“Advancing EU-Nigeria Energy Transition Cooperation”

10TH NIGERIA ENERGY FORUM HELD VIRTUALLY ON THURSDAY 20TH NOVEMBER2025

Organized by:Nigeria Energy Forum

Historical Journey of Energy Transition

- In 1920, coal accounted for 62% of primary energy consumption.
- The petroleum age took over in 1965 with crude oil as the most consumed energy source.
- Although up until now, fossil fuels have continued to dominate our energy resources yet renewable energy is making progress and will soon take over- ***World Economic Forum***
- The share of renewables in global electricity generation is projected to rise to 43% by 2030- ***IEA***
- Two major drivers of the transition to renewable as the energy of the future are; **Cost and environmental benefits.**
- First is the continuous decrease in the price of renewable energy generation equipment. For example the cost of PV panel per watt has fallen over the past four decades from $100 per watt in 1976 to $0.23 in 2016 which represent 99.3% decrease. ***Bloomberg***
- Secondly in line with global Paris agreement to maintain global average temperature: well below 2°C above pre-industrial.

Energy Access Gap in Nigeria

- As of 2023, Nigeria has the highest number of people without electricity access globally, with 86.8 million individuals lacking reliable power, according to the World Bank's latest energy progress report.
- Nigeria's consumption of electricity per capita is amongst the lowest in Africa, estimated at less than 150 kWh.
- Core Challenges to electricity access on the gird include; long-standing liquidity problem, Infrastructure Deficiencies and Security Issues
- 74% of the population lack access to clean cooking resulting in significant quality and length of life repercussions for mainly women and children in the country.
- The grid extension by relying alone on grid supply is not sufficient to meet 100% electricity access.
- Hence the need to move fast with multiple electrification strategies including decentralized energy solutions using renewable energy technologies.

Nigeria Renewable energy potential

- *Does nigeria have enough renewable energy potential to achieve universal energy access ? The answer is yes*

- The technical wind energy potential in Nigeria is estimated to be 5,382 MW(EU-GTAF).

- The potential capacity for SHP (up to 30 MW) is estimated at 3,500 MW.

- According to the International hydropower association, Nigeria has considerable hydropower potential of over 14GW for large hydropower , especially in central and northern regions. Only about 15% of this capacity has been utilised.

- Based on the estimates provided by the International Renewable Energy Agency (IRENA), the potential for solar PV energy in Nigeria is about 210 gigawatts (GW).

EU Global Policies Driving Energy Transition Engagement

- EU Global Gateway; to invest in smart, clean and secure infrastructure in energy and other key sectors across the world to tackle inequalities and put the Sustainable Development Goals back on track.

- Africa-EU Green Energy Initiative; increase the number of African people, businesses and industries having access to affordable, modern and sustainable energy services• support investments in renewable energy generation• promote energy efficiency:

  - **By 2030, provide at least 100 million people with access to electricity.**

European Commission

EU Strategy on Energy Transition in Nigeria

- The EU has been the biggest donor partner in terms of grants to the Nigeria's power sector (with about EUR 300 since 2008 and including the current NIP).

- Our 360-degree approach since 2008 involved providing technical assistance to improve institution/legal frameworks and ease of doing business within the renewable energy market, improvement of perception of renewable energy and introduction of technology standards in the country, development of skills for the nascent sector/technology transfer and investment in energy infrastructure.

- Promotion of investment in renewable energy generation (Both-Off and On-grid) **through public- private -partnership (PPP)** or **purely private sector led** that guarantee sustainability of EU funding and projects' impact.

- Reduction of demand for more power plants through promotion of **energy efficiency** for reduced energy intensity as well as decarbonization of power generation with renewable energy.

- Promotion og **circular economy across off-grid energy access value chain** through recycling, re-use of waste solar panels, batteries, inverters etc.

- Improvement of **institutions/legal frameworks** and ease of doing business within the renewable energy market.

European Commission

EU –Nigeria Cooperation on Energy Transition

Project	EU contribution to Budget	Project Description	Implementer	Beneficiary	Status
Small Hydro project (SHP)	5M EUR	The project involves generating electricity from small hydro, to power agricultural activities in Nigeria. SHP of varying capacity and technology will be installed across the six geopolitical zones of Nigeria. On average, each site will have an installed capacity ranging from 300kW-2MW	UNIDO	Sub-national	Ongoing
NESP3	9 M EUR	The EU flagship Technical assistance project for the power sector is to continue the work already done in the previous two phases on on-grid and off-grid electrification focusing on result-based financing for both isolated and interconnected mini-grids, premium grid for on-grid e-mobility, LPG for household and commercial cooking, targeting approximately 100MW from on-Grid and 6MW from off-grid solutions. The programme will also continue to strengthen legal and institutional framework in the sector.	GIZ	National(Both Public and Private sector)	Ongoing

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Nigeria Solar for Health	1.9M EUR for TA 8.7 M EUR for equipment	The project involves using solar micro-grids to provide 24hours electricity supply to critical public health care facilities that are off the grid or underserved. The intervention will target at least 100 public healthcare facilities across the six geopolitical zones of Nigeria.	NTU International	Sub-national	Ongoing
GET.invest Nigeria Country Window	4 M EUR,	The project will play the role of a Team Europe One Stop Shop for Clean Energy Investments, targeting start-ups and helping businesses scaling up by providing catalytic support for mobilising investments.	GIZ	Private sector	Ongoing
Advancing Nigeria's green and just transition to Net Zero through circular economy practices	4M EUR	To promote circular economy practices in the power sector through recycling and reuse of waste energy generation equipment in the power sector	UNIDO	Sub-national	Ongoing
ELECTRIFI Nigeria Country Window	30M EUR	Innovative financing for private sector led project in the off-grid sector. The instrument provides debt and equity finance mini-grid, C&I, Captive generation project in Nigeria	EDFIMC	Private sector	Ongoing

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Enhancing Vocational Training delivery for the power sector in Nigeria	8.3M EUR	The Action aims at contributing to the success of the power sector reform in Nigeria and its positive impact on economic development, job creation and population well-being, by providing to power sector stakeholders skilled workforce adapted to their needs and capacity building. The EU grant is supporting the review of training curriculum for the power sector and also to transform NAPTIM to a centre of excellence for training in the ECOWAS Region	AFD	National	Ongoing
Nigeria Renewable Energy Project(CLIMATE INVESTOR ONE)	10M EUR	EUR 10 million is dedicated and ring-fenced for funding on-grid renewable energy projects in Nigeria	FMO/Climate Fund Manager	Private Sector	Ongoing

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Northern Corridor Project-	25M EUR	The Northern Corridor project aims at supporting TCN in expanding its Power Transmission Infrastructure through the construction of additional transmission lines and substations across nine states in the northwestern part of the country. The specific objectives of the project will include: - reinforcing globally the northwestern power transmission grid - facilitating the evacuation/distribution of solar power to be generated by upcoming IPPs in the North-West - Promoting electricity access in the North - contributing to the North Core transmission system under the WAPP Nigeria-Niger interconnection project - improving the economic performance of TCN The EU investment grant will finance the Katsina-Daura-Gwiwa-Jogana twin 330kV line (around 230km, with around 600 towers and 30 angles towers, 50m Right of Way), allowing to evacuate power from north-west part of the national grid	AFD	National	Ongoing

European Commission

Thank You!