eco Act (private sector) withdrew. However, this did not have a significant impact on the results as the component in question was cofinanced by the PASE-Safo Project (European Union financing). Removal of Component 4 from the PRASE-FEM project reduced the budget, which improved the results in terms of the other components.

In institutional terms and in the context of decentralization, the national agency for investment in local government (ANFICT) did not fulfil its responsibilities to the project. The agency's creation has been delayed and it is still not fully operational.

III. Performance evaluation

3.1 Relevance of the PRASE-FEM project

In terms of Niger's economic, energy and environmental approach and in accordance with the international agenda on climate change and resilience, we conclude that PRASE-FEM is **relevant** and meets the needs and expectations of the beneficiary populations and targets. It is in line with the objectives of the Economic and Social Development Plan (PDES, 2012-2015+) and the National Strategy for Access to Modern Energy Services (SNASEM, validated in 2006) and the 3N initiative. It is also consistent with current regional and global initiatives, such as: (i) Inclusive Green Growth of the United Nations Economic Commission for Africa (UNECA); (ii) food security (FAO); (iii) the United Nations' Sustainable Energy for All (SE4All); (iv) the various climate conferences (COP); (v) WAEMU's Regional Initiative for Sustainable Energy; and, (vi) the ECOWAS/UEMOA White Paper.

The challenge that the project seeks to address is to lift approximately 70,000 people out of poverty using Energy Renewable Technologies (ERT) – low-carbon technologies – and contribute to achieving the SDGs. In addition, the project addresses nine of the 13 SDGs: no poverty, zero hunger, good health and well-being, access to quality education, clean water and sanitation, affordable and clean energy, decent work and economic growth, climate action and reduced inequalities.

3.2 Quality of the design of the action

With 12 intermediate outcomes grouped into five components (see above, C1, C2, C3, C5 and C6), the project's formulation includes a general objective: *to promote low-carbon emission solutions to improve access to both energy and energy services*. Using an integrated approach, it seeks to transform rural communities by developing its targets' and beneficiaries' capacities by training human resources, setting up infrastructure to provide access to sustainable energy services, implementing functional consultation frameworks, supporting development of economic activities that use energy services and capacity-building for national actors. From this perspective, the project design is strong in that it takes into account the support actions and the cross-cuttings aspects linked to the gender approach and the environment.

However, the indicators that allow the project to be monitored and evaluated the project are not all SMART, which hampers monitoring and evaluation of the implementation of certain project components.

With regard to institutional and regulatory concerns, the project has used high-quality studies to develop energy governance tools, beyond the support and capacity-building for State and private structures. These tools, implemented via decrees applying the new electricity code, should ensure that Niger makes the qualitative leap to an appropriate, environmentally-friendly energy transition that improves living conditions for rural populations. Suggestions have been made in this regard to the main stakeholders. When they are addressed, they should make a significant contribution to help ANPER become operational.

The populations and other beneficiary partners (the Safo local government, schools and health centres) appear to have taken ownership of the project and its facilities. Further, the revenue-generating activities emerging around the multifunctional platforms and water points can contribute to women's empowerment.

Overall, the quality of the design of the PRASE-FEM project could be improved, with fewer risks in the context of a wider-reaching program – first, regionally and, subsequently, nationally.

3.2 Effectiveness of the implementation of the PRASE-FEM project

3.2.1 Effectiveness of impact I: Strengthening PRASME structures and implementation mechanisms in rural areas.

The development and adoption of the main tools for governing rural electrification, in general, and for rural residents' access to modern energy services (specifically, legal and regulatory frameworks and operating and pricing schemes governing decentralized rural electrification and access to energy services are still being developed) contributed significantly to the recommendations taking hold within and being considered by the government, through the Ministry of Energy. A new electricity code (Law No. 2013-15 of 17 May 2016) and several implementing decrees were adopted in 2016, promoting rural electrification and renewable energy.

3.2.2 Effectiveness of impact II: Low-carbon solutions for integrated rural services.

Solar electrification of schools improved the quality of girls' instruction and their success rate. Specifically, 12 classes in five villages benefited photovoltaic solar electrification (Baban Rafi, Baguega, Kaima, Lili and Moulé Saboua), affecting more than 9,000 people.

An unexpected impact for schools is that other students from nearby villages use the night time lighting to review their lessons.

Two integrated health centres (Lili and Baban Rafi) were electrified and received solar refrigerators to store vaccines and solar water heaters, benefiting more than 4,500 people. Health services were improved and morbidity was reduced.

A backup solar system was also installed at the Safo town hall. With this system, town government employees can work for at least eight hours/day without losing electricity.

3.2.3 Effectiveness of impact III: Low-carbon solutions for production services (agriculture and mechanical power for local processing).

In conversations with beneficiaries, they unexpectedly referred to climate change, showing that they have already incorporated this issue in their thinking and actions, thanks to the project's awareness-raising activities and trainings.

- 252 market gardeners now use solar pump kits in place of diesel-powered motor pumps, reducing the commune's GHG emissions significantly.
- 98 hectares in 65 market garden sites are now farmed by means of a solar pumping system (392 agricultural units, where 1 agricultural unit = 0.25 hectares).
- 150 new jobs were created, the land area farmed increased by 50% and yields rose by 45%.
- The evaluation of the 2014-2015 campaign showed that market gardeners generated 320,385,994 FCFA in sales, or 4,929,015 FCFA/site and 1,271,372 CFA/market gardener.

The members of the women's management committees have become expert in using neem oil as a biofuel in the multifunctional platforms. Some of these committees are receiving orders for crushed neem seed, which is then used as an organic pesticide.

Because the project's area of influence is also a livestock area where oxen are stabled, the promotion of biogas for cooking, lighting and cooling (which is consistent with low-carbon integrated rural development activities) could be incorporated in anticipation of a larger-scale program. **3.2.4 Effectiveness of impact IV: Low-carbon solutions for domestic energy uses.**

Despite EcoAct's withdrawal and the steering committee's decision to eliminate the component, that component did have an impact, thanks to PASE cofinancing, which absorbed it entirely.

This component included:

- Training for 10 blacksmiths
- Distribution of 2,000 improved stoves
- Development of a business partnership between blacksmiths, working with the operators responsible for marketing the improved stoves, and energy stores (offering other domestic fuel products and accessories) in certain villages.

3.2.5 Effectiveness of impact V: A sustainable framework has been created to replicate the DSO approach in providing energy services in rural areas.

An outreach strategy was initiated via capitalization trainings for the actors, specifically including CNME members and the ministry's managers.

This entire experience, involving the lessons learned from the project, should be documented and validated in a handbook on capitalization to facilitate its ownership. It would be helpful during the project's scale-up phase.

The table below summarizes the results and outputs.

Table 3: Summary/analysis of results and outputs

Project components	Sub-components	Rating/progress towards achieving the expected outcome	Evaluation rationale	
			End-of-project status (early December 2016)	Outlook
Institutional capacity-building and strengthening the regulatory framework	1.1 – The staff of the relevant national, regional and community institutions are trained, made operational and capable of designing, planning and implementing energy access programs in rural areas	Encouraging, but additional time (post-project) needed to develop a more detailed understanding of all aspects of project ownership	a) The staff of the relevant national, regional and community institutions are trained and made operational thanks to the project – case of CNME. However, communication is not yet strong enough for national, regional and community actors to act as rural electrification project owner (acknowledged by certain authorities during interviews).	Result nearly achieved: a) National, regional and community actors are more knowledgeable (through training and information) in terms of rural electrification project ownership. b) Autonomous multifunctional platform operators who have become experts in their operating tool – Women who initiate revenue-generating activities and have management skills (case of women's group in Dan Alia, which repaid, in advance, a 10 million CFA loan to a microfinance institution). However, they were not pleased with the high interest rate (14%).
		Encouraging, but achievements to be consolidated	b) Encouraging institutional capacities in the areas of knowledge acquisition and project ownership tools for governing the rural electrification sector in Niger.	Result nearly achieved c) Governance tools for rural electrification and access to modern energy services (institutional, legal and regulatory frameworks and infrastructure operating and service pricing schemes) developed and validated in Niger.
	1.2 - National strategic framework to support and rank low-carbon technologies and practices is developed and approved	Satisfactory	c) Project steering committee established and functioning – National climate change policy drafted and integrated in national reference frameworks.	End-of-project result achieved d) Steering committee is composed of members from a variety of backgrounds, including ANPER (Nigerien rural electrification agency).
		Encouraging, but achievements to be consolidated	d) A national strategic framework to support and rank low-carbon technologies and practices has been developed and approved, <u>but not adequately implemented.</u>	Result nearly achieved: e) Inform and train national actors to implement this framework.
Institutional capacity-build	1.3 – Delegated Services Operators (DSOs)	Highly satisfactory	e) Concept and notion of private Delegated Services Operator (DSO) popularized and accepted	End-of-project result achieved

Project components	Sub-components	Rating/progress towards achieving the expected outcome	Evaluation rationale	
			End-of-project status (early December 2016)	Outlook
	are selected and made operational		at the national, regional (Maradi region) and local (Commune of Safo) levels.	f) Major achievements; recommendation that the project continue in the context of an enlarged program operating nationally (see recommendations).
		Encouraging, but achievements to be consolidated	f) A DSO chosen on a non-institutional, contractual basis; however, very committed to taking responsibility.	Expected result likely to be achieved, but post-project: g) Review and redefine the contract and the specifications of the DSO chosen by the Commune of Safo, in accordance with the governance tools to be defined for rural electrification. Prepare the women's management committees of the multifunctional platforms to become DSOs, but limit this to the Maradi region to ensure a positive experience that can be implemented more widely later.
		Encouraging, but achievements to be consolidated	g) As the institutional, regulatory and legal framework and the infrastructure operating and pricing schemes have been finalized and adopted, the DSOs and other private sector actors should invest, assuming adequate communication and awareness.	The fundamentals for achieving the expected result are defined: h) DSOs and the women's management committees develop business plans justifying the underlying financing and grant needs.
		Encouraging, but achievements to be consolidated	h) The DSO chosen is already operational. Partnerships developed with the women's management committees; even the multifunctional platform maintenance technicians are already integrated in the DSO staff.	Likely to achieve the outcomes and developing a regional low-carbon energy services market i) The sectoral governance tools needed to make the DSO operational have been developed and validated. They will be adopted formally by the Government.

Project components	Sub-components	Rating/progress towards achieving the expected outcome	Evaluation rationale	
			End-of-project status (early December 2016)	Outlook
Low-carbon solutions for integrated rural services	2.1 – Investments by Delegated Services Operators in energy production and efficient energy use projects	Insufficient, but initiatives underway	i) DSO has not achieved this, but files and business plans are being prepared to at least enter the market segment in the Maradi region.	The expected result should be achieved in 2017, but supervision and support/advising are needed to coach the DSO j) Remove institutional constraints and barriers in order to promote greater private investment in rural electrification.
		Encouraging, but achievements still insufficient	j) Investments carried out directly by the project, not by the DSO. This is a positive response to an institutional constraint, allowing project implementation to continue. However, the organizational and technical aspects ensuring that rural beneficiaries can use the equipment on a sustainable basis are not yet consolidated.	Expected result likely to be achieved because the DSO is taking over k) Continue technical and economic (management) training for users/beneficiaries and establish a service to provide ongoing maintenance and equipment renewal. Coaching support/advice from technical and financial partners.
		Highly satisfactory	k) Technical resources at schools and integrated health centres have improved significantly, thanks to photovoltaic solar electrification.	Result achieved but: l) Continue the investments for electrification of schools and health centres in the project area; Conduct an impact study on investments in community utility social sectors (including schools, health centres, public buildings and public lighting) and in the productive sector.

Project components	Sub-components	Rating/progress toward achieving the expected result	Evaluation rationale	
			End-of-project status (early December 2016)	Outlook
Low-carbon solutions for integrated rural services	2.2 – Decision-making tools are designed for investments in low-carbon technologies	Satisfactory	l) Decision-making tools are designed for investments in low-carbon technologies, completed within the timeline and in keeping with the planned approach.	Result achieved but: m) Continue promoting investments in low-carbon technologies.
		Highly satisfactory	m) The notion of climate change and GHG reduction is widely accepted among villagers in the Communes of Safo and Djiratawa.	Result achieved n) Nothing to report – significant achievement; no suggestions regarding the project's continuation.
Low-carbon solutions for production services	3.1 – Delegated Services Operators invest in production services	Still insufficient	n) DSOs have not yet achieved this.	Expected result to be achieved in 2017: o) Remove institutional constraints and barriers in order to promote private investment in rural electrification (see: i)).
		Encouraging but achievement insufficient at this stage	o) Investments carried out directly by the project, not by the DSO. This is a positive response to an institutional constraint, allowing the project implementation to continue. However, the organizational and technical aspects ensuring that rural beneficiaries can use the equipment on a sustainable basis are not yet consolidated.	Expected result to be achieved in 2017. p) Continue technical and economic (management) training for users/beneficiaries and establish a service to provide ongoing maintenance and equipment renewal.
		Highly satisfactory	p) Many new farmers are now using solar kits in place of gas- or gas-oil-powered motor pumps to pump water. Animal traction is used for ploughing and transport of agricultural products.	Expected result likely to be achieved in 2016, but: q) Significant achievement; Continue promoting solar kits for water pumping to boost agriculture in the project area – Encourage installation of biofuel production from neem seeds or jatropha in related crops – Introduce biogas technology.
Low-carbon solutions for production services	3.2 – Clean fuel tests on multifunctional	Satisfactory	q) Clean fuel tests on multifunctional platforms are performed within the timeline and in accordance with the agreed approach.	Expected result likely to be achieved in 2016, but: r) Continue disseminating these test results to promote the use of biofuels.

Project components	Sub-components	Rating/progress toward achieving the expected result	Evaluation rationale	
			End-of-project status (early December 2016)	Outlook
	platforms are performed	Satisfactory	r) The populations are now accustomed to using only biofuels (neem oil- or jatropha-based) to operate the multifunctional platforms.	<p>Likely to achieve the expected result at the end of the project, but:</p> <p>s) Continue technical training for beneficiaries; Establish an ongoing system to maintain and renew the equipment to ensure that the facilities are sustainable.</p>

Table 4: Summary/analysis of the results and outputs achieved

3.3 Efficiency of the PRASE-FEM implementation

With the exception of Eco Act, which did not meet its commitments (US\$ 800,000, or 14.63% of total financing), GEF and UNDP funds (US\$ 1,994,683.09) were mobilized smoothly, without interruption of the activities and at an average disbursement rate of approximately 100%.

Despite the lack of Eco Act cofinancing, which will likely have a negative effect on the expected results, the project coordination, working with the UNDP supervision team, demonstrated its adaptability and met the deliverables timeline (power provided by the multifunctional platforms and access to electricity thanks to the photovoltaic facilities), particularly in terms of components C2 and C3. Together with high-performing technologies, those components are driving integrated rural development in the Commune of Safo. Thus, the resources, although limited, were used efficiently.

Relationships among the Ministry of Energy, the project coordination and the UNDP Country Office are strong. Each party plays its role efficiently, in synergy with the CNME (National Multisectoral Energy Committee), at least as long as facilitation was needed at this level.

3.4 Sustainability and progress toward achieving the PRASE-FEM impact

3.4.1 Outcomes and measurable impacts

Based on discussions with the populations and the targets, the project's benefits are both positive and measurable (see illustrations in the Annex). Thanks to the renewable energy equipment that provides power or ensures access to electricity, the project is a model of rural integrated development. It uses a low-carbon approach to meeting basic needs and, even, to supporting revenue-generating activities in line with the SDGs: milling cereal, market gardening, providing electricity to school and health facilities, ensuring the cold chain to preserve medicines, supplying domestic hot water and enabling revenue-generating activities that support women's empowerment. Most of the infrastructure (investments) providing access to electricity and power through low-carbon technological solutions has been installed. The populations have accessed the energy services that help meet their basic needs and enable revenue-generating activities that support women's empowerment. The challenge remaining is to ensure sustainability, with proper equipment maintenance and after-sale service.

3.4.2 Viability and outlook for sustainability

Of course, the DSO's financial statements were not reviewed, but it does have considerable experience in the area of village water supplies and is working hard to identify for financial partners. This also implies that it has managerial capacity. However, its involvement in ensuring the sustainability of the modern energy services is still limited. Given its strategic position in the local energy system, the DSO should have been able, as of the third year, to experiment with an approach to billing for services rendered and a maintenance system in order to develop a municipal energy market. Even if the DSO's results indicators are inadequate, the interviews confirmed a desire to address concerns about the project's viability and sustainability. With this in mind, the mission provided advice on submitting business plans to the green funding windows that are in greatest demand today. They include the green finance label of the Agence Française pour le Développement (AFD), known as SUNREF (Sustainable Use of Natural Resources and Energy), and the Sustainable Energy Fund for Africa (SEFA), a multi-donor

trust fund administered by the African Development Bank (ADB). These two windows are presented in Annexes 4 and 5.

IV. Conclusion

4.1 Lessons learned

In Niger, as in most sub-Saharan African countries, energy services in rural areas are limited to the misuse and inefficient use of traditional biomass for cooking and heating, while lighting is provided by rudimentary means, such as candles and batteries. The most well-off rely on diesel generators, which are inefficient, poorly-maintained and emit GHG. Compared to traditional projects in sub-Saharan Africa, PRASE-FEM has made a difference because the equipment has helped to ensure that energy services meet the populations' needs and that those services are low-carbon.

The five main lessons (or experiences) drawn from this terminal project evaluation are as follows:

1. PRASE-FEM is a very relevant project in line with the economic guidelines of the Government of Niger and all of the global initiatives that the Government supports, including the SDG, SE4ALL and COP. However, the implementation of certain project components revealed problems in terms of effectiveness.
2. While only two-thirds of the planned resources were mobilized, the funds raised were used carefully and the technical execution rate is strong. This shows that the project's management unit, working with the UNDP's supervision services, has developed strong managerial and adaptive capacities.
3. Despite the overall satisfactory results, the project has pilot project status, which covers only one commune (70,000 residents) of the country's 268. It should be scaled up nationally, which would also provide additional experience with regard to the country's cultural diversity.
4. Despite this pilot project status, the populations and the target beneficiary groups responded enthusiastically to the improved living conditions resulting from the energy services delivered to meet needs in the areas of health, education and revenue-generating activities, with indications of women's empowerment around the multifunctional platforms. From this perspective, the project is a success story. Its achievements need to be consolidated, looking to meet the demand for biofuel from neem oil, expand animal traction (already well-introduced in the commune) and promote the biogas potential of livestock.
5. The project is making changes in beneficiaries' daily lives, particularly those of women who are launching income-generating activities through the multifunctional platforms. The beneficiaries' ownership of the ERTs and expansion of the DSO's business into rural electrification and the low-carbon energy services access market segment thus constitute project achievements and assets that should be pursued and enhanced.

6. 4.2 Recommendations

Based on the observations noted in the table in annex 6, we propose the following four main recommendations:

Recommendation 1: Ministry of Energy (ME):

To improve Niger's energy governance, the government should adopt the texts proposed by the project and take appropriate measures and initiatives to increase rural residents' access significantly to modern, low-carbon energy services. To that end, the roles of the ANPER and the CNPE should be strengthened, creating synergy among the institutions cooperating in rural electrification and pooling resources.

Recommendation 2: PRASE-FEM:

In consultation with the grassroots actors in the municipality of Safo, PRASE FEM should consider installing a neem- and jatropha curcas-based biofuel production plant, which could contribute further to women's empowerment and generate income for young people. The National Solar Energy Centre (CNES), the West African Science Service Centre on Climate Change and Adapted Land Use) and the School of Mining, Industry and Geology (EMIG) should be involved.

Recommendation 3: Government and UNDP:

The Government and UNDP should develop, as soon as possible, a similar PRASE-FEM II program. It should be scaled to other suitable areas of the country, integrating animal traction and biogas promotion for clean cooking and lighting. An outline of a future program to scale up PRASE-FEM or PRASE-FEM II activities is provided in Annex 3.

Next, a feedback workshop on this new program should be held in Maradi, inviting the relevant technical and financial partners and the country's potential DSOs. The agenda should include visits to the success stories in the project's area of influence.

Recommendation 4: DSO

The DSO should continue to provide energy services and supervise the WMCs and the young people in preparing funding requests for revenue-generating activities based on the project's achievements and submit them to the SUNREF/AFD, SEFA/ADB and other windows. It should focus first on the renewable energy services market in Maradi region.

ANNEX

Annex 1. Bibliography (non-exhaustive)

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Annex 2: List of individuals interviewed

Last name and first name	Organization/Town	Position
Ibrahim Hassane	PRASE-FEM Project	Project Coordinator
Abdoul Azizi Moussa	PRASE-FEM Project	Assistant Coordinator
Djibrilla Isoufou	PRASE-FEM Project	Administrative and Financial Manager
Raboiu Balla	PASE SAFO	Coordinator
Madaïji Issa	General Economy Directorate (DGE)/Ministry of Energy and Petroleum (MEP)	Director General
Bello Nassourou	DERED/DGE/MEP	Director
Elhadji Mahamane M. Lawali	UNDP/Niger	Energy and Environment Program Officer
Mourtala Sani	UNDP/Niger	Program Assistant
Djibo Abdou Salifou	Maradi/PASE-Safo Project	Monitoring and Evaluation Manager
Ibrahim Dobi	DSO/Safo (Maradi)	ELHYFROS Director
Kassim	DSO/Safo	ELHYFROS Administrator
Balla Mahaman Rabiou	PRASME Unit - Maradi	Coordinator
Issa Iro Kokina	Rural Commune of Safo	Mayor
Salif Harouna	Lili (Rural Commune of Safo)	Village leader
Mme Tchima Issa	Lili	CFG President
Mme Halissa Hachirou	Lili	CFG Treasurer
Tchima Issaka	Lili	MFP miller
Salamata Mamoud	Lili	MFP miller
Mamane Kabirou	Lili	CSI Medical Officer
Abou Oumarou	Babanrafi	CFG President
Sani Adamou	Babanrafi	CSI Medical Officer
Sani Amadou	Babanrafi	Director, primary school
Moussa Zanguilo	Dan Alia	Village leader
Sahara Issa	Dan Alia	CFG President
Foureira Lawali	Dan Alia	MFP miller
Saharatou Nouhou	Dan Alia	MFP miller
Louba Mani	Dan Alia	CFG Treasurer
Issiaka Mahamane	Soumarana	Market gardener
Amadou Bawa	Safo Nassarawa	Market gardener
Harouna Rabo	Safo Oubandawaki	Market gardener
Marou Adamou	Soumarana	Market gardener
Chaibou Danmani	Soumarana	Market gardener
Inoussa Wada	Soumarana	Market gardener

Illiassou Miko	Adrawa	Market gardener
Iro Mailahia Wassa	Adrawa	Market gardener

Annex 3: Outline of a future program to scale PRASE-FEM or PRASE-FEM II activities

- **Project title:** Program to Reduce Greenhouse Gas Emissions Based on Access to Modern Energy Services to achieve integrated development of rural communes in Niger PRASE-FEM – Phase II
- **Context and justification for PRASE-FEM II:** The new program is intended to consolidate the achievements and scaling of the PRASE-FEM I activities in four regions in Niger. This action is justified by the successes of PRASE-FEM I, achieved thanks to the good governance provided by UNDP and the project team, the sectoral policies underway and the shared commitment to promoting economic activities benefiting rural communities by providing clean and sustainable energy.
- **Program objectives:** *to promote low-carbon emission solutions to improve access to both energy and modern energy services as part of a better-integrated rural development approach that generates employment. The target beneficiaries include: the populations of the rural Communes of the regions of Maradi, Diffa, Dosso, Tahoua and Tillaberi, State and communal actors/decisionmakers, the private sector and civil society.*
- **Main components**
 - Component 1: Institutional capacity-building to reduce greenhouse gas (GHG) emissions – Capitalization and consolidation of achievements
 - Component 2: Reduction of GHG emissions in the provision of energy services to decentralized collective infrastructure (including health, education and water)
 - Component 3: Reduction of GHG emissions in the provision of energy services to productive infrastructure (including agricultural, multi-functional platforms and animal traction)
 - Component 4: Reduction of GHG emissions in the provision of domestic energy services (including improved stoves, as a cooking tool, and biogas, as an energy source)
- **Expected results:** 1) The access proposed to energy services to reduce greenhouse gas emissions as an integral part of Niger's Rural Energy Service Access Program (PRASE) is developed; 2) Multifunctional platforms using biofuels are publicized in communities to promote access to energy and economic opportunities for the country's most vulnerable populations; 3) A sustainable biofuel industry based on neem oil is established; 4) Animal traction is promoted more aggressively in the agricultural and goods transport sectors; and, 5) Biodigesters are promoted to use biogas as cooking energy and natural fertilizer.

- **Budget**
- **Implementation schedule**
- **Annexes**

Annex 4: Presentation of SUNREF, the green finance label

The green finance label of the French Development Agency (AFD), known as SUNREF (Sustainable Use of Natural Resources and Energy Finance), supports the energy and environmental transition of developing countries by helping private actors to carry out their projects and encouraging local banks to finance these projects.

Thanks to green growth, companies now have access to many opportunities through new markets, such as energy management, sustainable management of natural resources and environmental protection. Financing for this green growth in developing countries is a major challenge. AFD seeks to contribute to this process in partnership with local banks, including ORABANK and Société Générale de Banque, which operate in the ECOWAS countries. Niger is part of SUNREF's area of intervention.

SUNREF's objectives and results

- Reduce negative impacts on the environment and population health, both locally and globally, by diversifying the national energy mix and reducing CO2 emissions;
- Demonstrate how the private sector can support public policies and help to improve those policies directed towards the private sector;
- Improve private sector competitiveness and strengthen its skills;
- Thanks to a pilot project, support the structuring of a sustainable, green economy-based banking offer; and,
- Create new employment opportunities within the green economy.

Eligible renewable energy projects

Investing in renewable energy (including solar, wind, geothermal, hydraulic and biomass) offers many advantages.

- **Types of investments:** Photovoltaic equipment – solar water heaters – wind and hydroelectric facilities – biomass combustion systems for heat and/or power generation.
- **Project eligibility:** SUNREF gives priority to projects that, despite their technical and financial viability, experience difficulties due to their size or innovative nature and have an internal rate of return (IRR) of at least 8%.

Energy efficiency project eligibility

This involves new green equipment and technologies that can reduce companies' energy consumption and improve their energy efficiency, while providing productivity gains.

- **Types of investments:** Replacement or upgrading of energy-intensive equipment – On-site cogeneration of heat and electricity or trigeneration – Replacement of boilers, installation of a heat recovery unit, thermal insulation of buildings – Upgrading of existing ventilation/air conditioning systems, implementation of energy management systems or building management systems – Replacement of old coolers and compressors.
- **Project eligibility:** A reduction of energy consumption of at least 20% compared to standard technologies; An internal rate of return (IRR) of at least 10% of savings on

energy costs – an IRR of at least 20% of energy efficiency gains for investments involving increased production capacity of at least 50%.

For more information: go to www.sunref.org

Annex 5: Sustainable Energy Fund for Africa (SEFA)

Background

The Sustainable Energy Fund for Africa (SEFA) is a multi-donor trust fund administered by the African Development Bank (AfDB), with a commitment of US\$60 million from the Governments of Denmark and the United States. SEFA supports small- and medium-scale renewable energy and energy efficiency projects in Africa. In many African countries, smaller clean/renewable energy projects are potentially viable in commercial terms, but initial development costs often prevent them from obtaining the necessary financing. SEFA is founded on the premise that reliable, clean and affordable energy can contribute to strong African economies and have a positive impact in creating employment opportunities across the continent.

Description

The development objective of SEFA is to support sustainable, private-sector-led economic growth in African countries through the efficient use of presently untapped clean energy resources. SEFA has been designed to operate via three financing windows: project preparation, equity investments and support in creating an enabling environment.

(i) – Project preparation: This window provides cost-sharing grants and technical assistance to private project developers/promoters to facilitate pre-investment activities for renewable energy and energy efficiency projects. Grant funding will target development activities, from feasibility to final project closing, for projects with total capital investment in the range of US\$30 million – US\$200 million.

SEFA is structured to respond to requests originated and reviewed by AfDB staff. The SEFA Secretariat will screen and assess all proposals based on the eligibility criteria. The Secretariat is currently housed in AfDB's Energy, Environment and Climate Change Department (ONEC).

(ii) – Equity investments: This financing window seeks to address the lack of access to early stage capital for small- and medium-sized projects, as well as the weak managerial and technical capacities of smaller entrepreneurs and developers.

SEFA's equity capital, combined with a dedicated technical assistance budget, will be deployed by the Africa Renewable Energy Fund (AREF), which is co-sponsored by SEFA. The AREF is a pan-African Private Equity Fund (PEF) focused solely on small/medium (5-50 MW) independent power projects from solar, wind, biomass and hydro, as well as some geothermal and stranded gas technologies.

(iii) – Enabling environment: This window provides grants to support mainly private sector activities that create and improve the enabling environment for private sector investments in the area of sustainable energy in Africa. This includes advising and implementation of legal, regulatory and policy regimes that provide clear and predictable rules for project development, implementation and execution, as well as capacity-building activities.

SEFA is also aligned with the Sustainable Energy for All Initiative (SE4ALL).

For more information, go to: <http://www.afdb.org/en/news-and-events/sustainable-energy-fund-for-africa/> to obtain the funding request questionnaire and more information about submitting a project preparation grant request.

Annex 6. Terms of Reference

International Consultant for the terminal evaluation of the Project to Integrate the Reduction of Greenhouse Gas Emissions in Niger's Rural Energy Service Access Program

Location:	Niamey and Maradi region, Niger
Application Deadline:	14-Oct-16 (Midnight New York, USA)
Time left:	7d 20h 21m
Type of Contract:	Individual Contract
Post Level:	International Consultant
Languages Required:	English French
Starting	Date:
(date when the selected candidate is expected to start)	24-Oct-2016
Duration of Initial Contract:	21 days (over 5 weeks)

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Background

In accordance with UNDP and GEF monitoring and evaluation policies and procedures of UNDP and the GEF, the project to integrate the reduction of greenhouse gas emissions in Niger's Rural Energy Service Access Program (PRASE-FEM PIMS 4119), supported by UNDP and financed by the GEF, must undergo a terminal evaluation upon completion of implementation in 2016. The project began in September 2012 and is in its fourth year of implementation. These terms of reference (TOR) set out the expectations for a Terminal Evaluation (TE) of the project to integrate the reduction of greenhouse gas emissions in Niger's Rural Energy Service Access Program (PIMS 4119). The terminal evaluation process must comply with the directives set forth in the document, Guidance for Conducting Terminal Evaluations of UNDP-Supported, GEF-Financed projects (see Annex).

The project was designed to promote low-carbon emission solutions to improve access to both energy and modern energy services. Its targets/beneficiaries include the Energy Ministry (institutional aspects), the populations of the rural Commune of Safo (Region of Maradi, Department of Madarounfa), the State and communal actors/decisionmakers and the private sector.

It includes six components:

1) – Institutional capacity-building to reduce greenhouse gas emissions (GHG) in connection with Niger's Rural Energy Service Access Program services;

- 2) – Reducing GHG emissions in the provision of energy services to decentralized collective infrastructure (including health, education and water);
- 3) – Reducing GHG emissions in the provision of energy services to productive infrastructure (agriculture and multifunctional platforms);
- 4) – Reducing GHG emissions in the provision of domestic energy services;
- 5) – Capitalization and consolidation of actors’ capacity and achievements in the area of GHG emissions; and,
- 6) – Project management.

Following a recommendation included in the August 2015 mid-term evaluation, Component 4 was deleted and incorporated into the PASE-SAFO project (European Union financing), which is cofinancing the PRASE-FEM project.

The following outcomes are appended to each project component:

Outcome 1.1: The staff of the relevant institutions at the national, regional and community are trained and prepared to design, plan and implement energy access programs in rural areas.

Outcome 1.2: A national strategic framework to support and rank low-carbon technologies and practices is developed and approved.

Outcome 1.3: Delegated Services Operators (DSOs) are chosen and made operational.

Outcome 2.1: Delegated Services Operators invest in energy production and efficient energy use projects.

Outcome 2.2: Decision-making tools are designed for investments in low-carbon technologies.

Outcome 3.1: Delegated Services Operators invest in production services.

Outcome 3.2: Clean fuel tests on multifunctional platforms are performed.

Outcome 4.1: Framework to eliminate traditional cooking stoves is created.

Outcome 4.2: Energy-efficient devices and equipment are recommended to rural households.

Outcome 5.1: Lessons learned regarding access to energy and to energy services in rural areas are documented and analysed.

Outcome 5.2: Public decision-makers at the national and local government levels are able to make decisions on technical and technological issues related to access to energy and energy services in rural areas.

Outcome 5.3: Technically competent DSOs are capable of designing, installing, maintaining and promoting clear, efficient energy solutions.

Duties and Responsibilities

The evaluation team will be composed of two evaluators - an international team leader and a national evaluator. The consultants shall have prior experience in evaluating similar projects. Experience with GEF-financed projects is an advantage. The international consultant will finalize the evaluation report. The evaluators selected should not have participated in the project preparation and/or implementation and should not have conflicts of interest with project-related activities. In particular, the international consultant must have good knowledge of access to low-carbon energy services in rural areas, understand the relevant science and have in-depth experience with project evaluation techniques (particularly with GEF-financed projects).

The international consultant must have proven experience in the area of access to modern energy services in rural areas and strong knowledge of the legal and institutional framework governing access to energy services in rural areas and be very knowledgeable about the area of intervention.

The evaluator will review all relevant sources of information, such as the project description, project reports, including the Annual APR/PIR, project budget revisions, midterm review, progress reports, GEF focal area tracking tools, project files, national strategic and legal documents, and any other materials that the evaluator considers useful for this evidence-based assessment. A list of documents that the project team will provide to the evaluator for review is included in Annex B of the Terms of Reference.

The evaluator is expected to follow a participatory and consultative approach ensuring close engagement with government counterparts, in particular, the GEF operational focal point, UNDP Country Office, PRASE-FEM project team, UNDP GEF Technical Adviser based in Addis Ababa (Ethiopia) and key stakeholders.

The evaluator is expected to conduct a field mission to the Maradi region, including project sites in the rural Commune of Safo. Interviews will be held with the following organizations and individuals, at a minimum:

- The UNDP representation in Niamey (management, resilience unit, oversight & management);
- National Directorate for Renewable and Domestic Energy (DERED);
- The PRASE-FEM management unit in Niamey;
- The PASE-Safo management unit;
- Regional communal authorities in the project's area of intervention (Mayor of Safo);

- The project's beneficiary community (local population, DSOs, beneficiary health centres and schools);
- Departmental directorates of agriculture, hydraulics and rural engineering; and,
- NGOs involved in capacity-building.

The terminal evaluation team will assess progress in the project areas in the four categories referred to below.

Project strategy

Project design:

- Analyse the problem addressed by the project and the underlying assumptions. Review the impacts that incorrect assumptions or changes in the context may have on achieving the project results, as outlined in the Project Document;
- Review the relevance of the project strategy evaluated and whether it is the most effective means of achieving the expected results;
- Review the way in which the project addresses the country's priorities; and,
- Review the decision-making processes.

Results framework/logical framework:

- Conduct a critical analysis of the project's logical framework indicators and targets, assess the extent to which the end-of-project targets meet the SMART criteria (Specific, Measurable, Attainable, Relevant and Time-bound), and suggest specific amendments/revisions to the targets and indicators as necessary;
- Examine whether progress to date has led to, or could in the future lead to, beneficial development effects (for example, income generation, gender equality, women's empowerment, or improved governance) that should be included in the project results framework and monitored annually.

Progress toward results

- Review the logical framework indicators in light of the progress made in achieving the end-of-project targets; complete the Progress Towards Results Matrix, as indicated in the directives for conducting the terminal evaluation of UNDP-supported and GEF-financed projects; progress achieved is indicated by colour in a "traffic light system," based on the level of progress for each outcome; make recommendations for the areas marked as, "Not on target to be achieved" (red);
- Compare and analyse the GEF baseline tracking tool with the one completed just before the terminal evaluation;
- Identify the remaining barriers to achieving the project objectives during the remainder of the project;

- By reviewing the aspects of the project that have already been successful, identify how the project can further expand these benefits.

Project Implementation and Adaptive Management

Using the Directives for Conducting a Terminal Evaluation of UNDP-Supported, GEF-Financed Projects, review the project's progress in these seven categories:

- Management mechanisms;
- Activity planning;
- Financing and co-financing;
- Project monitoring and evaluation systems;
- Stakeholder participation;
- Communication of data; and,
- Communications.

Sustainability

Assess all of the risks to the project's sustainability based on the four following categories:

- Financial risks to sustainability;
- Socioeconomic risks to sustainability;
- Risks to sustainability associated with the institutional framework and governance; and,
- Environmental risks to sustainability.

The final evaluation consultant/team shall include a paragraph in the terminal evaluation report presenting the conclusions, based on evidence from the terminal evaluation, in light of the results.

In addition, the terminal evaluation consultant/team shall develop recommendations for the project team. These recommendations shall be presented in the form of succinct proposals aimed at key interventions that will be specific, measurable, achievable, and appropriate. A table that lists all of the recommendations may be included in the Report Summary. The final evaluation consultant/team will develop a maximum of 15 recommendations.

Evaluation deliverables

The terminal evaluation consultant/team will prepare and submit:

- Initial terminal evaluation report: the team responsible for the terminal evaluation will specify the terminal evaluation objectives and methods no later than two weeks before the terminal evaluation mission. The report shall be sent to the UNDP Niger office and to project management.

- Presentation: the initial results are presented to project management and the UNDP Niger office at the end of the terminal evaluation mission.
- Draft final report: the complete report, with the annexes, shall be presented within three weeks after the terminal evaluation mission;
- The final terminal evaluation report must be in English.
- The detailed terms of reference for the evaluation are accessible at the following link: <http://www.ne.undp.org/content/dam/niger/docs/Publications/UNDP-TE-TOR-fr-PRASE%20FEM.pdf?download>

Management arrangements

The Commissioning Unit has primary responsibility to manage the terminal evaluation. The Commissioning Unit for the project's terminal evaluation is the UNDP Niger office.

The UNDP Niger office will contract with the consultants and ensure that the terminal evaluation team receives per diems on a timely basis and will make its in-country travel arrangements. The project team will be responsible for contacting the terminal evaluation team to provide all relevant documents, set up stakeholder interviews, and arrange field visits.

Timeframe

The total duration of the terminal evaluation will be approximately 21 working days, spread over five weeks starting on 24 October 2016. It shall not exceed five months from the date of hiring of the consultant(s). The preliminary terminal evaluation timeframe is as follows:

- Mission preparation: 2 days
- Evaluation mission: 12 days
- Draft evaluation report: 5 days
- Final report: 2 days.

The contract start date is 24 October 2016.

The mission may begin before or after that date, in which case the timeframe will be revised accordingly.

Duty station

Travel:

- International travel to Niger will be required during the terminal evaluation mission.
- The Basic Security in the Field II and Advanced Security in the Field trainings must be completed successfully before travel commences.
- Consultants are responsible for ensuring that they have the necessary vaccinations/inoculations when traveling to certain countries, as designated by the UN Medical Director.

- Consultants are required to comply with the UN Security Directives set forth at <https://dss.un.org/dssweb/>.
- All related travel expenses will be covered and reimbursed as per UNDP rules upon submission of an F-10 claim form and supporting documents.

Qualifications

The team members must present the following qualifications:

- experience applying SMART indicators and reconstructing or validating baseline scenarios;
- competence in adaptive management;
- demonstrated understanding of gender-related issues;
- excellent skills in communication and preparing written reports; and,
- demonstrated analytical skills.

Required Skills and Experience

Education:

- Master's degree in Environmental/Energy Studies.

Experience:

- At least 5 years' experience in results-based management evaluation methodologies;
- At least 5 years' experience collaborating with the GEF or on GEF evaluations;
- At least 2 years' professional experience in the Sahelo-Saharan region;
- At least 10 years' experience in projects dealing with access to low-carbon energy services in rural areas;
- At least 5 years' experience in project evaluation/revision within the GEF and the UN system;

Languages:

- Excellent oral and written communication abilities in French, which is the working language, and a good command of English.

Note:

If individual evaluators are chosen (rather than complete field teams proposed by a consulting firm), the international consultant will be the team leader. That person will have full responsibility to submit the evaluation deliverables.

Additional information:

Schedule of payments

- 20% of payment upon approval of the terminal evaluation mission framing memo;
- 30% upon submission of the draft terminal evaluation report;
- 50% upon submission of the final terminal evaluation report.

Submission of tenders: the consultant shall submit a file that includes two proposals (technical and financial):

The technical proposal shall include:

- a copy of the most recent diploma;
- a letter of application;
- a detailed CV;
- a brief description of the work methodology, noting the steps in achieving the outcomes and the schedule;
- a completed United Nations P11 form and at least three references, with their email addresses;
- the P11 may be found at http://sas.undp.org/Documents/P11_personal_history_form.doc.

Financial proposal

- A financial proposal that includes fees, travel costs, per diem and other costs.

Incomplete applications will not be considered.

NOTE: Please submit your offers (financial and technical) at this site.

The criteria for the technical scoring are as follows:

- engineering degree or PhD in Environment/Energy or other closely-related sectors (15 points);
- methodological note indicating how the consultant will approach and conduct the mission (20 points);
- at least 10 years' experience in projects dealing with access to low-carbon energy services in rural areas (30 points);
- at least 5 years' experience in evaluation/revision of UNDP/GEF projects (30 points).
- professional experience in the West African region and/or in Niger (5 points).

Criteria for selecting the best proposal

- Only those applicants who obtained at least 70 points out of the total 100 will be chosen for a financial analysis;

- A “best value for money” evaluation method will be used (combined score). The consultant’s qualifications will receive priority consideration, but his/her financial proposal will also be taken into account.

Deadline and location of submission of applications:

Applications must be submitted on line, at <http://jobs.undp.org>, by Friday, 14 October 2016.

Women are encouraged to apply.

Annex 7: Recommendations: Table of implementation actions

Observations/ Comments	Recommendations	UNDP comments	Actions planned	Target dates	Managers		Implementation status
					Unit	Persons	
<p>As part of the reforms of the energy sector, the Ministry of Energy (ME) adopted the Electricity Code.</p> <p>The PRASE-FEM project also conducted relevant studies that have not yet been taken up: (i) legal and institutional framework of the PASE action; (ii) Guide to managing energy infrastructure in rural areas; (iii) Frameworks and tools for governing rural electrification and rural residents' access to modern energy services in Niger, etc.</p>	<p>Ministry of Energy (ME):</p> <p>To improve energy governance in Niger:</p> <p>The Government should adopt the Electricity Code's implementation decrees and take appropriate measures and initiatives to significantly increase rural residents' access to modern, low-carbon energy services. To that end, the roles of the ANPER and the CNPE should be strengthened, creating synergy among the institutions cooperating in rural electrification and pooling resources.</p>	<p>The study on the framework and tools for governing rural electrification and rural residents' access to modern energy services highlighted the project's other studies. In addition, some of these tools were taken into account in the Electricity Code. However, specific texts to strengthen the roles of ANPER and the CNME have yet to be adopted; this would constitute full application of the frameworks and tools proposed by the project.</p>	<p>This recommendation falls within the purview of the Ministry of Energy. However, UNDP will continue to advocate for its implementation.</p>	N/A	DGE	Maidiji Issa	Underway
<p>The PRASE-FEM carried out investigations confirming the existence of significant sources of neem seed in the Commune of Safo (70,000 tonnes/year) and elsewhere throughout the country. Demand for biofuels is increasing because of the multifunctional platforms' fuel needs, but also because of the women's management committees' interest in</p>	<p>In consultation with the grassroots actors in the Commune of Safo, PRASE FEM should consider installing a neem- and jatropha curcas-based biofuel production plant, which could contribute further to women's empowerment and generate income for young people. The National Solar Energy Centre (CNES), the West African Science Service Centre on Climate Change and Adapted Land Use) and the</p>	<p>This recommendation could be taken into account as part of a future project to scale the PRASE-FEM actions.</p>	<p>Formulate a program document to scale the PRASE-FEM actions.</p>	June 2017	Resilience program (UNDP) and project management unit	Resilience team leader	Completed

using organic pesticides and natural soap. .	School of Mining, Industry and Geology (EMIG) should be involved.						
<p>PRASE-FEM, which is becoming a success story in the region, is participating in the UNDAF results, specifically, increased incomes among the most vulnerable communications, and the UNDP results, with the extension of environmental and energy services to the poor;</p> <p>PRASE-FEM is in line with global initiatives such as the SDGs, Inclusive Green Growth, SE4ALL, food security, education and health for all;</p> <p>Thanks to UNDP, the multifunctional platforms constitute a basis for industrialization in rural communities;</p> <p>Deforestation resulting from the improper use of wood energy across the country is a disaster. However, the commune's livestock offers a potential.</p>	<p>UNDP</p> <p>UNDP should develop, as soon as possible, a similar PRASE-FEM II program. It should be scaled to other suitable areas of the country, integrating animal traction and biogas promotion for clean cooking and lighting.</p> <p>Next, a feedback workshop on this new program should be held in Maradi, to include the relevant technical and financial partners and the country's potential DSOs. The agenda should include visits to the success stories in the project's area of influence.</p>	This recommendation could be taken into account as part of a future project to scale the PRASE-FEM actions.	Formulate a program document to scale the PRASE-FEM actions.	June 2017	Formulation of a program document to scale the PRASE-FEM actions.	Resilience team leader	Completed
There is no way, at present, to ensure that all of the PRASE-FEM solar equipment and accessories in the Commune of Safo will be monitored and maintained, even if the coordination provided the DSO with ongoing supervision, as well as the necessary capacity-building.	DSO: The DSO should continue to provide energy services and supervise the WMCs and the young people in preparing funding requests for revenue-generating activities based on the project's achievements and submit them to the SUNREF/AFD, SEFA/ADB and other windows. It should focus first on the renewable	Recommendation is relevant.	Encourage the DSO to continue its efforts in terms of supplying energy services to the beneficiaries.	December 2017	DGE	Maidiji Issa	Underway

	energy services market in the Maradi region.						
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Table 5: Implementation of the recommendations

Annex 8: Photos

Solar-powered market gardening and agriculture



Solar-powered irrigated perimeter of a market garden

Solar-powered irrigation of a corn and millet field

Health centres



Photovoltaic heating, plumbing and electrification at an integrated health centre



Solar back-up for electrical connection at the Safo mayor's office



Solar-powered health centre

Schools



Solar-powered classroom



Lit classroom

Interviews with women: Revenue-generating activities associated with the multifunctional platforms



Interviews with women



Products of the revenue-generating activities



Women milling – multifunctional platforms



Solar-powered drinking water tower



Fully operational integrated health centre