SOUTH SUDAN COUNTRY ASSESSMENT REPORT

Version: 2.0

Release Date: 20 Nov 2025

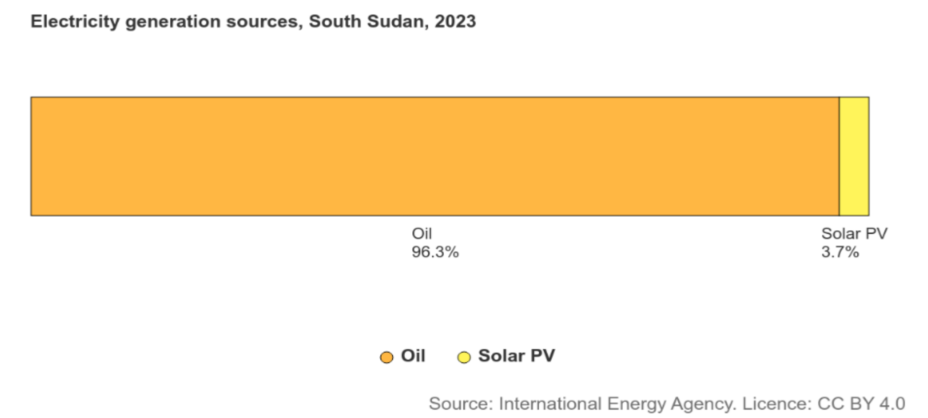
Contents

1.1 Country Assessment Report Template

Country Name	**South Sudan**
Introduction	South Sudan has an estimated population of 12 million people (UNFPA, 2025), though estimates from multiple sources may vary due to the absence of recent comprehensive census data. Its economy has been severely constrained by limited infrastructure and ongoing challenges since its independence in 2011. According to the World Bank's most recent Macro Poverty Outlook, South Sudan's GDP in 2024 was $6.5Billion, with GDP per capita at $543.9. Oil generally provides 90% of government revenue and nearly all exports, yet severe mismanagement, corruption, and weak accountability have eroded its potential. The year-long shutdown of the Dar Blend pipeline (February 2024–2025) severely disrupted the economy resulting in a 46% budget deficit, causing the World Bank to estimate a sharp 23.8% GDP contraction during FY25. South Sudan suffers from one of the world's lowest electricity access rates, with the World Bank reporting that only about 5.4% of the population had access to electricity as of 2023, primarily concentrated in urban areas such as Juba, with 98% of rural households having no access to electricity. The majority of the connected population is concentrated in the capital city, Juba and the towns of Wau and Malakal. Approximately 70% of businesses rely on diesel-powered generators to operate, significantly constraining economic productivity.

1.2 Electrical Generation and Demand

Electricity Generation



South Sudan generated 571GWh total electricity in 2023 with about 96.3% of it from thermal sources with the remaining 3.7% coming from solar PV sources (IEA, 2023). The country's installed generation capacity is estimated to be 258MW total, with 212MW from thermal and 46MW from solar. The World Bank's Pathways report states that the Government of South Sudan estimates only around half of the thermal capacity is both operational and available for use. There are a few off grid generation systems although currently unaccounted for in terms of capacity.

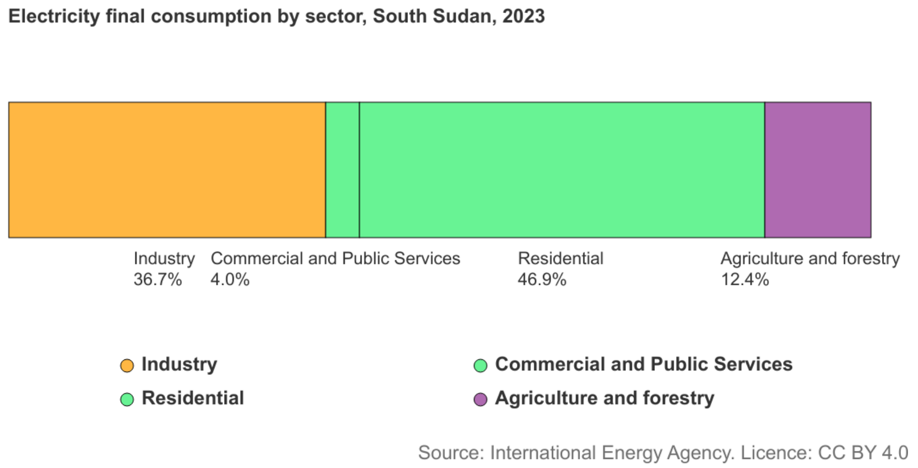
Location	Fuel type	Capacity (MW)	Status	Established year
Ezra Power Plant Juba	Diesel	33	Operational	2019
Malakal Power Plant	Diesel	4.8	Not Operational	1982
Wau Power Plant	Diesel	5.6	Operational	2008
Bor Power Plant	Diesel	3	Not Operational	2009
Rumbek Power Plant	Diesel	3	Not Operational	2009
Yambio Power Plant	Diesel	3	Not Operational	2009
Renk Interconnection Substation	Roseires Hydropower Plant	5	Operational	2007
Paloch Power Plant	Diesel	97	Operational	2005
Tharjath Power Plant	Diesel	58	Operational	2005
Total		212.4		

Source: World Academy of Science, 2024

Aptech Solar commissioned a 26 MWp solar plant for Ezra Construction and Development Group Limited in Juba in 2023, a grid-connected system built in two phases, each with a capacity of 12 MWp and 14 MWp. Another 20 MWp of Solar was commissioned for Ezra Construction and Development Group in early 2025, bringing its PV capacity to 46 MWp(AFSIA, 2023).

Solar energy is the most abundant renewable resource throughout the country, many locations receive annual global irradiation above 5.0 kWh/m², making large-scale solar power plants feasible.

Electricity Demand and Consumption
South Sudan has one of the world's least developed electricity sectors, with extremely limited data availability. According to the International Energy Agency, a 2023 breakdown of the final electricity consumption is shown below.



Further, according to South Sudan's Economic Commission estimates, total electricity demand could reach 300MW if there were no supply or affordability constraints. However, actual demand is severely suppressed due to multiple factors such as:

- Extremely high electricity tariffs (average USD 0.40/kWh), among the highest in the region.
- Only 5.4% electricity access rate (2022 World Bank survey), the world's lowest.
- Limited infrastructure outside Juba
- Peak demand in the Juba grid dropped from 30 MW to around 20 MW in May 2025, reflecting affordability constraints.

- As of 2023, South Sudan's electricity consumption remained critically low at approximately 51 kWh per person annually, which starkly contrasts with the global average of approximately 3,781 kWh per person (Low Carbon Power, 2025).

1.3 Electrical Interconnection and Import/Export

Additional information

South Sudan currently has very limited operational electricity interconnections. It operates as an electrical “island”, with small, isolated grids in cities such as Juba, Wau and Malakal, and a growing number of private mini-grids. Still, it depends on a small cross-border supply from Sudan (for the town of Renk) and has major new interconnection projects underway with Uganda. Plans also exist for Ethiopia and Kenya, but these are not yet operational. The existing interconnection serves only Renk, with a contracted capacity of up to 40 MW, but actual imports have typically been significantly lower. No wider grid infrastructure connects the two countries.

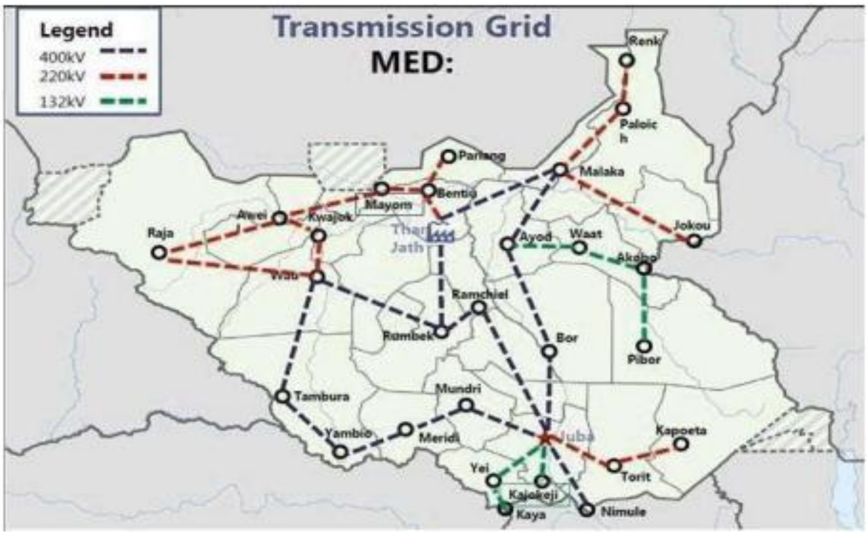


Fig 1: Planned transmission lines in the Upper Nile, Baher el Ghazal and Equatoria regions (Source: International Conference on Power Electronics and Energy System, 2024)

Planned Interconnection
Uganda-South Sudan Interconnection (Primary Project)

- In December 2024, the African Development Fund approved financing of $153.66 million for a 400 kV regional transmission line, approximately 299 km between Juba (South Sudan) and Olwiyo (Uganda), including associated substations. The 400kV double-circuit line will have a power transfer capacity of 1,000 MW. The new interconnection will enable the exchange of an average of 624GWh of energy annually between the two countries. Initially, South Sudan is expected to be a net importer of electricity from Uganda, with work anticipated to be completed by 2029 under the stewardship of the South Sudan Electricity Corporation (SSEC) and the Uganda Electricity Transmission Company Limited (UETCL).

Ethiopia-South Sudan Interconnection

- A 230 kV transmission line (335 km) from Gambela, Ethiopia, to Malakal, South Sudan, is still in the early stages of development. The Gumbo substation in South Sudan is designed to accommodate a future connection from Ethiopia and to transmit power to other states in the country.

Regional Integration - Eastern Africa Power Pool (EAPP)

	• South Sudan recently joined the Eastern African Power Pool (EAPP), which aims to coordinate cross-border power trade and grid interconnection among Eastern African nations. There are currently four synchronized networks in the EAPP region: Egypt-Libya, Ethiopia-Sudan-Djibouti, Kenya-Uganda, and Rwanda-Burundi-East DRC. South Sudan is not yet connected to any of these synchronized networks.

1.4 Market Structure

South Sudan possesses one of the world's most underdeveloped electricity sectors. The sector operates under a centralized monopoly model with extremely limited liberalization, facing severe infrastructural, financial, and regulatory challenges stemming from the country's independence in 2011 and subsequent civil conflict.

Market Participants and Structure

1. Generation

The market includes both the state-owned South Sudan Electricity Corporation (SSEC) and emerging private Independent Power Producers (IPPs), particularly Ezra Group which operates the largest generation facility. SSEC owns existing state legacy infrastructure and holds significant stake in new projects through partnerships with Ezra Group.

2. Transmission

SSEC is mandated with expanding and operating generation and distribution assets, though transmission infrastructure remains extremely limited. The country operates three isolated distribution networks totaling approximately 15 km in Juba, Wau, and Malakal, with no interconnected national grid.

3. Distribution and Retail

The Juba Electricity Distribution Company (JEDCO) is a public-private partnership incorporating Ezra Construction & Development Group (52% shareholding) and SSEC (48% shareholding). JEDCO has become the primary electricity service provider in Juba, effectively privatizing distribution in the capital. JEDCO buys bulk power from Ezra (and soon other generators) and delivers it to commercial and residential customers within Juba. There is no independent retail segment; JEDCO acts as both distributor and retailer.
Other urban centers rely on smaller, isolated mini-grids managed by state entities or donor-backed initiatives. Expansion of these networks is ongoing, but capacity remains limited.

Regulatory Framework

The Electricity Act, 2012: This is the principal legislation governing the electricity sector in South Sudan. Key provisions include:

- Establishment of the Electricity Regulatory Authority (ERA): The Act created the ERA as an independent regulatory body responsible for regulating the generation, transmission, distribution, and supply of electricity
- Licensing Requirements: Mandates that entities engaged in generation, transmission, distribution, or supply of electricity must obtain licenses from the ERA
- Tariff Regulation: Grants the ERA authority to approve electricity tariffs and ensure they are fair, reasonable, and cost-reflective
- Technical Standards: Empowers the ERA to establish and enforce technical, safety, and performance standards for the electricity sector
- Consumer Protection: Provides for consumer rights and establishes complaint resolution mechanisms
- Private Sector Participation: Creates a framework for private investment in the electricity sector through licensing and regulation

Electricity Trading and Pricing

Electricity tariffs in South Sudan average approximately $0.42 per kWh, among the highest in the world relative to income levels. There is no competitive wholesale electricity market; all power is procured through direct contracts between SSEC and private generators, or through public-private partnership arrangements, such as JEDCO. The sector operates on a cost-recovery basis without adequate government subsidies, leading to chronic financial unsustainability. Generation costs exceed revenues, leading to frequent load shedding,

service interruptions, and inadequate infrastructure maintenance.
Bilateral power purchase agreements with private suppliers are part of the power sector reform agenda.

Market Liberalization Status
South Sudan's electricity market remains minimally liberalized with significant institutional weaknesses. Generation is open to private investment through IPPs, with PPP models increasingly utilized.

Transmission is a Monopoly under SSEC, though infrastructure is nascent.

Distribution/Retail is De facto privatization in Juba through JEDCO; elsewhere, it is monopolized by SSEC.

There is no independent regulatory body; the Ministry of Electricity and Dams (MoED) functions as both government policymaker and regulator.

The South Sudan Electricity Corporation Act 2011 and National Electricity Policy 2013 provide only a partial sector management framework. The Cabinet passed a draft National Electricity Bill but has returned it to the Ministry of Justice for revisions, leaving it unratified and resulting in significant regulatory gaps in licensing, tariff regulation, and sector oversight.

Environmental Attribute Products and Certificate Systems
I-REC(E) Standard (Primary System)
South Sudan has been approved as an I-REC(E) country since September 2019, with Energy Peace Partners (EPP) serving as the authorized issuer for both standard I-REC(E) certificates and Peace Renewable Energy Credits (P-RECs)- an impact label on the I-REC(E).

Operational Track Record:
- P-RECs have been issued from projects in South Sudan since 2020, primarily from an off-grid mini-grid solar project owned by the International Organization for Migration (IOM), Malakal Humanitarian hub. Total issuance volumes remain modest, but they are growing.
- No regulatory barriers or government opposition encountered to date

Other Certificate Systems: None

Market Development Outlook
In general, the South Sudan electricity market is in a pre-commercial development stage. Priority areas include:
- Expanding generation capacity through both grid and off-grid solutions
- Developing transmission and distribution infrastructure
- Strengthening regulatory institutions (particularly the ERA) and implementing subsidiary regulations
- Finalising and implementing the National Energy Policy
- Developing standardised licensing procedures and PPAs for renewable energy
- Attracting private investment through clearer policy frameworks and regulatory certainty
- Leveraging renewable energy resources, particularly solar and hydro
- Improving operational and financial sustainability of SSEC

International development partners, including the World Bank, the African Development Bank, and various bilateral donors, are supporting gradual market development; however, progress remains constrained by ongoing economic challenges, limited fiscal resources, and infrastructure deficits.

1.5 Responsible Government Department

Ministry of Energy and Dams (MoED)

- This is the line ministry responsible for national energy policy, planning and coordination in South Sudan. In practice, because South Sudan does not yet have an operational, independent electricity regulator, MoED currently performs many regulatory and oversight functions (policy formulation, tariff advice and licensing oversight) in addition to its policy and planning duties.

- The ministry has been configured with slightly different names in various government reorganizations (for example, previously combined with water resources as the Ministry of Electricity, Dams, Irrigation and Water Resources), but MoED remains the government's principal energy sector institution.

- The World Bank and government project documents further note that while establishing an autonomous regulator is a stated priority, MoED will continue to implement necessary sector regulations until such an authority is created and staffed.

South Sudan Electricity Corporation (SSEC)

- The SSEC is the state-owned utility established by the Southern Sudan Electricity Corporation Act (2011) and charged with generation, transmission and bulk supply responsibilities. The Act sets out SSEC's mandate but also refers to a separate regulatory Authority (not yet established in practice), which has contributed to role overlap between the Ministry, SSEC and any future regulator.

- Since 2018 SSEC has participated in a public-private joint venture for Juba's distribution network with the Juba Electricity Distribution Company (JEDCO) in which SSEC is reported to hold 48% and a private partner (Ezra Group) holds 52%.

- In recent years SSEC's operational footprint has been constrained by asset damage, limited revenues and reliance on government financing; at the same time private operators (notably the JEDCO/Ezra arrangement) now provide most of Juba's electricity services, making SSEC's practical role more limited than its statutory mandate.

Ministry of Environment and Forestry

- The Ministry of Environment and Forestry is the national focal point for environmental policy, environmental protection and the government's obligations under international environmental conventions. The Ministry is responsible for environmental planning, oversight of environmental assessments where applicable, and coordination on climate-related matters.

- Various government environmental/social frameworks and donor project documents identify directorates or functional units (for example, climate change / meteorology and environmental planning) within the ministry's remit, although up-to-date public organograms are limited and donor reports commonly describe weak institutional capacity and incomplete legal frameworks for environmental management

Regulatory Gaps and Pending Legislation

- South Sudan does not currently have an operational, independent electricity regulatory authority. A National Electricity Bill (2015) was drafted to establish a National Electricity Regulatory Authority and to modernize sector licensing and tariff frameworks, but that Bill has not been enacted into law and no autonomous sector regulator is functioning at scale.

- The primary statutory instrument remains the Southern Sudan Electricity Corporation Act (2011), which assigns broad utility responsibilities to SSEC but does not fully separate policy, ownership/operation and independent regulation—creating institutional overlap in practice.

- Similarly, the Draft National Environmental (Protection) Bill 2013 envisages a National Environmental Management Authority (NEMA), but that Bill remains pending/draft and the NEMA is not yet fully established in law; as a result, many environmental oversight duties are being implemented by the Ministry of Environment and Forestry and by project-level environmental and social frameworks rather than by a standalone statutory authority.

Environmental Attribute Tracking and Certification

- South Sudan does not have a domestic renewable energy certificate or environmental attribute tracking system. However, the I-REC(E) is available in the country with Energy Peace Partners (EPP) serving as the issuer, as well as the exclusive issuer of Peace Renewable Energy Credits (P-RECs). This means that EPP serves as the official contact point for I-REC(E) certification and environmental attributes in South Sudan, operating under the International Tracking Standard Foundation (I-TRACK Foundation) framework.

1.6 Existing/Planned Legislation

Existing Legislation

South Sudan Electricity Corporation Act 2011

The 2011 SSEC law, to date, is the only ratified sector law; however, it has also been essentially rendered obsolete by subsequent sector developments. This Act provides no clear distinction between the roles of the government as operator, regulator, and policy maker. Additionally, it does not mention any support for renewable energy in the country.

Electricity Act 2012

The Electricity Act 2012 represents an advancement over the 2011 SSEC Act by establishing the Electricity Regulatory Authority (ERA) as an independent regulator and creating a more comprehensive framework for sector governance. The Act provides for the licensing of generation, transmission, distribution, and supply activities, establishes tariff regulation mechanisms, and outlines consumer protection provisions.

National Electricity Policy 2013

The 2013 National Electricity Policy and Strategy has become increasingly obsolete due to the political and sector developments that have occurred in the decade since its release. This policy attempted to outline the roles and responsibilities of sector institutions but the loss of grid infrastructure as a result of conflict, along with the increased role played by the private sector, has diminished its relevance.

Environment Policy of South Sudan 2016

The Environment Policy of South Sudan was developed in 2016 to provide high-level environmental management principles for the country. The policy emphasizes ecological protection and sustainable resource use and calls for systematic ecological impact assessment for development projects. Key elements include emphasis on environmental protection and sustainable natural resource management, systematic environmental impact assessment requirements, and integration of climate change considerations into development planning.

2. **Planned Legislation**

National Electricity Bill 2015

The purpose of the National Electricity Bill of 2015 is to provide for the establishment of a regulatory framework that governs the generation, transmission, bulk supply, distribution, supply, export, import, and system operation and related matters. The Bill was drafted in 2015 and passed by the cabinet but has yet to be ratified and contains several gaps that threaten to limit its effectiveness as a governing document.

Draft Environmental Protection Bill 2013

The Draft National Environmental Bill 2013 (approval still pending) provides for the establishment of an autonomous South Sudan National Environmental Management Authority (NEMA) to act as the watchdog over all public institutions, private companies, and individuals who fail to comply with the stipulated environmental laws and regulations.

Environment Policy of South Sudan 2016

Developed in 2016, the policy provides high-level environmental management principles but lacks implementation regulations or legal force. It emphasizes environmental protection and sustainable resource use and calls for systematic environmental impact assessment.

Legislative Impact on Environmental Attribute Products

- South Sudan's existing and planned legislation presents a legally ambiguous environment for environmental attribute products such as I-REC(E), characterized by neither explicit support nor prohibition. The current South Sudan Electricity Corporation Act 2011 and Electricity Act 2012, along with the National Electricity Policy 2013 and Environment Policy 2016, do not contain provisions addressing renewable energy certificates, environmental attribute tracking, or certification systems.

- The pending National Electricity Bill 2015 and Draft Environmental Protection Bill 2013, despite being drafted over a decade ago and awaiting ratification, similarly lack specific provisions for environmental attributes. However, they could provide institutional foundations through the proposed Electricity Regulatory Authority and National Environmental Management Authority.

- South Sudan's Nationally Determined Contributions (NDC) submitted in 2021 establish climate commitments that environmental attribute systems could support. However, no implementing legislation or regulations currently exist to facilitate I-REC recognition.

The legislative gap in South Sudan's electricity sector means that I-REC(E) implementation could proceed on a voluntary basis, driven by international standards and market demand rather than domestic regulatory requirements. The lack of explicit prohibition, combined with the country's international climate commitments, creates space for voluntary environmental attribute schemes to operate while awaiting more comprehensive regulatory frameworks.

1.7 Environmental and Renewable Electricity Legislation

1. Environmental Protection Act (2016)

This law provides the legal basis for environmental management. It mandates pollution control (air, water, and land), sustainable use of natural resources, biodiversity conservation, and requires environmental impact assessments (EIAs) for significant projects—including energy infrastructure. The Act established the South Sudan Environmental Protection Agency (SSEPA) for regulatory oversight. Disclosure is required through EIAs, but there are no direct provisions for renewable electricity tracking mechanisms.

2. National Environment Policy 2015–2025

This policy offers strategic guidance on environmental stewardship, resource management, climate change adaptation and mitigation, environmental planning, and CSR. It sets the goal of sustainable natural resource use but does not establish binding targets or mandates for renewable energy or emissions reduction.

3. Nationally Determined Contributions (NDC)

South Sudan submitted its first Nationally Determined Contribution (NDC) to the United Nations Framework Convention on Climate Change (UNFCCC) in 2021, marking the country's primary commitment to climate policy. The NDC outlines South Sudan's contributions to global climate change mitigation and adaptation efforts, with particular emphasis on the energy sector, given its potential for both emissions reduction and development benefits.

4. National Adaptation Programme of Action (NAPA)

South Sudan has developed a National Adaptation Programme of Action focusing on priority climate adaptation needs and interventions. The NAPA identifies vulnerable sectors and populations, prioritizes adaptation measures, and provides a framework for building climate resilience. While the NAPA primarily addresses adaptation rather than mitigation, it recognizes sustainable energy access as essential for building climate resilience in vulnerable communities.

Enablers and Restrictions for Renewable Electricity Tracking

- South Sudan's legal and policy framework neither explicitly enables nor restricts renewable electricity tracking mechanisms or certificate-based support systems, creating a legally ambiguous environment for environmental attribute certification. The existing legislation, including the South Sudan Electricity Corporation Act 2011, the Electricity Act 2012, the Draft Environmental Protection Bill 2013, and the Environment Policy 2016, does not contain provisions establishing renewable electricity tracking requirements, frameworks for certificate-based support systems, or mandates for metering or verification of renewable energy generation.

- The 2021 NDC emphasizes renewable energy development for climate mitigation. Still, it does not specify tracking mechanisms, monitoring frameworks, or environmental attribute recognition systems to verify progress toward climate goals.

- There are no electricity disclosure labels that mandate utilities to inform consumers about the composition of their energy sources, no requirements for corporations to report their renewable energy consumption, and no regulatory obligations for entities making renewable energy claims to substantiate them through third-party verification or certification. This absence of disclosure and verification requirements means there is no domestic regulatory driver compelling the use of renewable energy certificates or environmental attribute systems.

1.8 Existing/Planned Certificate or Support Systems

South Sudan has been an I-REC(E)-approved country since September 2019, with Energy Peace Partners being designated the local issuer. P-RECs are the most visible attribute certificate currently issued in South Sudan. Recent landmark transactions, such as the P-RECs supplied from the IOM Malakal solar facility and purchased by private companies, demonstrate the mechanism's practical operation. Proceeds directly support humanitarian electrification projects.

Policy Framework and Restrictions

- The absence of explicit sector laws or registry rules has permitted the adoption and issuance of I-REC(E) and P-RECs without formal domestic restriction. International partners, NGOs, and UN agencies remain the primary project developers and attribute owners.
- South Sudan has not established a domestic environmental attribute registry or mandatory certificate system and all attribute ownership, use, and transfer for international certificates are subject to private agreements.
- There are no national-level bans or restrictive conditions relating to I-REC(E) or other internationally recognized energy attribute standards. Issuer eligibility, issuance, and data verification are determined by I-REC(E) rules and best international practice, rather than domestic legislation.

Carbon Credits and Offset Mechanisms

- South Sudan has minimal participation in international carbon markets or offset mechanisms. There are no domestic carbon credit schemes, and very few projects in the country have pursued international carbon certification.

1.9 Extent of Engagement with Government

- Engagement between Energy Peace Partners and the Government of South Sudan has been limited but progressively developing, primarily through project-level coordination, early consultations, and pilot initiatives related to I-REC(E) and environmental attribute tracking with privately owned projects. The nature of interaction has focused on building awareness and gathering stakeholder feedback primarily from private developers and UN agencies operating in the country.

1.10 Expected Response from Government

Current Experience with I-REC(E) Issuance

I-REC(E), particularly Peace Renewable Energy Credits (P-RECs), have already been issued from renewable energy project in Malakal that is owned by IOM.

Anticipated Government Position

Based on the current operational record, the South Sudanese government and regulatory agencies are expected to maintain a supportive or neutral stance toward I-REC(E) certification. The following factors support this position:

- Alignment with National Priorities: I-REC(E) certification advances South Sudan's renewable energy and electrification goals without imposing administrative or fiscal burdens on the government. The certificates help demonstrate an international commitment to clean energy and climate priorities outlined in national strategy documents.
- Attraction of Private Investment: Voluntary certification systems like I-REC(E) and P-REC can enhance the bankability of renewable energy projects, stimulate private and donor investment, and attract international corporate buyers—all of which are consistent with government objectives to scale up energy access and sector sustainability.
- No Conflict with Existing Policies: I-REC(E) operates as a voluntary, internationally recognized market mechanism and does not interfere with existing tariff structures, power market regulation,

government licensing requirements. No conflicts or overlaps with domestic energy policy have been identified.

- International Credibility: I-REC(E) and P-REC issuance provide South Sudan with international visibility and recognition for its renewable energy resources and humanitarian impact, bolstering the country's profile and access to global climate finance opportunities.

Potential Future Developments
Should the South Sudanese government consider introducing binding renewable energy targets, carbon market instruments, or a state-operated certificate scheme in the future, close coordination with the I-TRACK Foundation would be essential. This would ensure compatibility, avoid double-counting of environmental attributes, and maintain high standards of ecological integrity. The I-REC(E) governance structure is designed to work in parallel with or be integrated into national frameworks, should policy or regulatory conditions change.

1.11 Proposed Restrictions

To preserve the environmental integrity of South Sudan's attribute tracking system and prevent double issuance or double counting of ecological attributes, several country-specific limitations and best practices should be considered:

- **Grid and Off-grid Requirements**

For grid-connected projects, certificates should be issued only for energy that can be demonstrably injected or consumed within the national grid system, with metering and project boundaries clearly established. For mini-grid and off-grid projects, robust meter-based reporting and additional environmental reporting (such as EIAs) may be required to ensure the legitimacy and traceability of generation.

- **Government Approval**

All projects participating in the registry should obtain written confirmation or project-level approval from the Ministry of Energy and Dams, which serves as the responsible authority in the absence of a dedicated regulator. This approval mechanism helps confirm project eligibility, prevent unauthorised issuance, and support national reporting needs.

- **Registry Coordination**

To avoid double-counting, only recognised certificate issuers (such as EPP) should issue attributes, and all certificates must be recorded within the international I-REC(E) registry. There should be a requirement for prompt cancellation of I-RECs when claimed for reporting purposes, following the standard's anti-double-counting protocols.

- **Disclosure Requirements**

While not legally mandated, registry participants may be asked to publicly disclose certificate claims and transactions to promote market transparency and foster public trust, especially in contexts with emerging sector oversight and donor involvement.

1.12 Any Other Relevant Information

RE Market Potential
South Sudan possesses significant untapped renewable energy potential, with solar irradiation averaging 5-6 kWh/m²/day, one of the highest in Africa, and over 5,000MW of potential hydropower capacity along the Nile tributaries. Given these infrastructure constraints, off-grid solar solutions, including solar home systems and mini-grids, represent the most viable near-term deployment pathway. International development partners have increasingly identified South Sudan as a priority for off-grid renewable energy interventions.

Historical Support or Development of Renewables in the Country/Region
International support for renewables in South Sudan has been limited and fragmented, primarily through development partners such as the World Bank, AfDB, and UNDP; however, implementation has been severely constrained by political instability. Various NGO-led solar initiatives have provided small-scale installations for health facilities, water pumping, and displacement camps. Regionally, South Sudan's membership in the East

African Community and Nile Basin Initiative provides theoretical frameworks for cooperation, though practical engagement remains minimal. Neighbouring countries like Uganda, Kenya, and Ethiopia offer more developed renewable energy sectors that could provide lessons. Still, South Sudan's institutional capacity remains extremely limited, with the Ministry of Energy and Dams lacking operational effectiveness and no functional regulatory framework or renewable energy policy in place.

Demand-Side Market Potential or Strategic Nature of Market Development

The demand for renewable energy in South Sudan is critical across multiple sectors, including health facilities that require reliable power for vaccine refrigeration and medical equipment, schools that lack electricity for educational technology, and water supply systems that depend on solar pumping. Energy access is explicitly linked to peacebuilding and state-building objectives, making renewable energy development strategically important beyond pure economic considerations. Off-grid renewable solutions may prove more feasible than grid extension for decades, given the destruction of infrastructure and limited financial resources. The humanitarian-development nexus is particularly relevant, as large displacement populations require energy services, and the transition from emergency response to development necessitates sustainable energy infrastructure that could create demonstration effects for broader adoption.

Analysis of Political Disruptions or Market Risks

South Sudan faces severe political instability with ongoing implementation challenges of the 2018 peace agreement, periodic violence, and sub-national conflicts that limit access and investment. Security risks include active conflict zones, documented attacks on infrastructure, and restricted humanitarian access during rainy seasons. Economic fragility is extreme, with over 90% of the government's budget dependent on oil revenues, creating fiscal volatility, severe currency depreciation, hyperinflation episodes, and limited foreign exchange availability. Governance challenges encompass weak institutional capacity, pervasive corruption, lack of transparent procurement, and minimal data availability. The high probability of project disruptions due to conflict, flooding, or political events necessitates comprehensive force majeure planning, though insurance and risk mitigation instruments remain extremely limited or unavailable.

Analysis of Regulatory Risks, Including Linkages with Carbon Markets and Support Systems

South Sudan lacks essential regulatory frameworks, including electricity regulation, an independent regulatory authority, a renewable energy policy, standardized PPAs, technical standards, and consumer protection mechanisms. The capacity to develop, verify, and issue carbon credits is essentially non-existent, although additionality would be relatively easy to demonstrate given the diesel-or-nothing baseline. International certification mechanisms, such as I-REC(E), operate independently of local regulatory frameworks.

1.13 Author

Complete all fields.

Organization Name		Energy Peace Partners	
Signature			
Name (BLOCK CAPITALS)		PIUS OUNA, LINDA WAMUNE	
DATE	13	11	2025

The International Tracking Standard Foundation
De Mortel 2D 5211 HV ‘s-Hertogenbosch
The Netherlands
www.trackingstandard.org