STATE OF JAPAN
日本

REPUBLIC OF COTE D'IVOIRE

Country Report – Côte d'Ivoire– JICA Program 2025

Energy Policy

Tokyo, Monday 23 June 2025

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Country : CÔTE D'IVOIRE

Name : N'GBESSO Delon Parten

Organization : CI-ENERGIES

Current Position : Senior Power Generation Planning Engineer

<**Current Duties**>

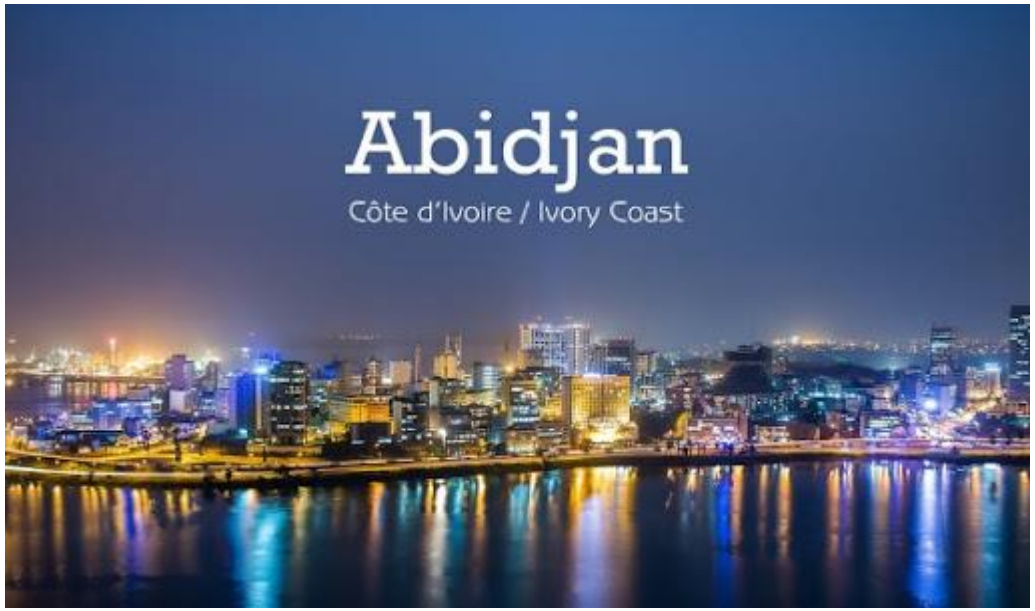
- Contribute actively to the development and monitoring of master plans for the expansion of power generation and transmission infrastructure in Côte d'Ivoire.
- Support the preparation and monitoring of forecasted investment plans in power generation and transmission.
- Conduct simulation studies to ensure the balance between electricity supply and demand.
- Propose optimal investment options and scheduling to guarantee short-, medium-, and long-term supply-demand balance.
- Monitor the preparation of strategic studies for the electricity sector.

II. GENERAL INFORMATION

1 – Country profile and Economic indicators

Area	322.462 Km²
Population	~ 30 millions
Capital	**Political :** Yamoussoukro **Economic :** Abidjan
Official Language	French
Administrative structure	14 Districts including 2 autonomous , 31 régions et 107 départments
GDP Growth	6% to 6,5% per year
Political System	Democracy, Multiparty
GDP 2023	~US$ 79 billions
Number of households:	~6 millions
River	**Cavally** (600 km) **Sassandra** (650 km) **Bandama** (950 km) **Comoé** (900 km)
Main Agricultural Exports	Coffee, cocoa, cashew nuts, cotton, rubber, oil palm

Côte d'Ivoire is a country located in West Africa



II. GENERAL INFORMATION

2 – ORGANIZATIONAL STRUCTURE RELATED TO ENERGY

PRESENTATION OF THE INSTITUTIONAL FRAMEWORK FOR THE ELECTRICITY SECTOR

State of Côte d'Ivoire (granting authority) Ministries of guardianship:

- Ministry of Mines, Oil and Energy
- Ministry of Finance and Budget
- Ministry of Heritage, State Portfolio and Public Enterprises

Public actors

CI-ENERGIES CÔTE D'IVOIRE ÉNERGIES

ANARE-CI AUTORITÉ NATIONALE DE RÉGULATION DU SECTEUR DE L'ELECTRICITÉ DE CÔTE D'IVOIRE

Type of agreement: BOO, BOOT ou MOP	Concession for public electricity service	Contract of sale and purchase of natural gas
Independent Power Producers (Supply of electricity)	CIE	**Natural gas producers** (Supply of natural gas)
CIPREL	**National Clients**	PETROCI
AZITO ENERGIE	*Ivory Coast*	FOXTROT International
aggreko	**International Partners**	Canadian Natural
CI-ENERGIES CÔTE D'IVOIRE ÉNERGIES	*Mali*, *Ghana*, *Burkina Faso*	eni
Soubré hydro plant	*Liberia*, *Sierra Leone*, *Guinea*	
Boundiali solar power plant		
KARPOWERSHIP		
ATINKOU l'énergie à partager		

MAJOR PLAYERS IN THE ELECTRICITY SECTOR

CI-ENERGIES CÔTE D'IVOIRE ÉNERGIES

CI-ENERGIES is a public company operating in the electricity sector in Côte d'Ivoire since 2011, responsible for:

- Demand forecasting and investment planning;
- Construction and project management of investments and development projects in the electricity sector in Côte d'Ivoire
- Electricity Sector Wealth Management and Ownership of Assets since 2017 (Power Plants – Lines – Posts)
- Managing financial flows and maintaining the financial balance of the electricity sector
- Production of electrical energy since November 2017

ANARE-CI AUTORITÉ NATIONALE DE RÉGULATION DU SECTEUR DE L'ELECTRICITÉ DE CÔTE D'IVOIRE

ANARE-CI has been an independent and autonomous authority since 2016. It is responsible for :

- Monitoring compliance with laws and regulations, as well as the obligations arising from current permits or agreements in the electricity sector
- Safeguarding the interests of public electricity users and protecting their rights
- The settlement of disputes in the electricity sector, particularly between operators and between operators and users
- The proposal to the State of tariffs applicable in the electricity sector, including tariffs for network access

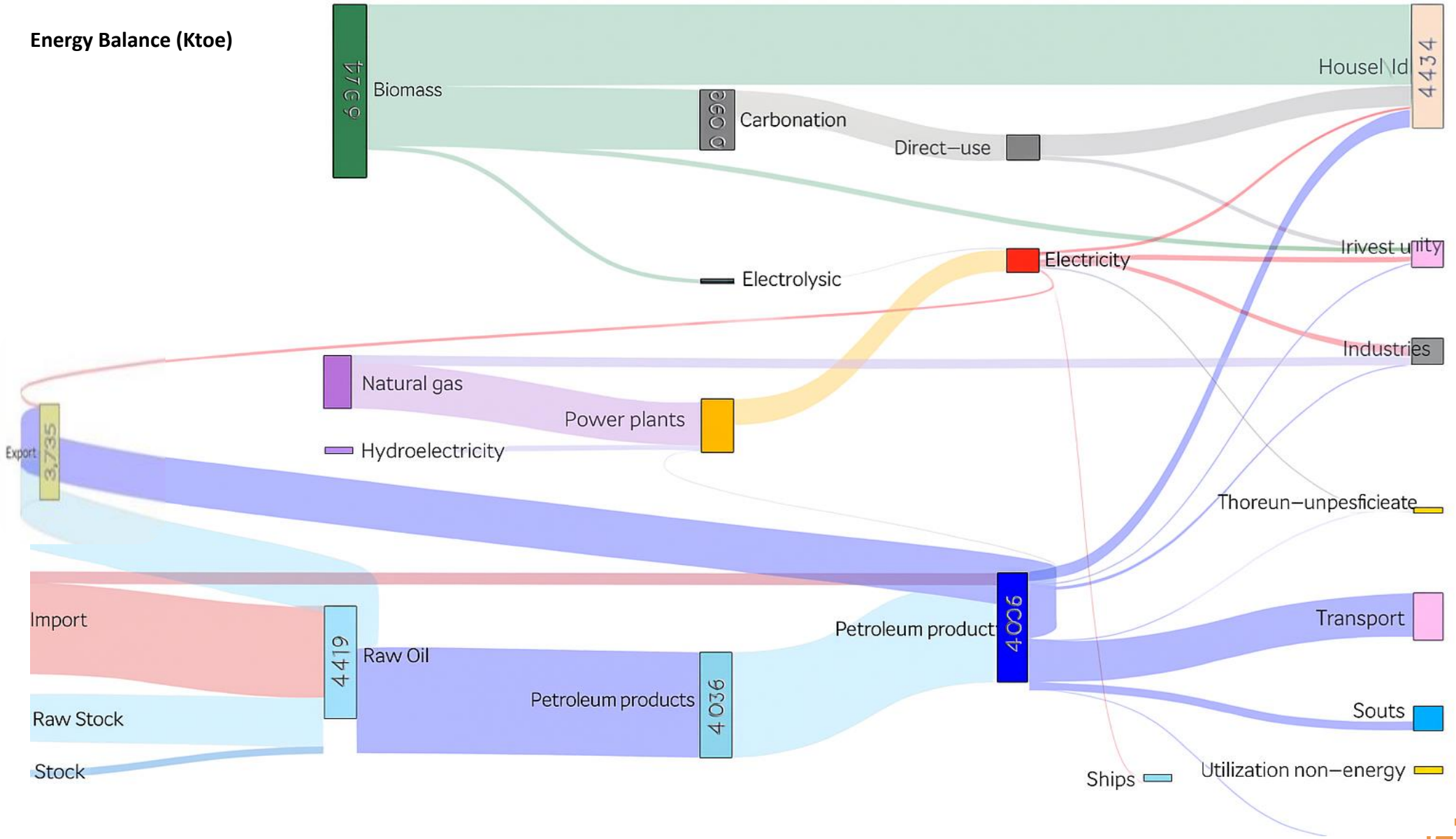
CIE

The Compagnie Ivoirienne d'Electricité (CIE) is a private company responsible for:

- Electricity transmission, distribution and export in Côte d'Ivoire
- Operating the power plants provided to it by the State and ensuring the technical and commercial management of the Ivorian electricity system

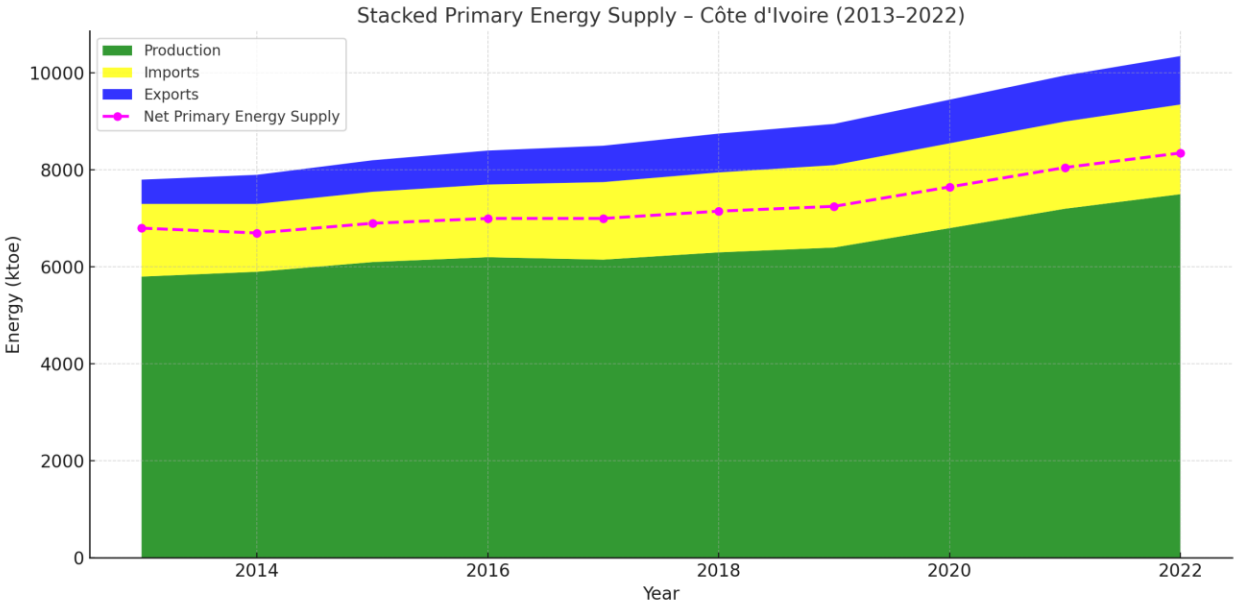
III. ENERGY CHART

Energy Balance (Ktoe)



III. PAST ENERGY DEMAND AND SUPPLY

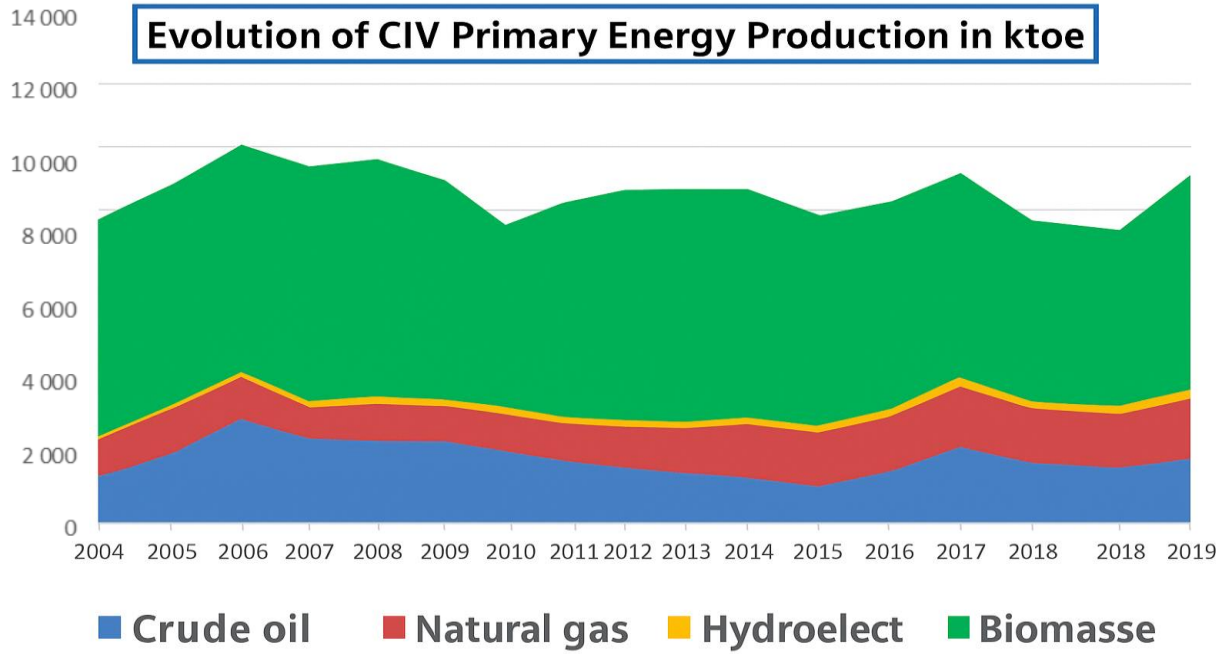
1 – PRIMARY ENERGY SUPPLY



Source: Estimates based on national data and regional energy statistics.

Between 2013 and 2022, Côte d'Ivoire's net primary energy supply increased from approximately 6,800 to over 8,200 ktoe, reflecting sustained growth in energy demand and national production capacity.

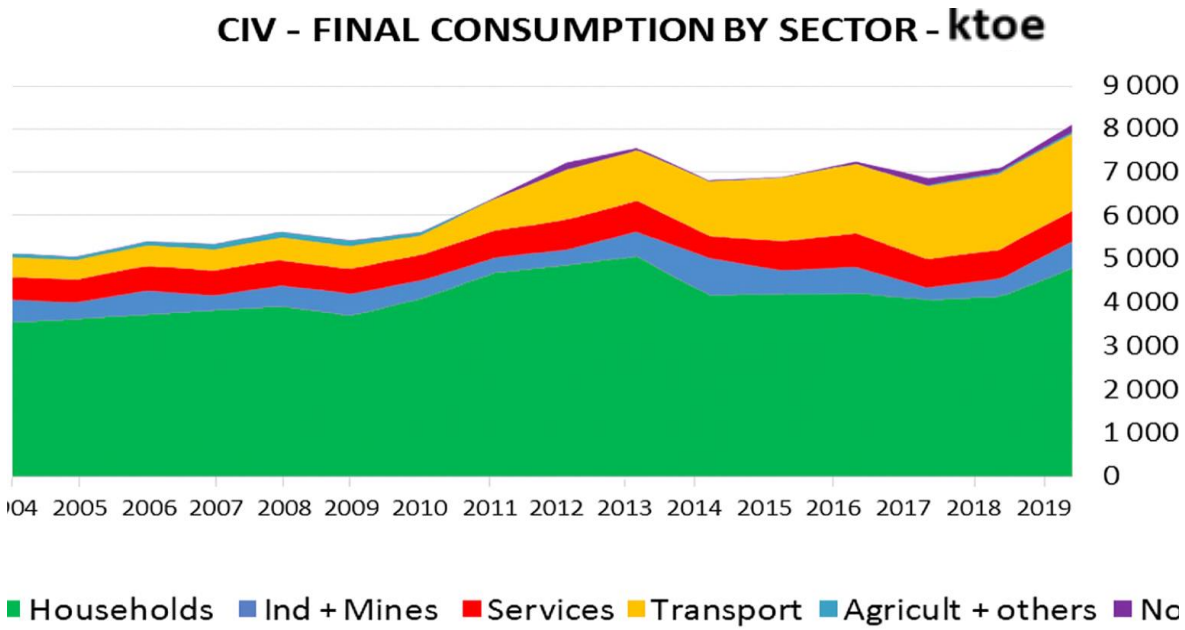
Between 2014 and 2022, biomass and waste consistently dominated Côte d'Ivoire's primary energy mix, while oil and natural gas showed moderate but steady growth. Hydropower remained stable, and solar energy made gradual progress.



Source: national reports (2020)

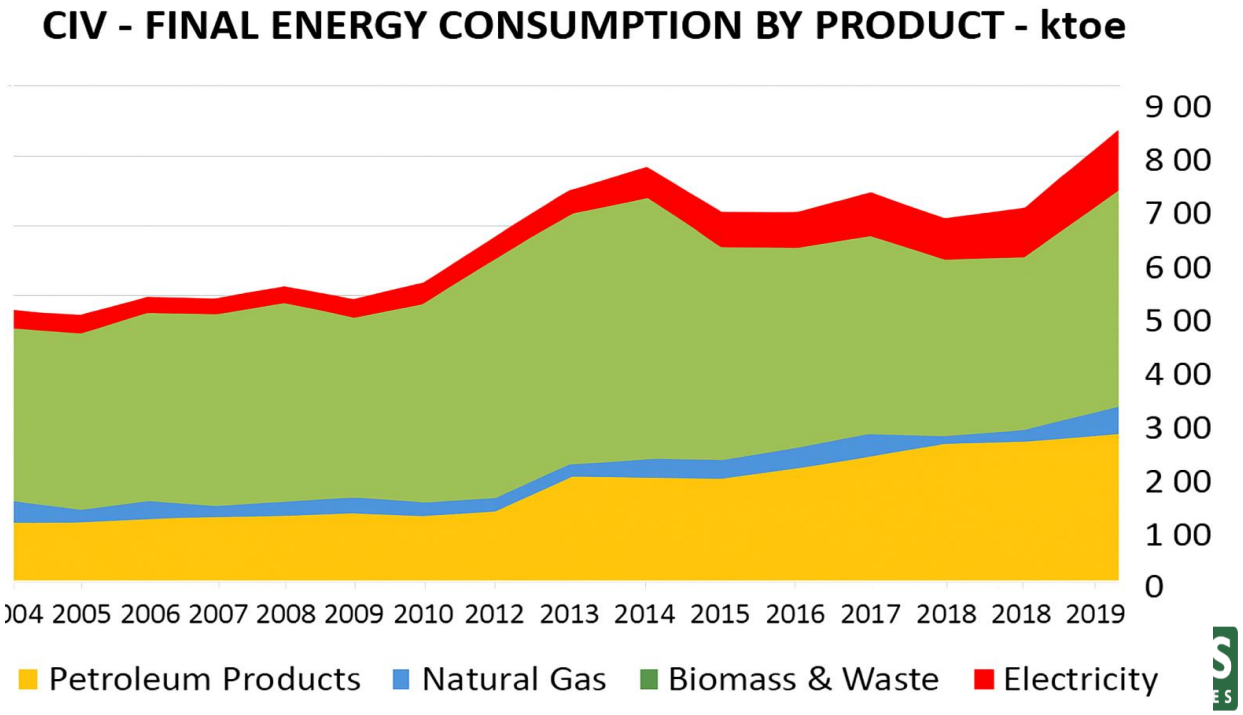
III. PAST ENERGY DEMAND AND SUPPLY

2 – FINAL ENERGY CONSUMPTION



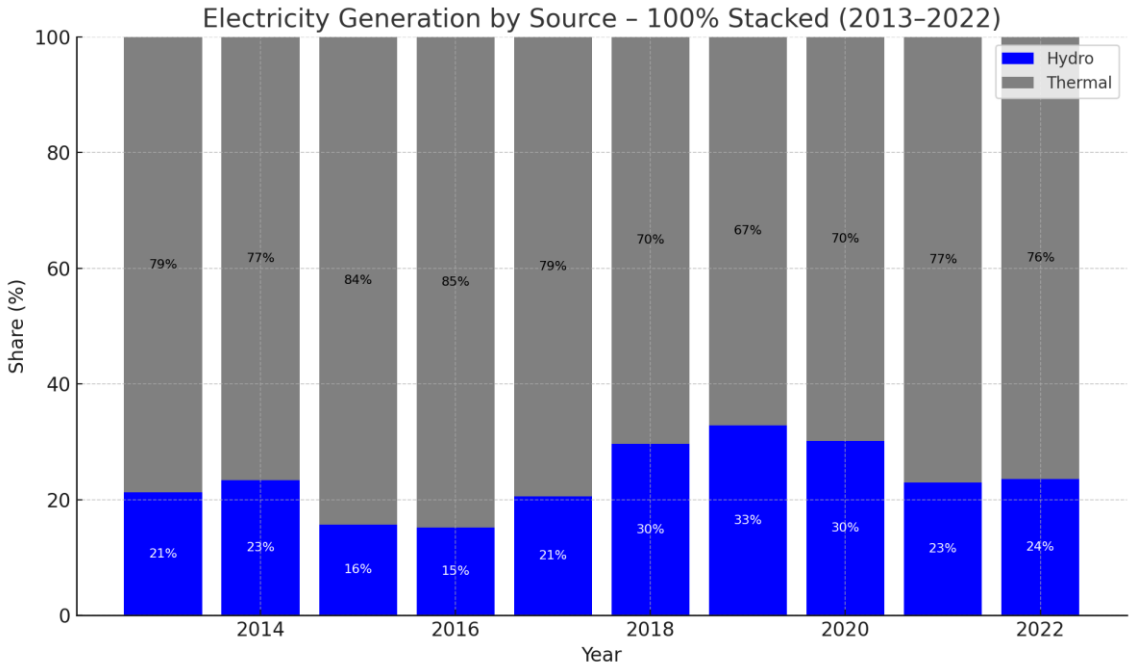
Between 2013 and 2022, final energy consumption in Côte d'Ivoire increased steadily across all sectors, with transport and residential sectors accounting for the highest shares.

Oil and biofuels remain the dominant sources of final energy consumption, while electricity and natural gas usage have grown steadily, reflecting diversification of energy use.

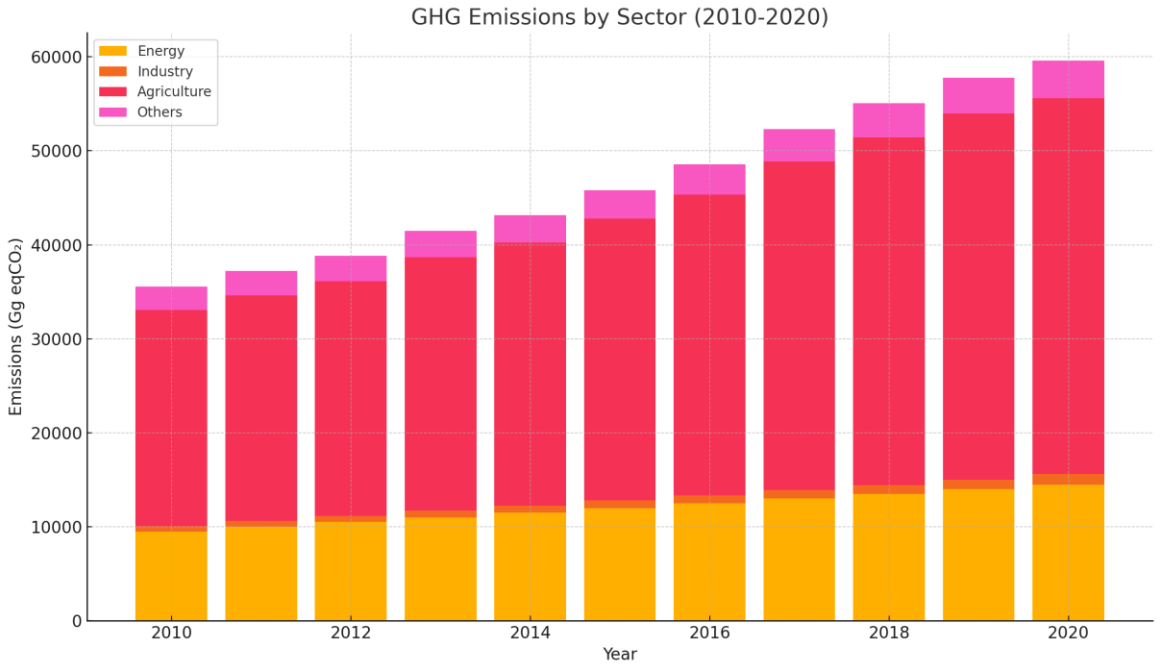


III. PAST ENERGY DEMAND AND SUPPLY

3 – ELECTRICITY GENERATION AND CO_2 EMISSION



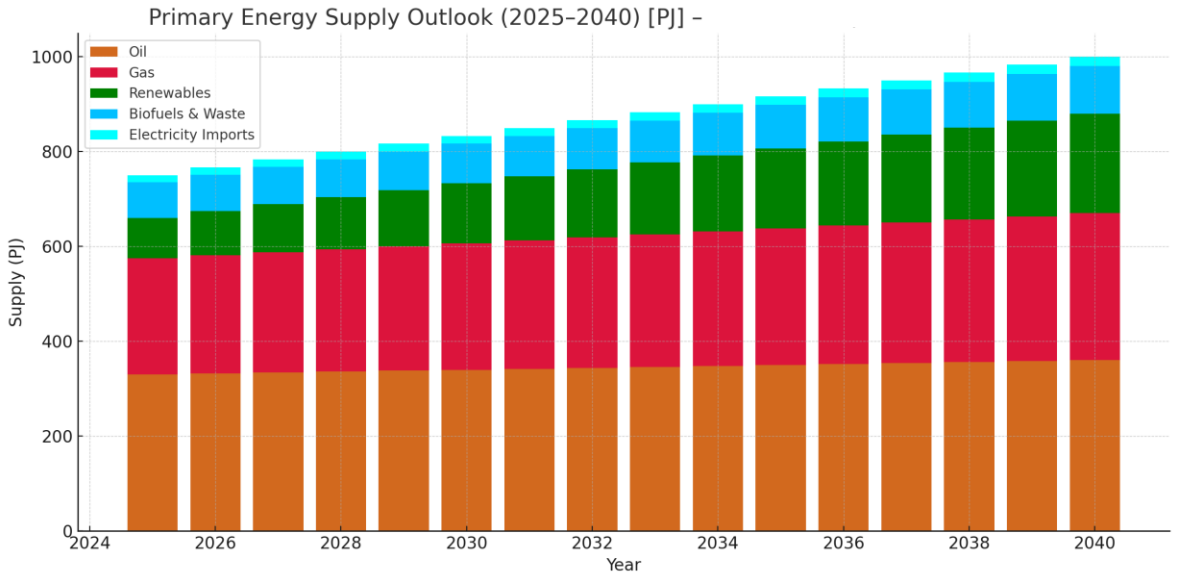
The chart shows the share of hydro and thermal power generation in Côte d'Ivoire from 2013 to 2022. Thermal sources dominated the mix, averaging over 70%. Hydro peaked at over 30% in 2019 but declined to around 25% by 2022. This reflects a continued reliance on thermal power, highlighting the need for greater investment in renewables to improve energy resilience



The chart shows a steady rise in GHG emissions from 2010 to 2020, reaching nearly 60,000 Gg CO_2-eq. Agriculture is the largest contributor, followed by energy. All sectors show increasing trends, highlighting the need for targeted mitigation strategies, especially in agriculture and energy.

IV. OUTLOOK OF ENERGY DEMAND AND SUPPLY

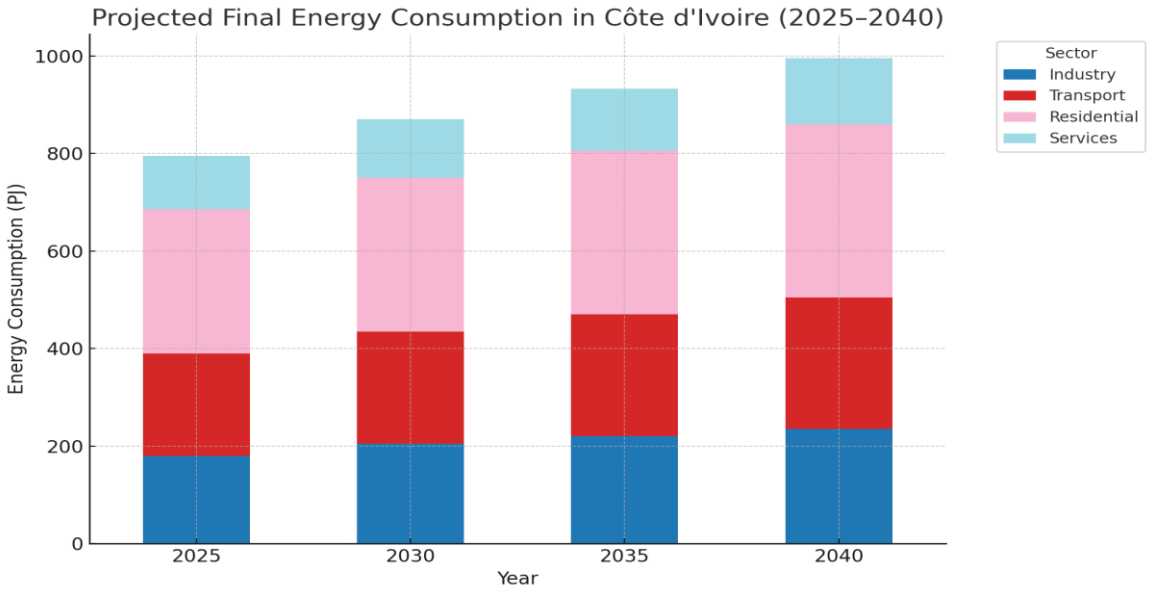
1 – PRIMARY ENERGY SUPPLY AND FINAL ENERGY CONSUMPTION



Source: CI national energy outlook assumptions (2024)

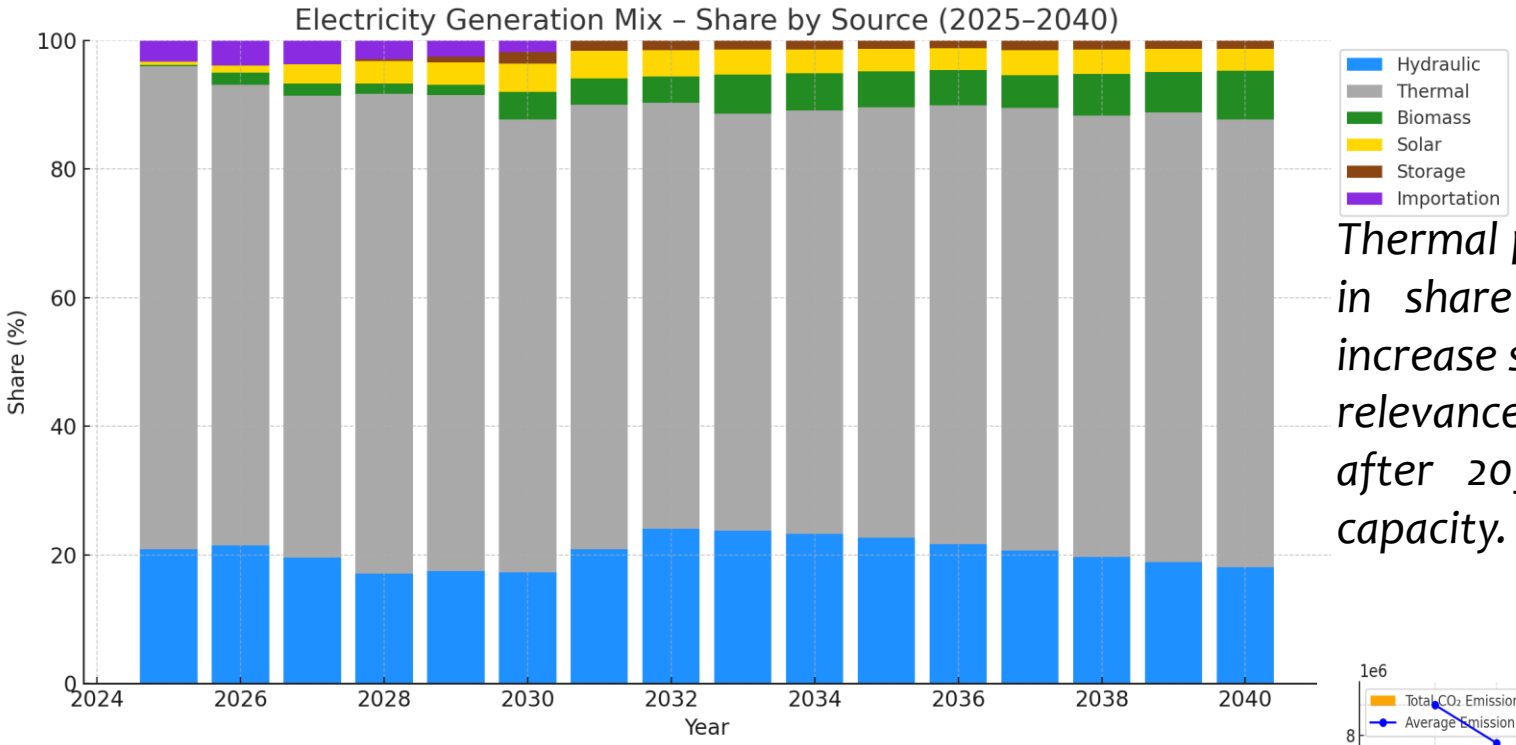
The supply of renewable energy is expected to triple by 2040, from roughly 84 PJ to over 210 PJ, reflecting the country's transition to cleaner energy. Oil and gas will continue to dominate, though their share in total supply may gradually reduce.

From 2025 to 2040, Côte d'Ivoire's final energy consumption is projected to rise from 795 PJ to nearly 1,000 PJ. The residential sector leads the demand, followed by transport and industry. This growth highlights the need for strategic energy planning and efficient demand management



IV. OUTLOOK OF ENERGY DEMAND AND SUPPLY

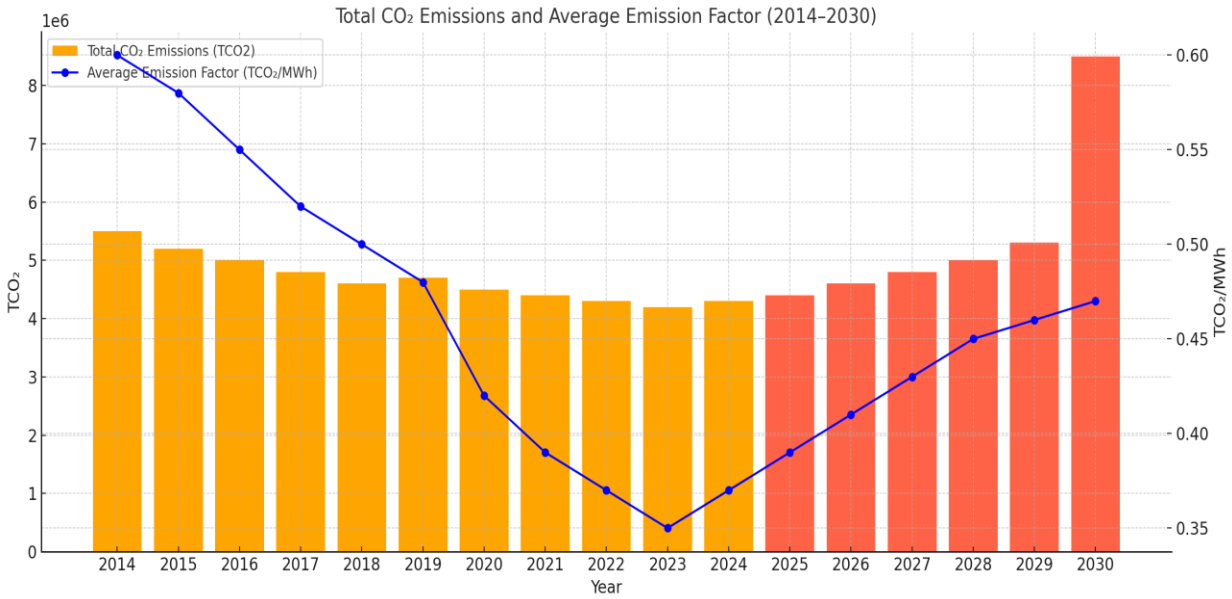
2 – ELECTRICITY GENERATION AND CO_2 EMISSION



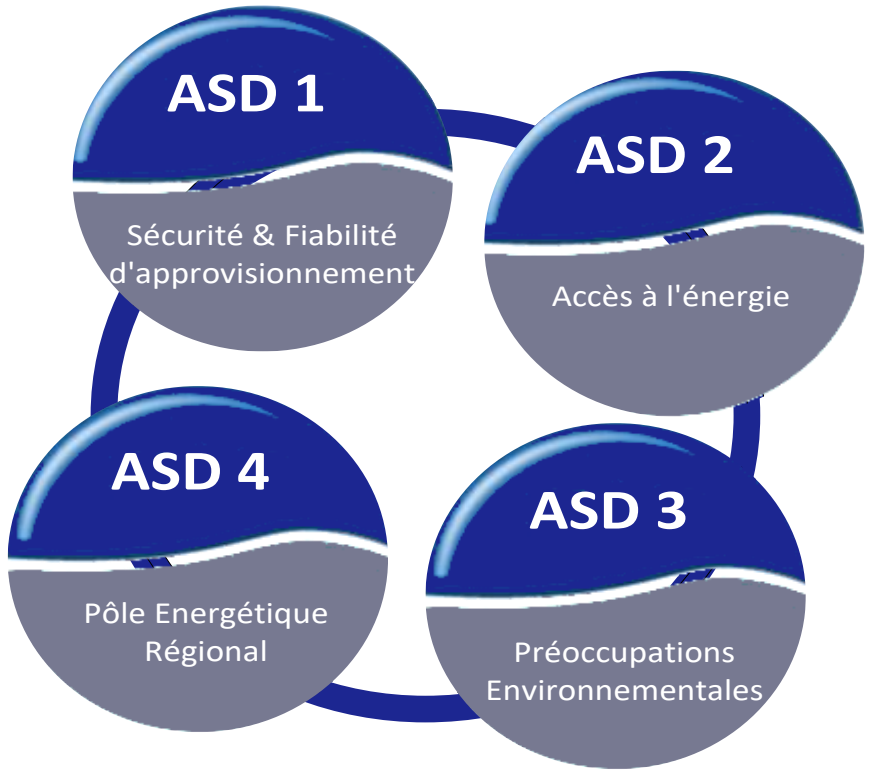
Thermal power remains dominant but gradually declines in share after 2035. Hydropower and solar energy increase steadily, while battery storage and biomass gain relevance. Electricity imports disappear from the mix after 2030, reflecting increased national generation capacity.

Here is the graph showing Total CO_2 Emissions and Average Emission Factor for Côte d'Ivoire from 2014 to 2030:

- *Total CO_2 emissions (orange bars) slightly declined between 2014 and 2024, then gradually increased toward 2030.*
- *Emission factor (blue line) shows a downward trend until 2024, indicating efficiency gains, but slightly rises again between 2025 and 2030.*



4 Strategic Development Axes (ASD), in line with the National Development Plan (PND) and taking into account all the energy sub-sectors.



ASD 1 : security and reliability of electricity supply by developing and strengthening energy production and transmission facilities

ASD 2 : universal access to electricity

ASD 3 : reducing the environmental impact of projects and respecting international commitments in terms of climate protection as well as energy transition and energy management

ASD 4 : Strengthening its leadership in the sub-regional energy market.

V. CURRENT ENERGY POLICY AND MEASURES

2 – MAJOR DIFFICULTIES AND BOTTLENECKS CURRENTLY FACED IN FORMULATING ENERGY POLICIES

Energy policy bottlenecks stem from deeper issues.

VI. EXPECTATION FOR THIS TRAINING COURSE

No.	Topic	Detail
1	**Long-term energy system planning**	To improve planning practices for sustainable energy development in Côte d'Ivoire.
2	**Renewable energy integration modeling**	To better assess technical and economic impacts of renewable integration.
3	**Energy transition scenario analysis**	To understand pathways and options toward decarbonization.
4	**Climate-resilient energy infrastructure**	To ensure infrastructure sustainability under climate change risks.
5	**Policy and regulatory frameworks for energy efficiency**	To support the design of national policies, adapt regulations, and enable stakeholder-wide adoption for effective implementation.
6	**Regional electricity interconnection strategies**	To enhance cooperation and optimize power exchanges within West Africa.

At the end of this training, I should be able to propose an appropriate energy policy for the Government of Côte d'Ivoire, taking into account the commitments made at COP28, the financing mechanisms for green projects, and the applicable regulatory frameworks.

CI-ENERGIES
CÔTE D'IVOIRE ÉNERGIES

Thank you for your attention

IV. APPENDIX : Energy Prices

Category	Voltage Level	Avg. Tariff (FCFA/kWh)
Social	LV (BT)	45.9
General Domestic 5A Single-phase	LV (BT)	76.1
General Domestic 10A Single-phase	LV (BT)	78.7
General Domestic 15A Single-phase	LV (BT)	84.9
Domestic Three-phase	LV (BT)	91.2
Professional	LV (BT)	110.9
Conventional Domestic	LV (BT)	87.5
Public Lighting	LV (BT)	3.2
Short-term Use	MV (MT)	92.2
General Use	MV (MT)	84.4
Long-term Use	MV (MT)	78.8
High Voltage	HV (HT)	79.9

IV. APPENDIX : Energy-Related Investment (Domestic and Overseas)

Côte d'Ivoire promotes energy investments through public-private partnerships (PPPs) and concessional financing. Domestically, investment priorities include:

- Gas-to-power infrastructure to ensure base load capacity
- Hydropower expansion to support renewable targets
- Utility-scale solar projects under IPP frameworks
- Grid reinforcement and rural electrification programs

Internationally, Côte d'Ivoire is actively involved in:

- Cross-border transmission projects (e.g. CLSG, WAPP)
- Power export agreements with neighboring countries
- Regional energy integration efforts under ECOWAS and WAPP

These investments aim to secure energy supply, attract climate finance, and strengthen the country's role as a regional electricity hub.

CI-ENERGIES
CÔTE D'IVOIRE ÉNERGIES