

Green Energy Transition in Africa - Senegal

**Background &
justification**

**National projects and
programs**

**Public-Private Partnership
power plant projects**





**"Ensure broad and reliable
access to quality and
affordable energy..."**

- State of Senegal

« Ensuring broad and reliable access to quality and affordable energy ».

In Senegal, energy self-sufficiency is one of the main concerns of the state.

With a growing need for energy, Senegal uses two types of energy: non-renewable energy composed of fossil fuels and renewable energy.

Several private solar photovoltaic power plants have been commissioned and integrated into the Interconnected Grid in order to achieve solar and wind energy independence.

Background & justification

38.3% of the Senegalese population has no access to electricity, mainly in rural areas.

The demand for energy will increase fivefold with the increase in population (approximately + 3,000,000 hbts in 2025).

Senegal has set itself the goal of universal access to energy by 2025:

- Securing energy supply;
- Reduction of dependence on fossil fuel imports;
- Opportunities for innovation and job creation.

ANSD study conducted between 2014 and 2015 in Senegal

- 3/5 Senegalese households have access to electricity
- More than 30% of households not connected to the electricity network in their locality
- Rate of access to electricity 52
- Price per kilowatt hour (\$0.25)
- Solar system more present in rural areas (4% of households)

National projects and programs

- Sustainable Energy Programme (PED) with the German Cooperation;
- Sustainable and participatory management of traditional and alternative energies project (PROGEDE);
- National Domestic Biogas Programme (PNB-SN);
- Rural electrification programme (ASER, PERACOD);
- Eco-villages programme (ANEV);
- Emergency Community Development Programme (PUDC);
- PNEEB/TYPHA programme of the Ministry of the Environment, financed by UNDP/GEF, which develops prototypes of energy-efficient housing and buildings (local insulating materials, orientation and ventilation of buildings);
- Access to drinking water through boreholes using PV and wind systems (Ministry of Hydraulics) and Telephone operators.

Power plant projects operational:

Public-Private Partnership



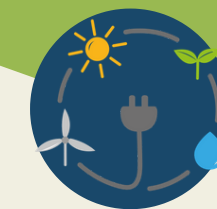
SOLAR POWER PLANTS

- Sakal 20Mw
- Diass 15Mw,
- Bokhole 20Mw,
- Malicounda 20Mw,
- Santhiou Mekhe 20Mw,
- Ten Merina 20Mw,
- Kahone 35Mw et Kael 25Mw



WIND POWER PLANTS

- The wind power plant of Taiba Ndiaye 150Mw



PROGRAMS

- The scaling solar programme: from Kahone and Kael » World Bank.
- Taiba Ndiaye wind power plant, 192 billion FCFA
- Kahone solar power plant, CFAF 15 billion
- Sakal solar power plant, CFAF 20 billion
- DIASS solar power plant, CFAF 13 billion » German Cooperation



Public lighting

According to the ESDA 2019-2023, four private solar PV plants were commissioned and integrated into the Interconnected Grid for a total capacity of 142 MWC in 2018 to achieve solar and wind energy independence.

1905 solar street lamps have been installed in religious cities, places of worship and local communities.

The installation of 50,000 solar PV street lamps is planned in all regions.

1 **STRENGTHS**

Geographical position of the country and its Climate ;
A strong private sector providing employment in the renewable energy sector

3 **OPPORTUNITIES**

Lowering the cost of renewable energy equipment in the global market;
Increase the share of renewables in the energy mix by 2030 (from 22% to 30%)

2 **WEAKNESSES**

No subsidies for the development of renewable energy activities
Acquisition taxes for some equipment still high

4 **THREATS**

Risk of recession and inflation in Senegal:
Growth rate initially projected at 1.1% could fall to 0.7%.
The IMF forecasts a growth rate of 5% with a deficit of 3%.
Risk of fossil fuels taking over from RE with new oil and gas discoveries in Senegal

Senegal's target: 30% renewable energy in the energy mix by 2030

Key actors in Senegal

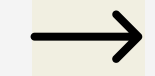
PUBLIC & PARA-PUBLIC ACTORS

MINISTRY OF OIL AND ENERGY

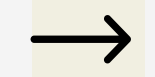
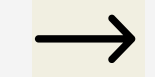
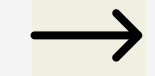
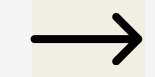
- Permanent Secretariat for Energy
- Directorate of Administration and Equipment
- Directorate of Electricity
- Directorate of Strategy and Regulation
- Directorate of Renewable Energy Development



- SENELEC
National Electricity Company
- PED
Promotion of the Productive Use of Solar Energy and Professional Training
- PROGEDE
Management of traditional and alternative energies
- PNB-SN
Promotion and popularisation of domestic biogas



- ANER
Promoting the use of RE in all sectors of activity
- ASER
Promote the use of
- AEME
Helping to reduce energy consumption by 40%.
- ANEV
Enable diversification of energy sources (Solar & Biogas...)
- CRSE
Regulation of the production, transmission, distribution and sale of electrical energy. Setting of tariff conditions for operators



- COMNACC
National Climate Change Committee
- ADEPME
Accompaniment and supervision of SMEs
- Directorate of Private Sector Development (DDSP)
- ANPEJ
Promotion of youth employment
- Departmental Offices for Youth Employment (ODEJ)
- Territorial Collectivity

Key actors in Senegal

PRIVATE ACTORS

- Nadji Bi
- Bonergie
- Suntaeg Energy
- Fonroche Sénégal
- Lynergies Afrique
- High Tech Energy
- Expertises & Solutions INTERNATIONAL
- TechoGaz
- Methanizer Afrique

CIVIL SOCIETY

- PRODER
- ENDA Energie
- Energy4Impact
- PRACTICAL Action
- Ong Le Partenariat
- Ong AMES
- COPERES
- FESELEC
- ENABLIS
- ACCESS
- Action Solidaire International

TECHNICAL & FINANCIAL PARTNERS (TFP)

- PED/GIZ
- GGGI
- UE & AFD
- USAID
- IAER/AREI, CEREEC, SABER-AFREC
- SCAC/AmbaFrance
- PLASEPRI
- DER-FJ
- FONGIP
- FONSI
- Banques locales & SFD

RESEARCH & TRAINING

- CERER
- EPT
- LER
- CIFRES
- CEFER
- INPG
- IAED

Conclude

By 2025, Senegal's ambition is to have energy in quantity and quality at an affordable cost, while ensuring universal access to modern energy services, while respecting the principles of social and environmental acceptability.

To achieve this objective, an energy transition is necessary.

There are three major axes :



GAZ TO POWER STRATEGY



UNIVERSAL ACCESS TO ELECTRICITY



MODERNISATION OF THE TRANSMISSION AND DISTRIBUTION NETWORK

For more information, please contact the Energy Transition Club for West Africa



EUROCHAM
CHAMBRE DES INVESTISSEURS EUROPÉENS AU SÉNÉGAL

Strength of a Network

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SENEGAL

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