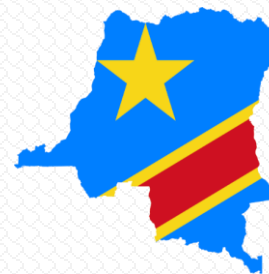




Japan International
Cooperation Agency

202411681J001 Energy Policy



Democratic Republic of CONGO

COUNTRY PRESENTATION

By Emery KAMBALE MBAVUMOJA

ANSER – DRC

<https://anser.gouv.cd/>



June 2025

1. GENERAL INFORMATION

COUNTRY PROFILE

- Capital: Kinshasa.
- Provinces : 26
- International Air ports : 5 (Kinshasa – Kolwezi – Lubumbashi – Goma – Kisangani)
- Area: 2 345 409 km² vs (6,2 x Japan)
- Climate : Mainly equatorial, tropical and mountain climates. As a result, DRC has the world's second-largest rainforest.
- Hydrography : 3 basins : the Congo River basin, the Nile basin & Shiloango. DRC has the second longest river in Africa and carries the third largest discharge volume after the Amazon and Ganges
- Lakes : Tanganyika – Kivu - Albert & Lake Mai-ndombe.



Extractive Industry : +6.5 %
Non-Mining Sector : +3.2 %



GDP per capita (2024)

Per capita : 688 \$
73.5% live on less than \$2.15/day

Economic Structure

(GDP composition, 2022)



● Agriculture, hunting, forestry, fishing ● Industry ● Services



Electricity (2024)

National rate : 21 %
Rural access : 1 %

Currency

(period average)

Congolese Franc



2,865.00 per USD (2025)



Natural Resources

Cobalt, copper, Tantalum, Tin, and Tungsten (3T),
High hydropower potential, +100 GW
Arable land, forest Immense biodiversity,

Language

FRENCH
Lingala
Swahili
Kikongo
Tchiluba

Political System

Unitary multiparty
republic
910 PP (2024)

Population

112 Millions (2025)
Urban Pop : 47 % (2024)

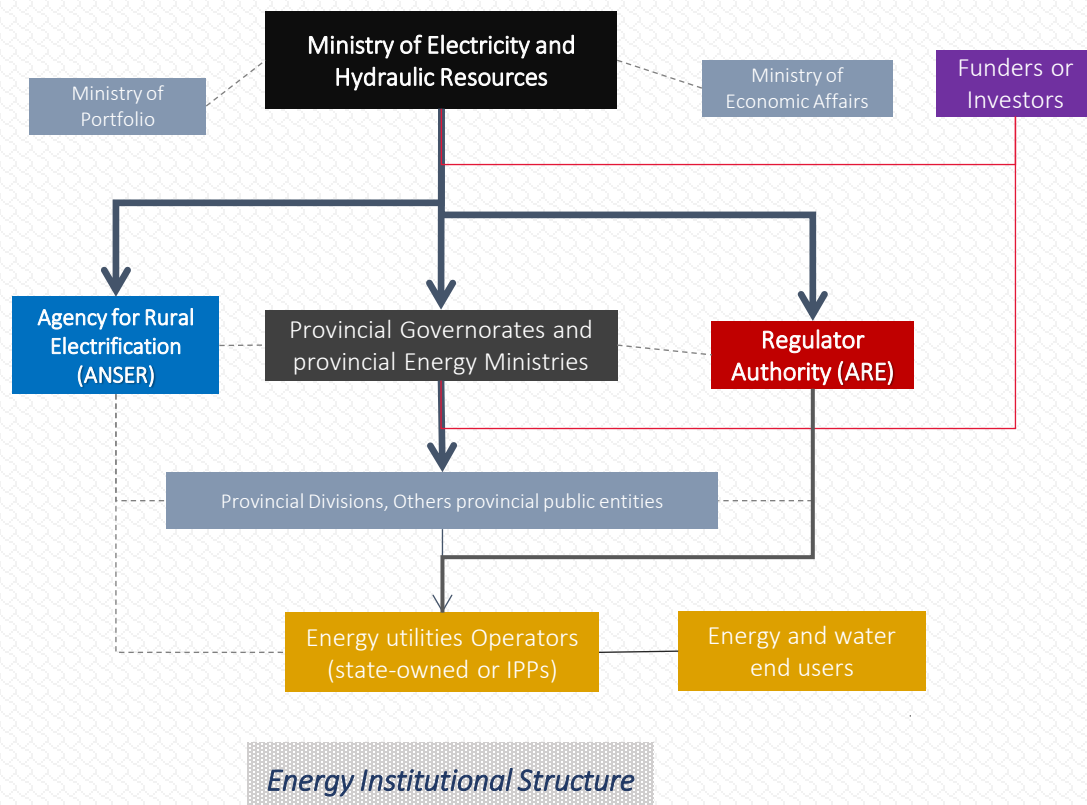


Women Pop : 51%
Population growth rate 2.3%
Fertility Index: 5.7 children /women





ENERGY STRUCTURE

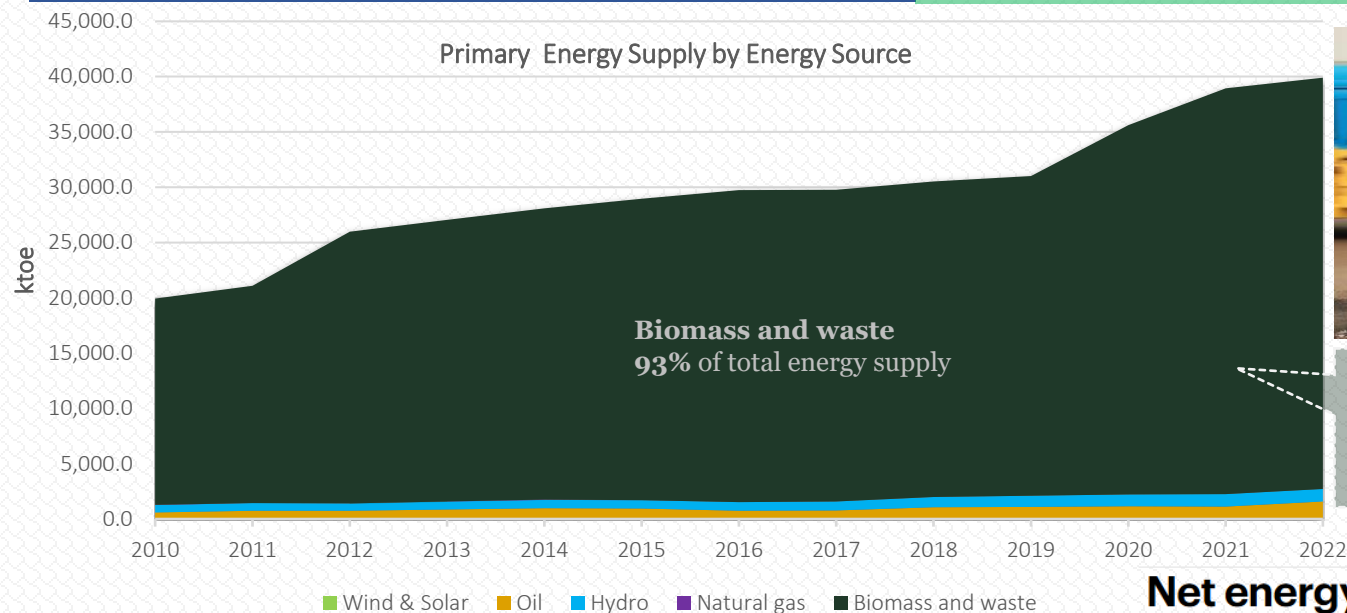


Key Actors	Responsibilities
Ministere des Ressources Hydrauliques et Electricite (MRHE)	Main authority in the electricity sector responsible for overseeing the national utility, SNEL, planning as well as policy and program development
Société Nationale d'Electricité (SNEL)	State-owned utility company responsible for the generation, transmission, and distribution of electricity
Electricity Regulation Authority (ARE)	Responsible for regulating various forms of energy, including electricity and tariff setting
The Congolese Association for Renewable and Decentralized Energy (ACERD)	Responsible for coordinating DRC's energy companies to respond to energy-access problems. Members include major players, such as BBOX, Greenlight Planet, BURN, Altech, and Dev Solaire
National Agency for the Promotion of Investments (ANAPI)	Responsible for actively promotes investments and provides investors with technical and legal support.
Participation in Regional Energy Infrastructure (Power Pools) and Institutional Arrangements	• Southern African Power Pool (SAPP) • Central African Power Pool (CAAP) • East African Power Pool (EAPP)
Relevant Regulatory Frameworks and Legislation	• National Electrification Fund • Energy Sector Policy Letter 2009 • Act number 14/011 of 17 June 2014 to govern the electricity sector • Law No. 11/009 of Jul 2011 is the law on the fundamental principles relating to environmental protection • Ordinance-Act No 70-033 of 1970 established state electricity company SNEL • Act No 08/007 of 2008 privatized SNEL

Energy Key Actors and Regulatory Framework

2. PAST ENERGY STATS

ENERGY STATISTICS OVERVIEW



<https://www.iea.org/countries/democratic-republic-of-the-congo/energy-mix>



<https://beta.oxfam.org/en/crisis-and-conflict/crisis-and-conflict>

- The 53% of Congolese people live in rural areas
- Wood, charcoal and others are used as primary energy for most of residential in urban as well as rural areas

Net energy imports

1.6%

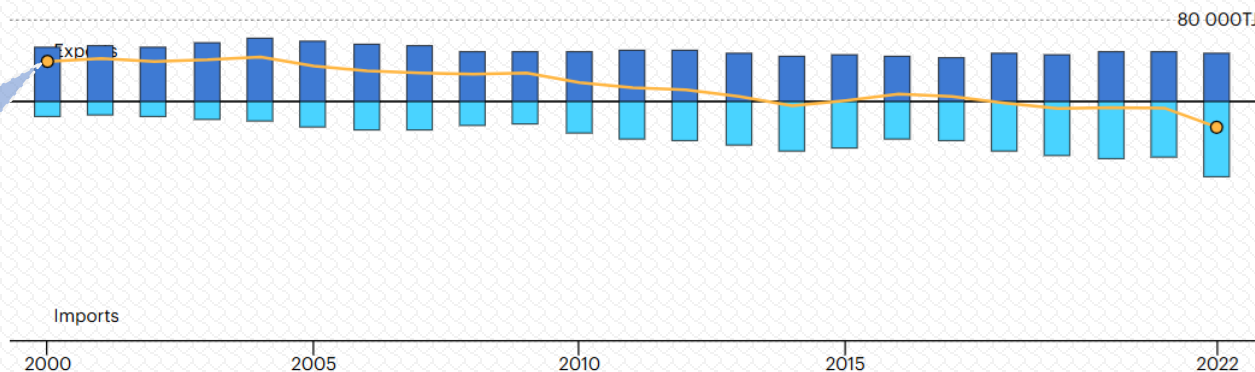
of 2022 total energy supply

Trend in energy imports

↑393%

change 2000-2022

- Ageing infrastructure, operational inefficiencies and governance issues have led to a decline in the quality and reliability of the SNEL's service which still dominating the market ; Together with an average population growth rate estimated at 3.3% per year
- High demand from the mining industry, and lack of access to the national grid and available electricity in neighbouring countries force mining to import power.

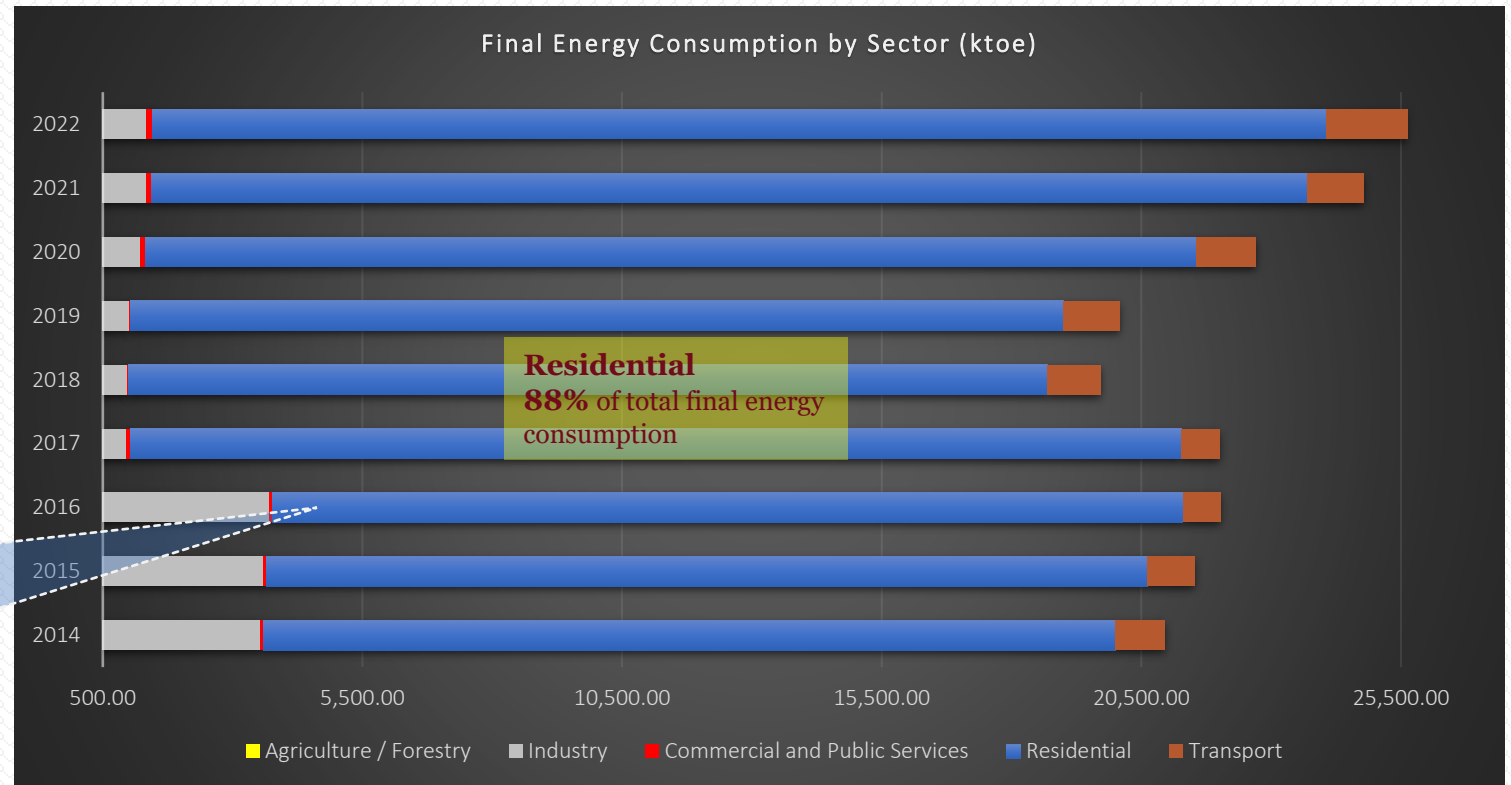


2. PAST ENERGY STATS

COUNTRY PROFILE

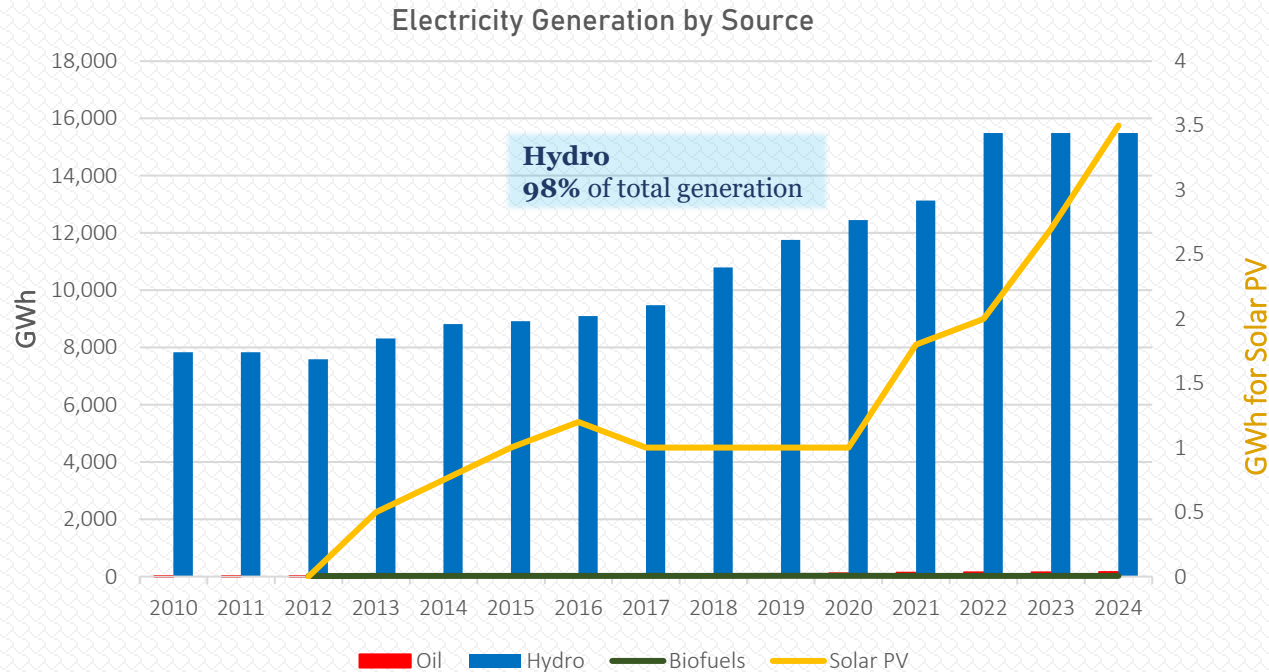


- As the Wood, charcoal and others dominate the supplier chain as primary energy, residential in urban as well as rural areas consume most of the energy
- Conventional transportation with main used vehicles and unavailability of the grid for Mining and other industries pushe the high consumption to fuel

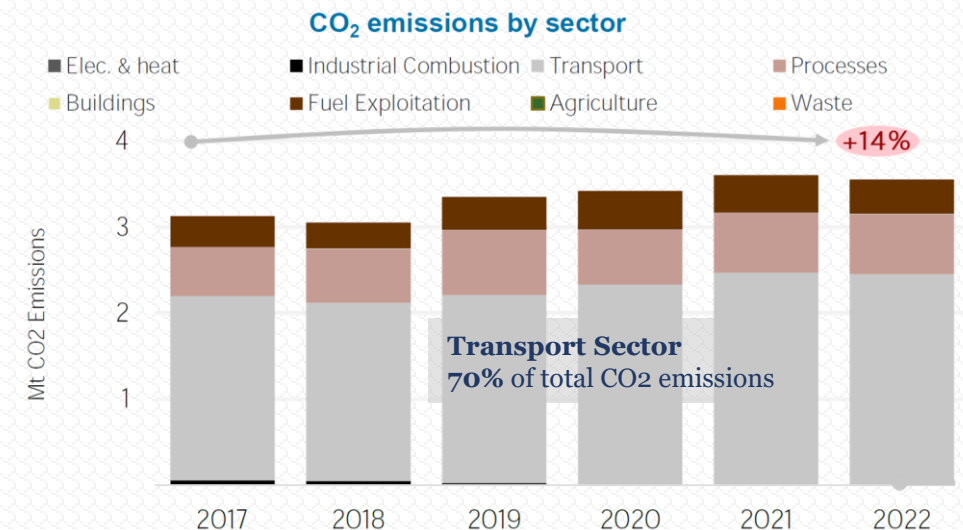
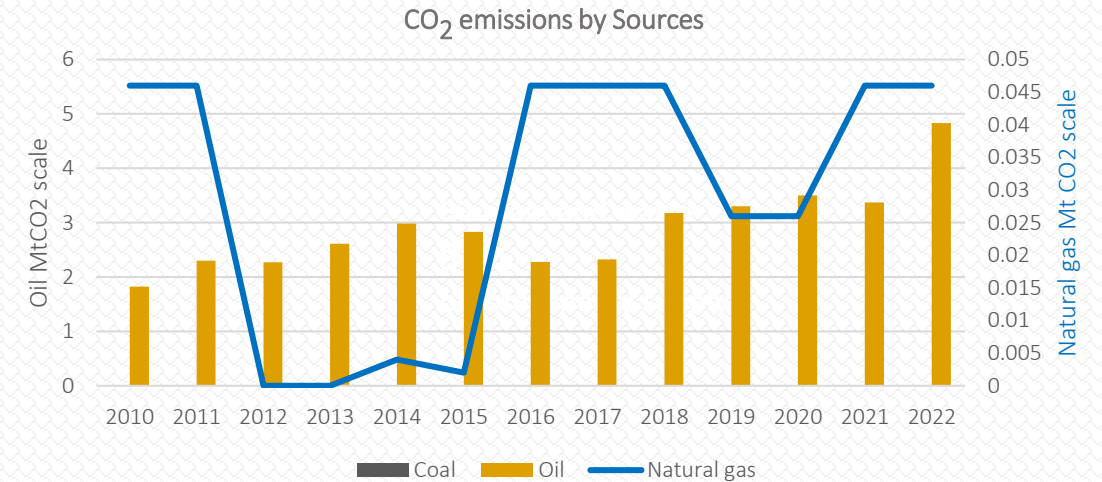


Source ARE : <https://are.gouv.cd/wp-content/uploads/2025/03/ARE-RAP-2024-RAPPORT-ANNUEL-2024-VF-2.pdf>

2. PAST ENERGY STATS COUNTRY PROFILE



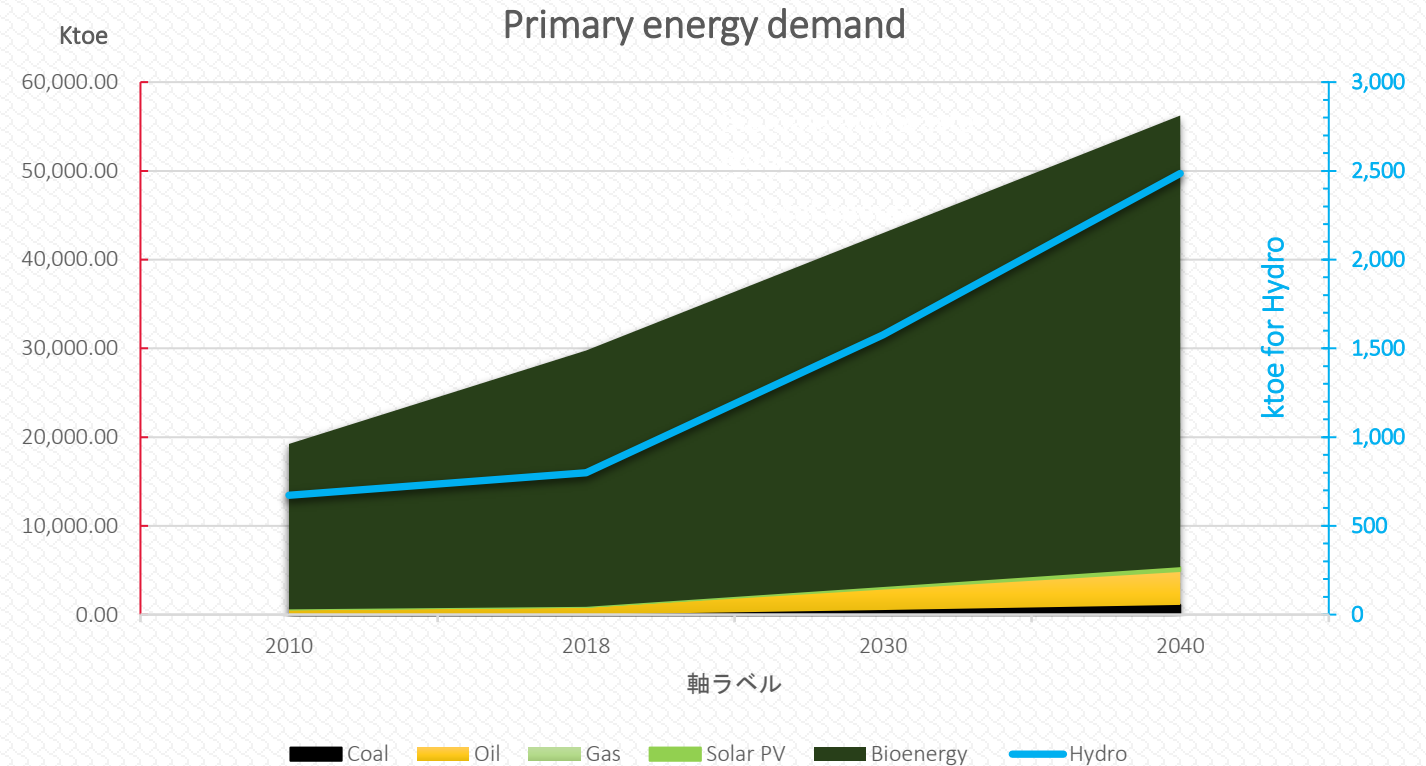
- Hydropower currently covers almost all of the DRC's electricity generation output.
- Solar PV plants are increasing in the DRC (cause : high energy demand from mining, abundant solar resources or a very flexible delivery period).



3. OUTLOOK ENERGY

SUPPLY & DEMAND

DR Congo's gross economic activity is expected to continue its rapid growth, as is the one of the fastest-growing economies



- Most of the DRC's population is highly dependent on biomass and has little access to clean cooking solutions, and this will be a key challenge in the decades to come.

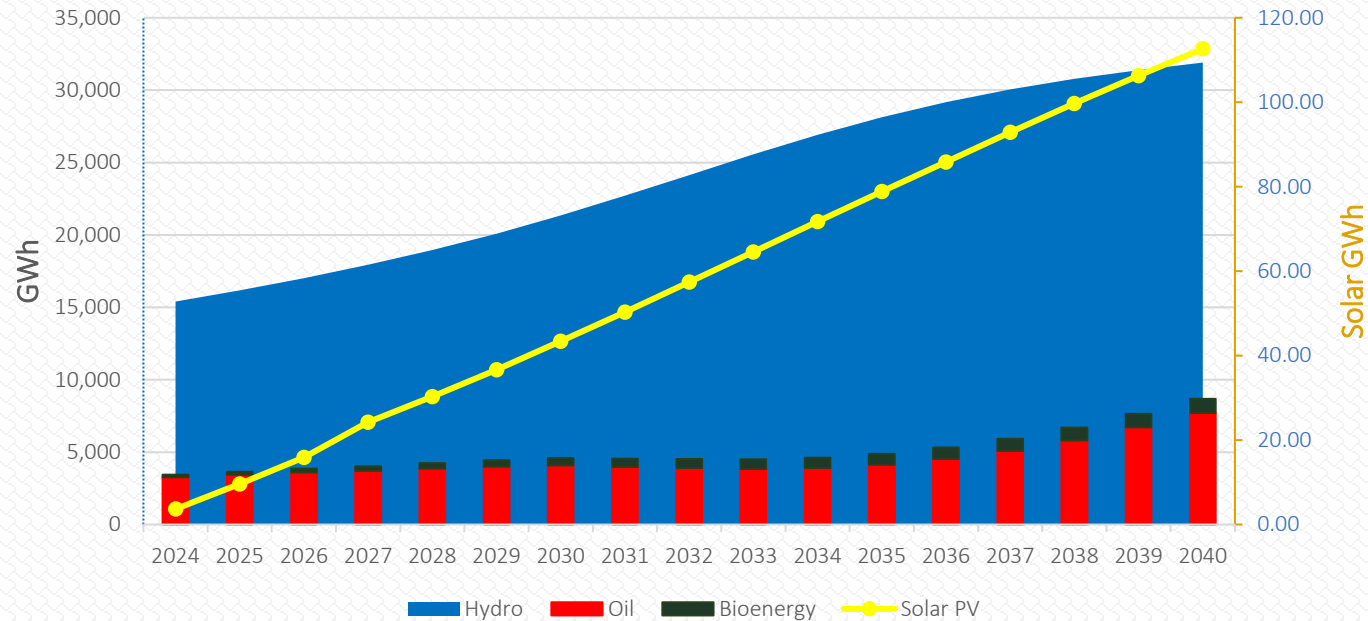
Source IRENA : https://www.irena.org/-/media/Files/IRENA/Agency/Statistics/Statistical_Profiles/Africa/Democratic-Republic-of-the-Congo_Africa_BP.pdf

3. OUTLOOK ENERGY

SUPPLY & DEMAND

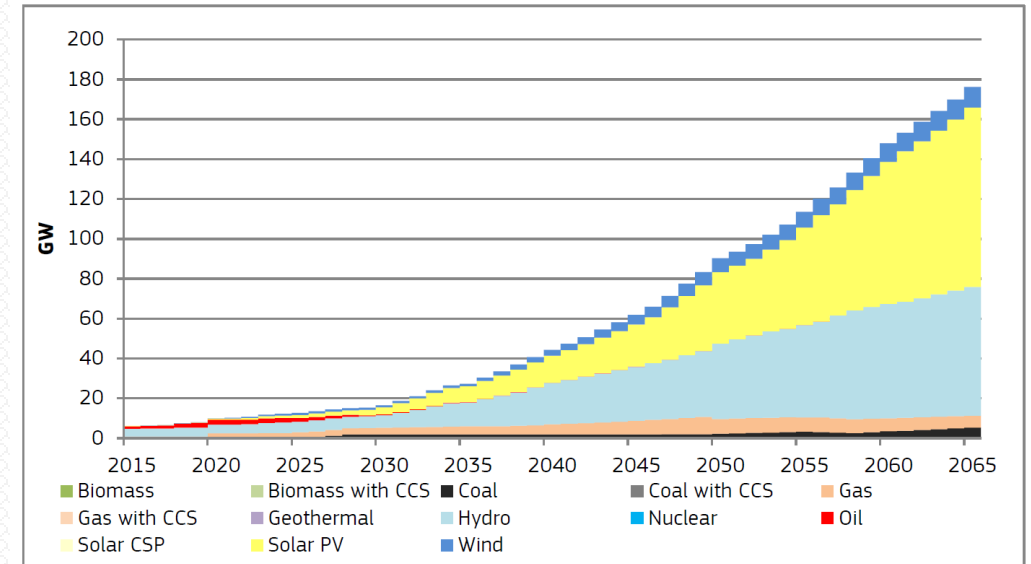
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Electricity Generation



- The proposed Grand Inga project is a series of potential hydroelectric dams that could reach a cumulative installed capacity .
- Solar PV plants are increasing in the DRC (cause : high energy demand from mining, abundant solar resources or a very flexible delivery period).

Primary energy supply by source

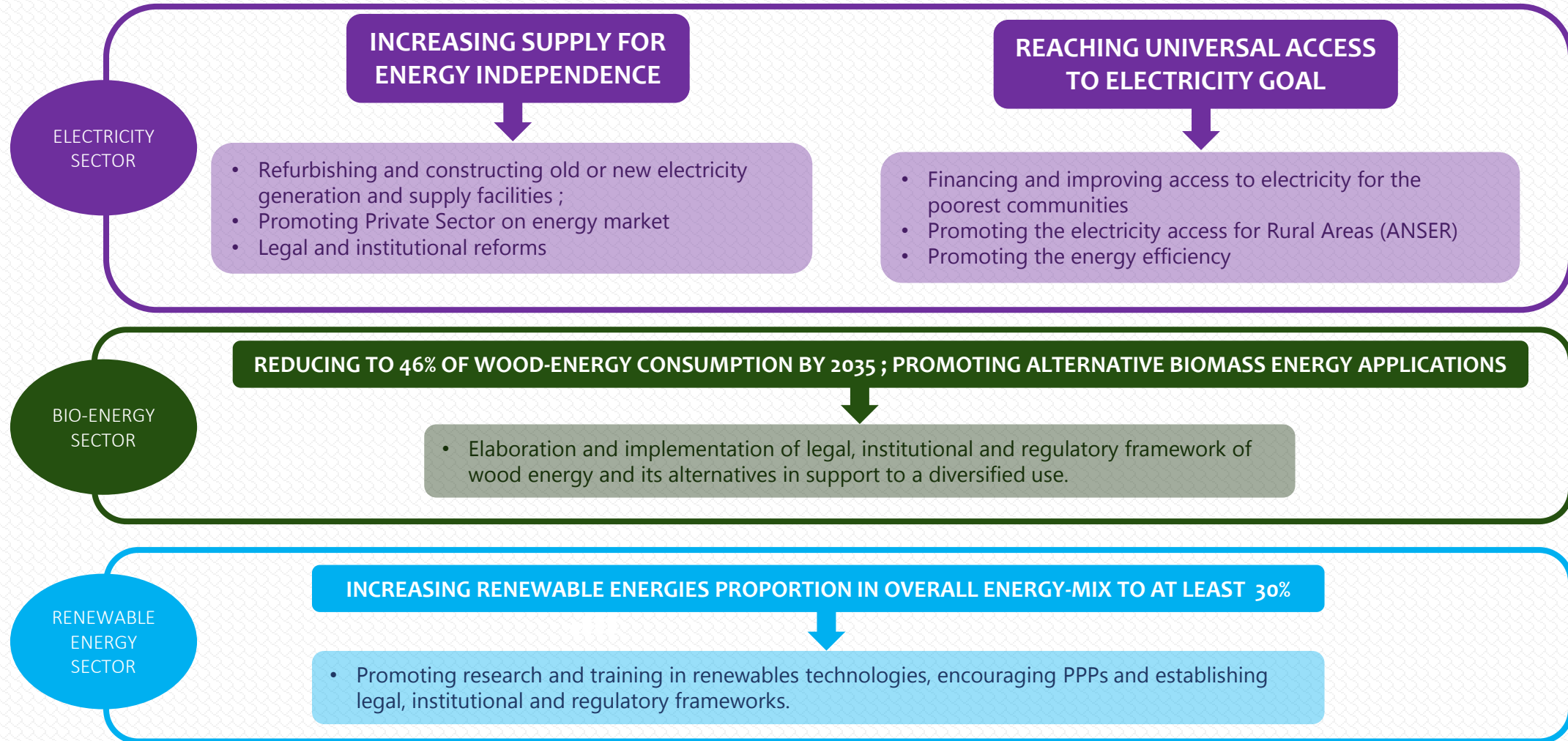


- DRC boasts vast hydropower resources, particularly from the Congo River, but struggles with low electrification rates and heavy reliance on biomass for energy needs.
- Future energy supply will likely be shaped by investments in hydropower, particularly the Grand Inga project, and the expansion of other renewable energy sources like solar and modernize the energy infrastructure.

Source IRENA : https://www.irena.org/-/media/Files/IRENA/Agency/Statistics/Statistical_Profiles/Africa/Democratic-Republic-of-the-Congo_Africa_BP.pdf

4. CURRENT ENERGY SECTOR

ENERGY POLICY



The DRC's energy policy (PNE) is focused on increasing electricity access, modernizing the energy sector (regulatory framework – business environment), ensuring energy security by mixing renewable energy technologies and reducing considerably biomass use by 46% in 2035.

4. CURRENT ENEREGY SECTOR

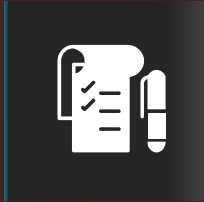
ENERGY MEASURES



DRC's main energy policy measures include : opening the energy market to private Investment, encouraging off-grid systems and energy generation, and reducing greenhouse gas emissions by at least 21% by 2030 through various initiatives,

4. CURRENT ENERGY SECTOR

ENERGY DIFFICULTIES & BOTTLENECKS



NO NATIONAL ENERGY POLICY (PNE) AND NO UPDATED ENERGY STRATEGIES.

No developed, completed and adopted National Energy Policy and provincial/territorial energy strategies.

Lack of policies that promote renewable energy projects and take in the climate change mitigation, and the conservation of Congo Basin forest areas.

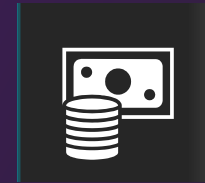


REGULATORY AND GOVERNANCE ISSUES.

Weaknesses in governance and management of the energy sector further contribute to the challenges

Uncertainty in the regulatory environment, Lack of a clear regulatory framework and a dedicated rural electrification

Lack of skilled workers and technical expertise in updated energy sector



FINANCIAL CONSTRAINTS

Even if the electricity sector was liberalized in 2014, very limited private investment persists

Lack of direct or indirect funding support facilities, including loan access mechanisms



5. SUBJECTS TO BE LEARNED & EXPECTATIONS FROM THE PROGRAM



- i. Legal and regulatory framework governing renewable in energy sector in to developing counties
- ii. “Best practices” in Energy Policy across developing countries
- iii. Off-grid micro-hydroelectricity generation technologies for low-income communities
- iv. Affordable clean cooking and alternative technologies

On completion of this program :

- i. JICA to support trainees in applying the acquired theoretical knowledge by holding conferences, workshops or other forums targeting energy sector players and public institutions ;
- ii. JICA to formally select and sponsor a series of energy-related pilot projects in each of the candidates' home country ;
- iii. During the stay in Japan, JICA to organize an energy forum for networking between trainees and energy developers, investors, research institutions or humanitarian organizations.

APPENDIX



ALL ENERGY POTENTIAL

HYDROELCTRICITY :

Potential : 100 GW

SOLAR PV :

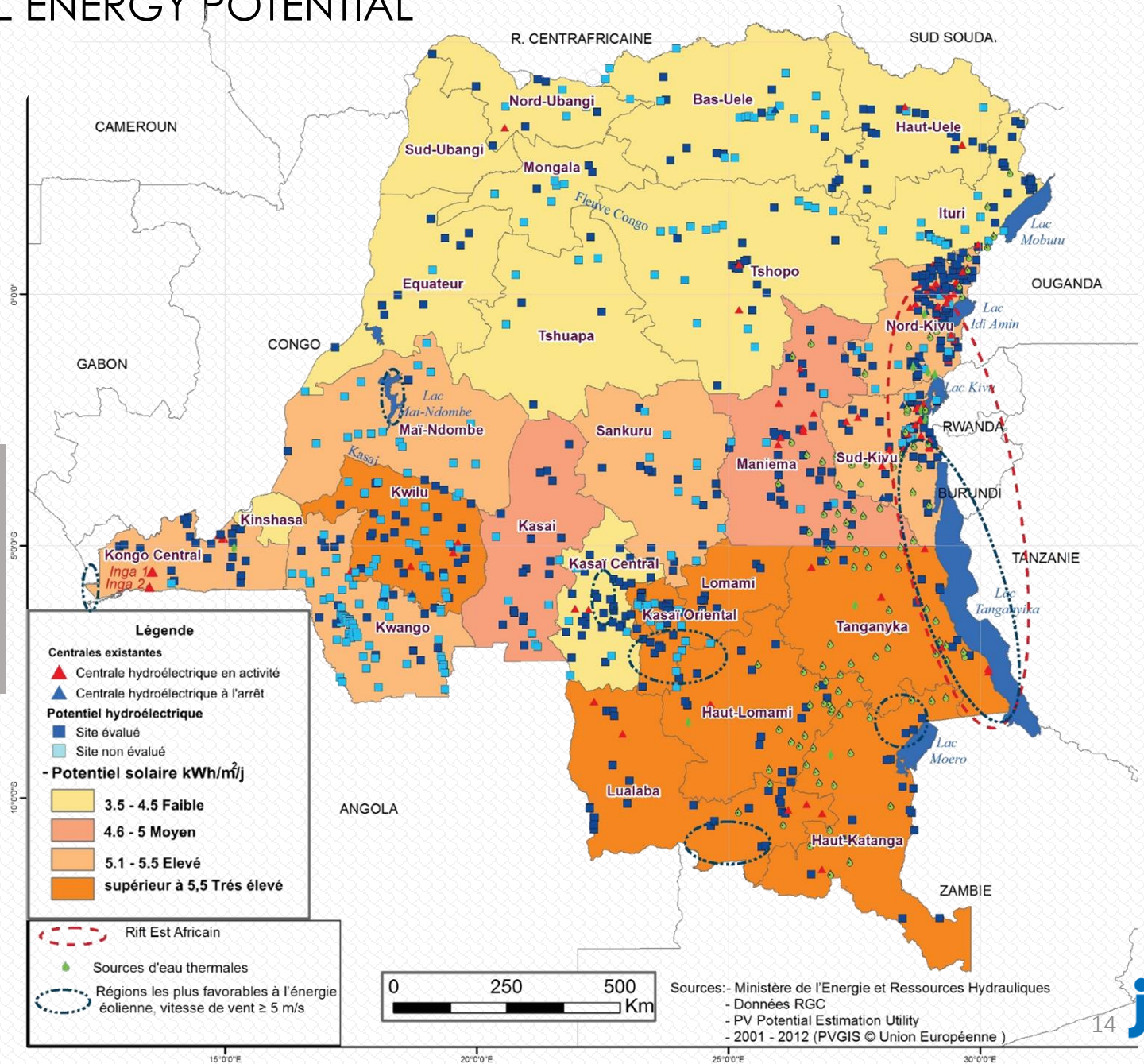
Potential : 5,5 kWh/m²/day

WIND ENERGY :

Potential : 2,5 m/s = 34W/m²

Others Potential

- Biomasse : 8,5 mil ktoe
- Natural Gas : Lake Kivu holds the methan gas equivalent of 700MW /50 years
- Geothermal : lack of studies despite its strategically high rift position; several hundred MW are productibles





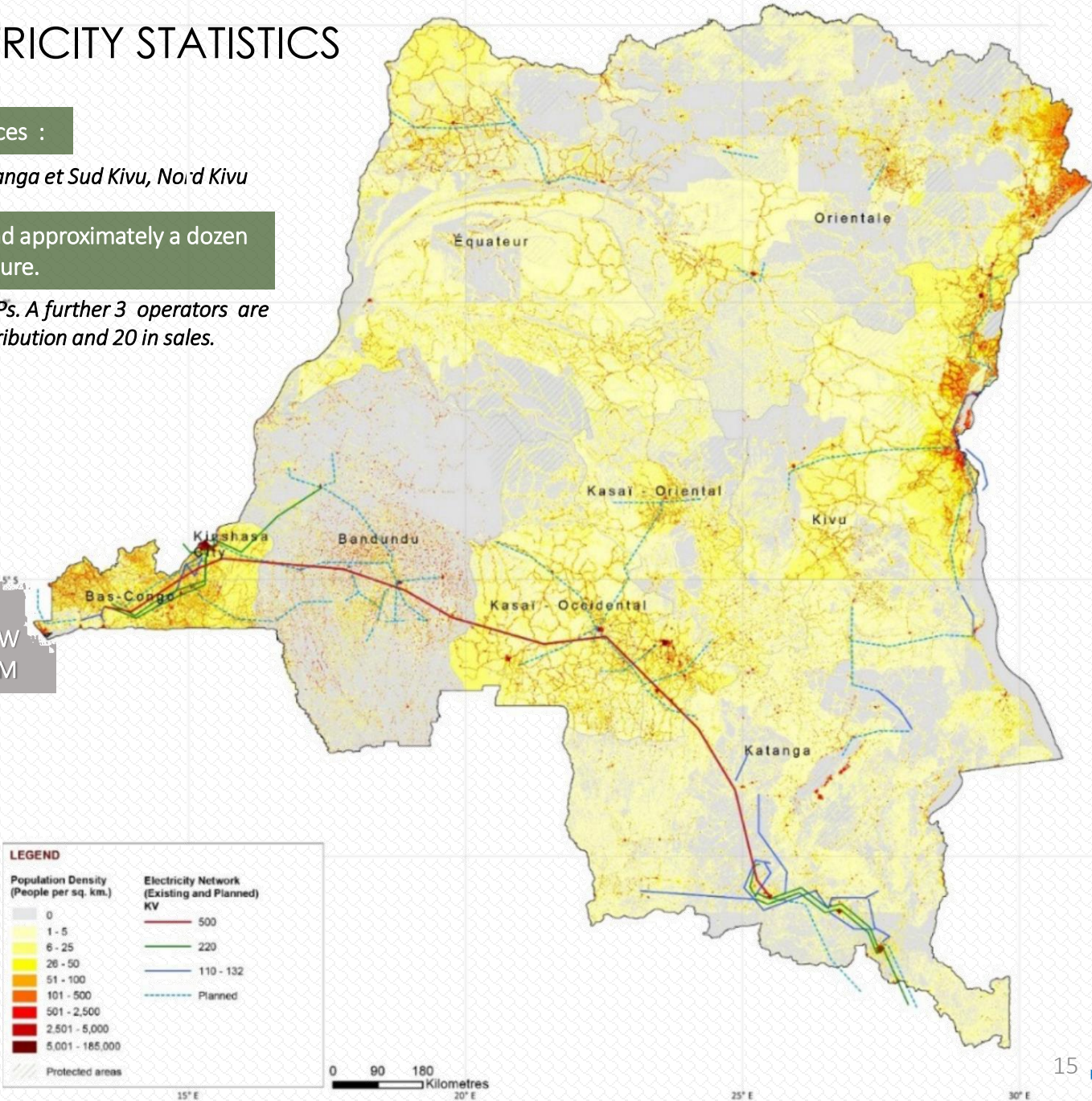
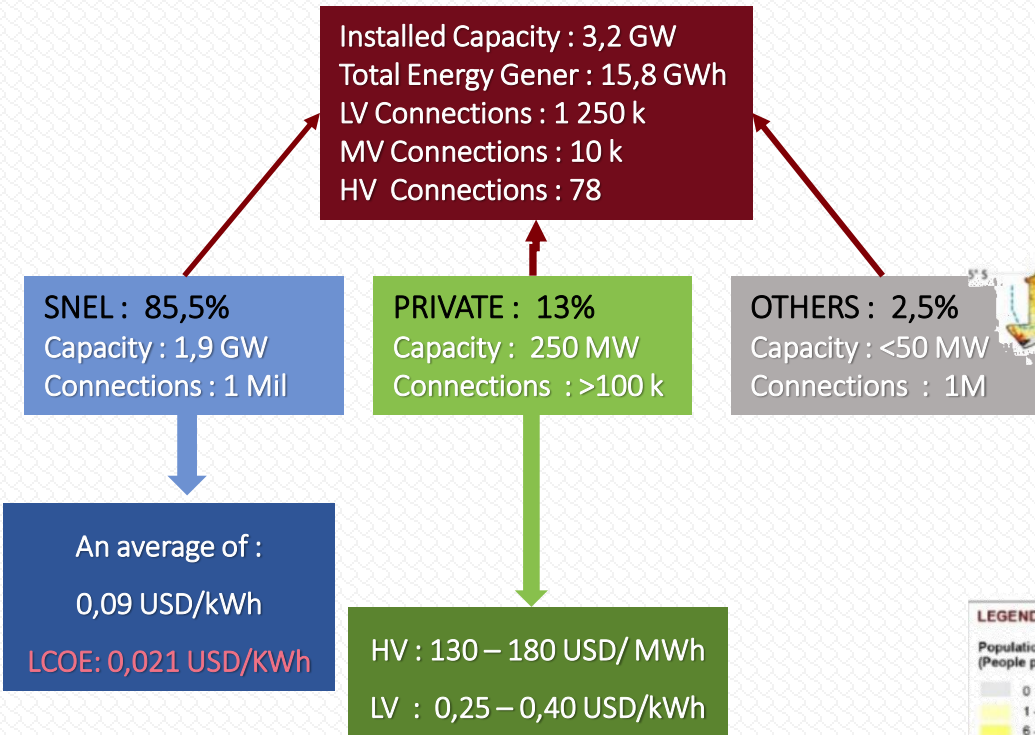
ELECTRICITY STATISTICS

The country electricity system is interconnected in only 8 of its 26 provinces :

Kongo central – Kinshasa – Kwango – Kwilu, Kongo central – Lualaba – Haut Katanga et Sud Kivu, Nord Kivu

The electricity industry is largely operated by SNEL, the public operator, and approximately a dozen independent electricity grids offering industrial-scale electricity infrastructure.

Over 37 operators currently generate Electricity Supply in the DRC, of whom 12 IPPs. A further 3 operators are importing ; 7 operators manage high-voltage lines, 22 are directly involved in distribution and 20 in sales.

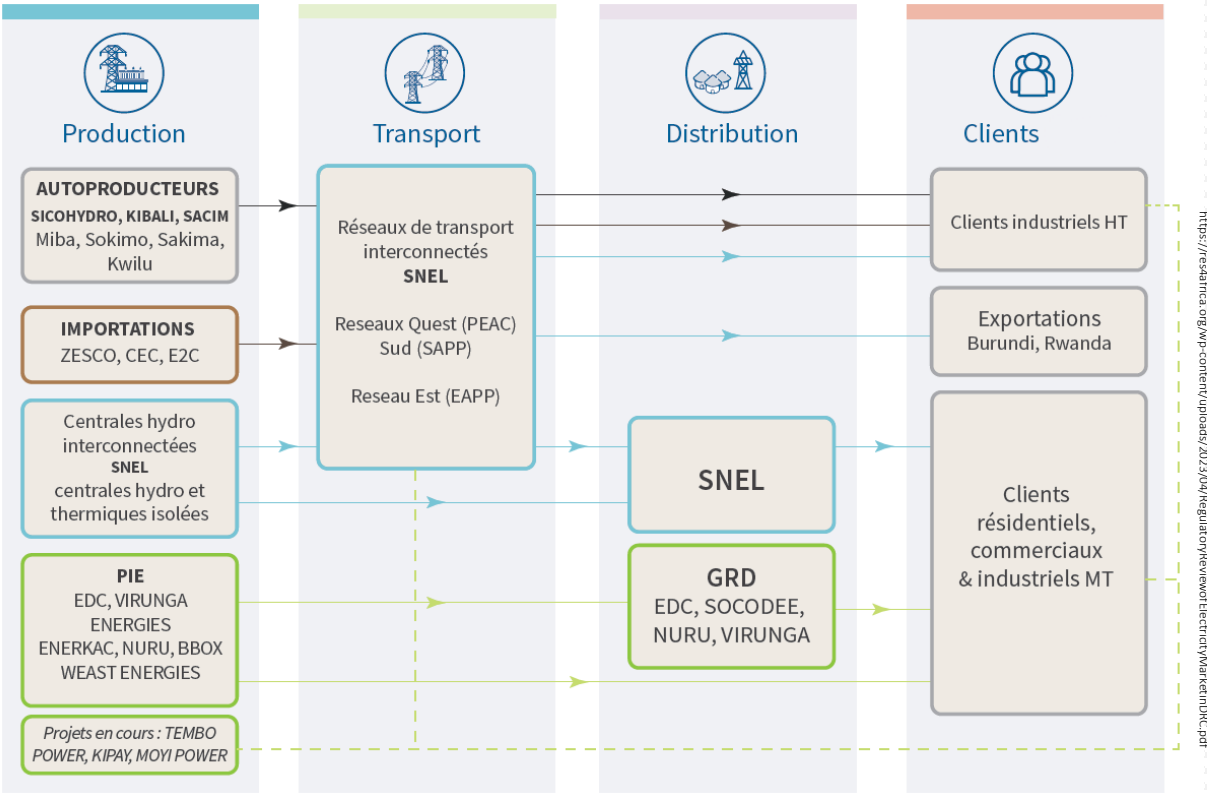




ENERGY-RELATED INVESTMENTS

Major Foreign Electricity Players and Initiatives

- **China** : Continues to be a dominant investor, particularly in large-scale mining-related power projects (e.g., Busanga hydropower plant).
- **African Development Bank (AfDB)**: Actively involved in financing and structuring major energy projects, like the Moyi Power project, and supporting the DRC's energy access goals.
- **European Development Finance Institutions** : Organizations like those supporting Virunga Energies play a significant role in decentralized renewable energy.
- ❑ **Private Developers** : A growing number of private sector companies, both international and local, are entering the market, especially in solar PV and mini-hydro, seeking to capitalize on the vast unmet demand.
- ❑ **International Collaborations** : The DRC is increasingly engaging in bilateral energy cooperation with other African nations and global partners.



In May 2025, the World Bank has approved a \$250m credit to fund the first phase (Inga III : 4,8GW) of what could be the biggest hydroelectric project in the world with a potential of up to 44GW

END DRC ENERGY SECTOR



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