



Strengthening the implementation of climate change mitigation and adaptation actions through the development of solar energy systems at off-grid agro-industrial facilities through the establishment of a "community solar platform" technical assistance program

TECHNICAL ASSISTANCE– EC – CTCN CLIMATE CHANGE AND SECURITY PROGRAMME

Program Advisory Board
25/09/ 2024

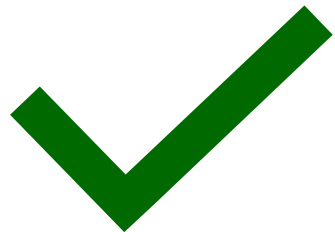


BENEFICIARIES



Designated National Entity

Government of Burkina Faso, represented by
the Ministry of Environment, Green Economy
and Climate Change
Contact Person: Mr. Ouedraogo Pamoussa,



Applicant organisation

Sahelia Solar
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TA Objective

General objective : To set up an innovative energy payment system based on the "Pay As You Use" model to strengthen sustainable access to energy in Ouahigouya

- **Specific objectives :**

- Define the project baseline, monitoring indicators, impact and gender analyses, and timeline for implementation
- Establish the governance structure of the project
- Diagnose Sahelia Solar's current payment methods
- Proposing and piloting a new "Pay As You Use" system
- Implement a system for tracking, optimizing and closing the project

Brief company introduction

Overview of Sahelia Solar experience in Solar Integration

- ▶ Based in Burkina Faso
- ▶ Specialized in the integration of solar photovoltaic systems
- ▶ Committed to harnessing solar potential, reducing local energy costs and strengthening climate change initiatives
- ▶ Launch of more than ten projects across Burkina Faso
- ▶ Testing application of productive uses of solar in agro-industrial cooperatives in rural areas in Burkina Faso
- ▶ Identification of specific energy needs for the agro-industrial sector
- ▶ Initial integration of energy for agricultural machinery in grain processing
- ▶ Development of suitable payment models
- ▶ Ensure continuous availability of energy despite financial and logistical constraints
- ▶ Technical & Economic Challenges:
 - ▶ Higher costs of services related to solar-powered machinery compared to diesel options.
 - ▶ Insufficient energy baseload for continuous agri-processing.
 - ▶ Affordability issues for rural populations.
 - ▶ Limited infrastructure (limited mobile access, payment system and mobility) and low digital literacy and in remote areas.

NEEDS

- Address the growing demand for energy and limited supply of renewable technologies
- Disparities in access to energy between urban and rural areas
- Scaling up technology solutions and payment systems for agricultural processing and resilience
- Address the technological challenges of solar deployment for micro-industry and agri-food processing
- Problems with quality standards and efficient after-sales services
- Payment method challenges in remote areas / Evaluation of alternative payment models based on actual energy use
- Formulation of recommendations for improved management of the system, including the definition of a new "pay-as-you-use" system

TECHNICAL ASSISTANCE FROM CTCN RESPONSES

- Easing current limitations
- Identifying and providing solutions for energy access and agri-processing.
- Development of new payment models ("pay-as-you-use").
- Improvement of the business model, system management and stakeholder engagement
- Strengthening the institutional framework
- Technical support to key players

ROLE OF INNOVATION IN SOLVING CHALLENGES



Smart Meters: Enable accurate tracking of energy consumption and real-time monitoring, providing insights for both users and providers.



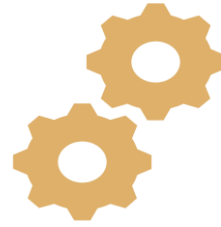
Digital Integration of Payment Systems: Mobile payments to offer flexibility in energy payments, enhancing accessibility for users across various economic backgrounds.



Payment Flexibility: Payment models tailored to match the fluctuating income patterns of rural populations, promoting greater financial inclusion.



Improving Energy Access: The digital approach increases energy access, empowering rural populations to manage their energy usage more effectively.



Business Model Enhancement: Integrate a strategic business model that leverages digital tools to drive financial sustainability and user engagement.



Market Creation and Scalability: Digital platforms enhance market creation by providing scalable solutions that can be easily expanded to meet growing energy demands.

TECHNOLOGICAL INFRASTRUCTURES IN BURKINA FASO TO SUPPORT DIGITAL DEPLOYMENT OF SOLAR ENERGY FOR AGRICULTURE - TECHNOLOGICAL CAPACITY AND DIGITAL DEVELOPMENT IN BURKINA FASO



Enhancing Mobile and Internet Networks :

Expansion of 4G networks and the deployment of fiber optics to enhance connectivity.



Development of Digital Services :

Growth in energy management platforms and smart metering systems to improve efficiency.



Technological Infrastructure :

Strengthening technological infrastructures to support digital solutions, especially in the energy sector.



Key Actors and Partnerships :

Emerging actors, partnerships, and technological advancements driving digital transformation in Burkina Faso.

Electronic Money Institutions : Supporting digital payments and financial inclusion.

- Orange Money Burkina Faso : A leading mobile payment service, potentially integrable into energy billing models.
- Other Key Actors : Moov Money, Coris-Money, Wave, Wizall.

Bank-Telecom Partnerships : Facilitating mobile payments for energy services and improving access for rural populations.

- **Strategic Collaboration :**

- UBA Burkina & Moov Africa : Moov Money.
- Coris Bank & Tagpay : Coris-Money.
- Banque Atlantique & Wizall : Wizall.

Positive Impact of partnerships between banks and telecom operators on the deployment of digital financial services.

REGULATORY FRAMEWORK AND ROLE OF REGULATORS

- **Evolving Regulatory Framework :**

- Supporting innovation in digital and energy services.
- Ensuring secure transactions and data protection.

- **Key Regulators :**

- **ARCEP:** Regulates telecommunications and digital services.
- **BCEAO:** Regulates digital financial services, including electronic money services like Orange Money and Wave.

PROJECT STEERING COMMITTEE COMPOSITION

- CTCN Representative: Ensures alignment with Climate Technology Centre and Network (CTCN) directives and provides necessary technical support.
- NDE CTCN Representative: Liaison for the National Designated Entity, ensuring national priorities and CTCN support are aligned with project objectives.
- Sahelia Solar Representative: Represents Sahelia Solar, focusing on the technical and operational aspects of implementing solar solutions.
- Representative of the Agency on Renewable Energy (Ministry of Energy): Provides oversight and regulatory guidance, ensuring compliance with national renewable energy policies.
- Representative of the Ministry of Agriculture: Ensures agricultural needs and priorities are incorporated into the energy solutions, supporting productive agricultural applications.

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- Representative of Local Authorities of the Beneficiary Community: Facilitates the involvement of local authorities, ensuring local realities and support are considered for the project's success.
- Representatives of Beneficiary Communities: Ensures that the voices, needs, and perspectives of the local communities benefiting from the project are considered in all decisions.
- Representative of Women's Groups: Guarantees that gender issues are integrated into the project and that women benefit equitably from the opportunities created.
- Representative of SSA (Provisional Secretariat): Ensuring coordination and alignment with the provisional secretariat's objectives.

GOVERNANCE AND REGULATORY NEEDS FOR PROJECT LONG TERM SUSTAINABILITY

Enabling Conditions and Barriers

- **Enabling Conditions :**
 - Government support through policy alignment for renewable energy and rural electrification.
 - International partnerships for funding and capacity-building support.
- **Barriers :**
 - Affordability challenges for rural populations.
 - Limited digital literacy hindering effective adoption of PAYG models.

- **Governance Requirements :**

- Streamlined licensing and permitting for renewable energy projects in Burkina Faso.
- Policies to support off-grid solutions and mobile payment systems integration.

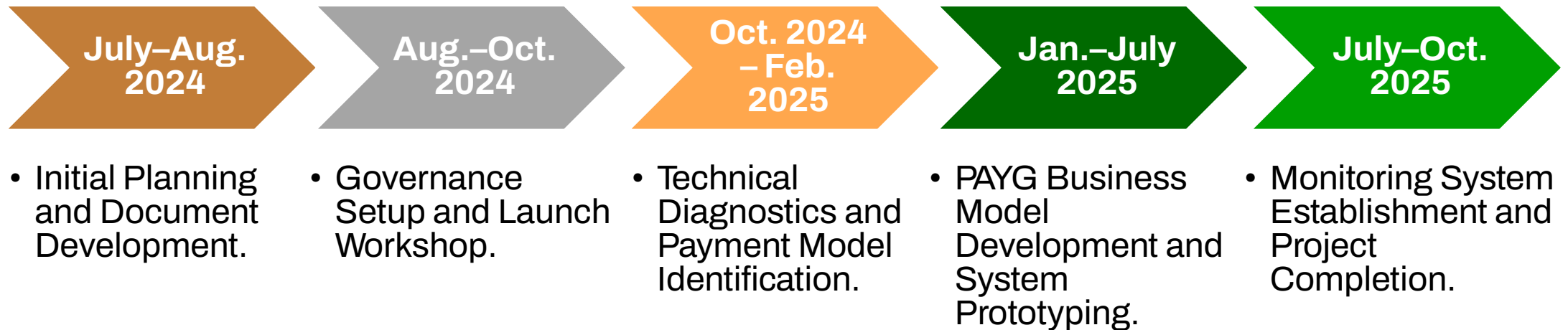
- **Consumer Protection :**

- Quality assurance standards for equipment and services.
- Legal mechanisms for consumer rights and dispute resolution.

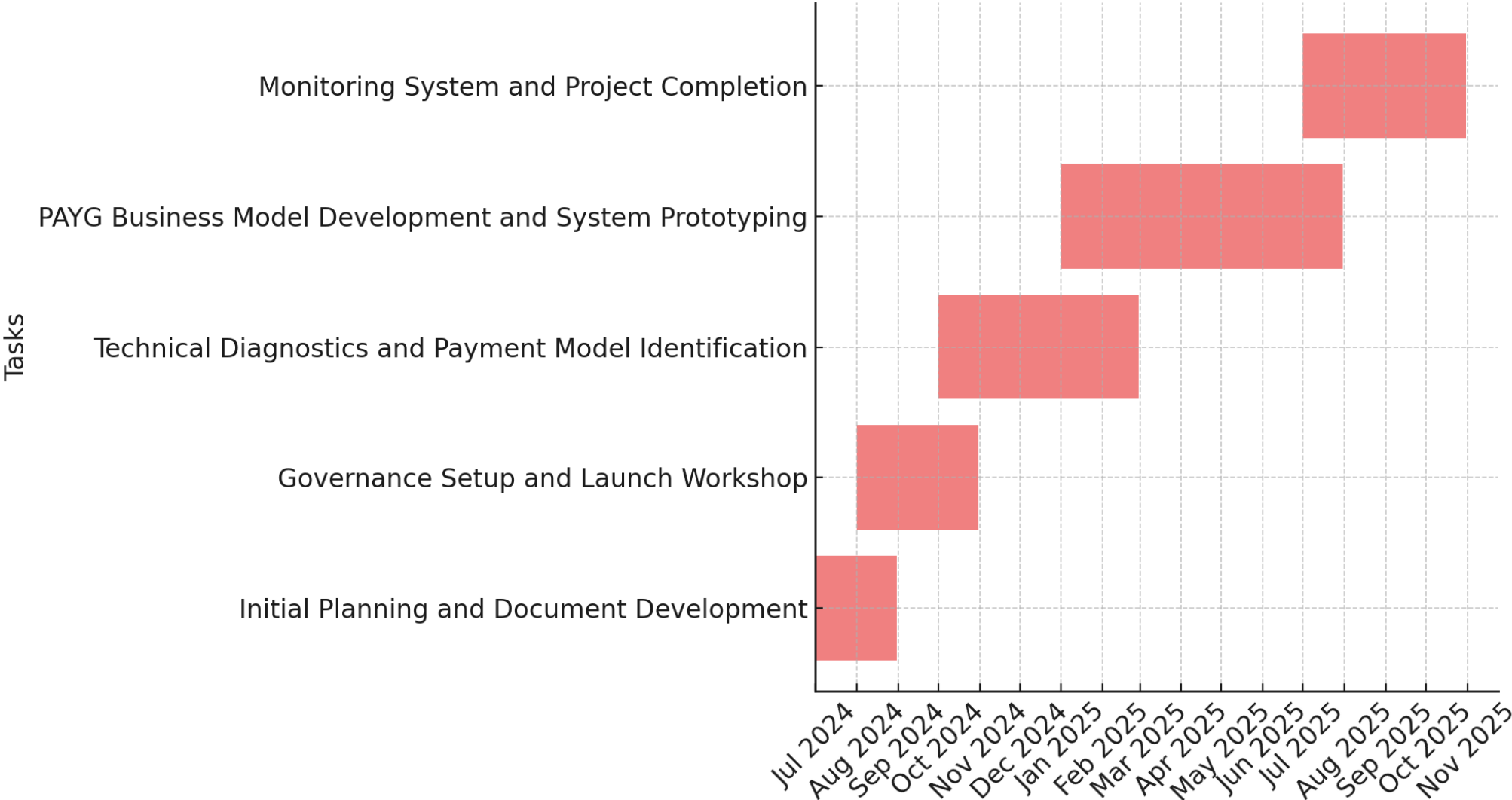
- **Local Capacity Building :**

- Training programs for regulators and local authorities to manage renewable energy initiatives effectively.
- Digital literacy for various stakeholders : providers and users

15-MONTH PROJECT SUMMARY TIMELINE:



15-Month Project Gantt Chart



CONCLUSION

- **Solar Sahelia's Role:** Solar Sahelia is leading the deployment of solar energy in Burkina Faso, utilizing innovative models like Pay-As-You-Go (PAYG) to deliver renewable energy solutions to rural agro-industrial communities.
- **CTCN Technical Assistance:** The Climate Technology Centre and Network (CTCN) plays a crucial role by providing technical assistance to Solar Sahelia. This support enhances the deployment of digital payment systems, improves energy access, and develops customized business models tailored to the needs of agricultural processing in local contexts.
- **The combination of Solar Sahelia's expertise, CTCN's technical assistance, and Burkina Faso's growing digital infrastructure presents a unique opportunity for large-scale deployment of solar energy systems. This project has the potential to serve as a model for scaling across the country and throughout the region.**
- **Community and Stakeholder Engagement:** Solar Sahelia, with the support of CTCN, is dedicated to engaging local communities, integrating gender considerations, and promoting inclusive growth in energy access for all.

Q&A



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