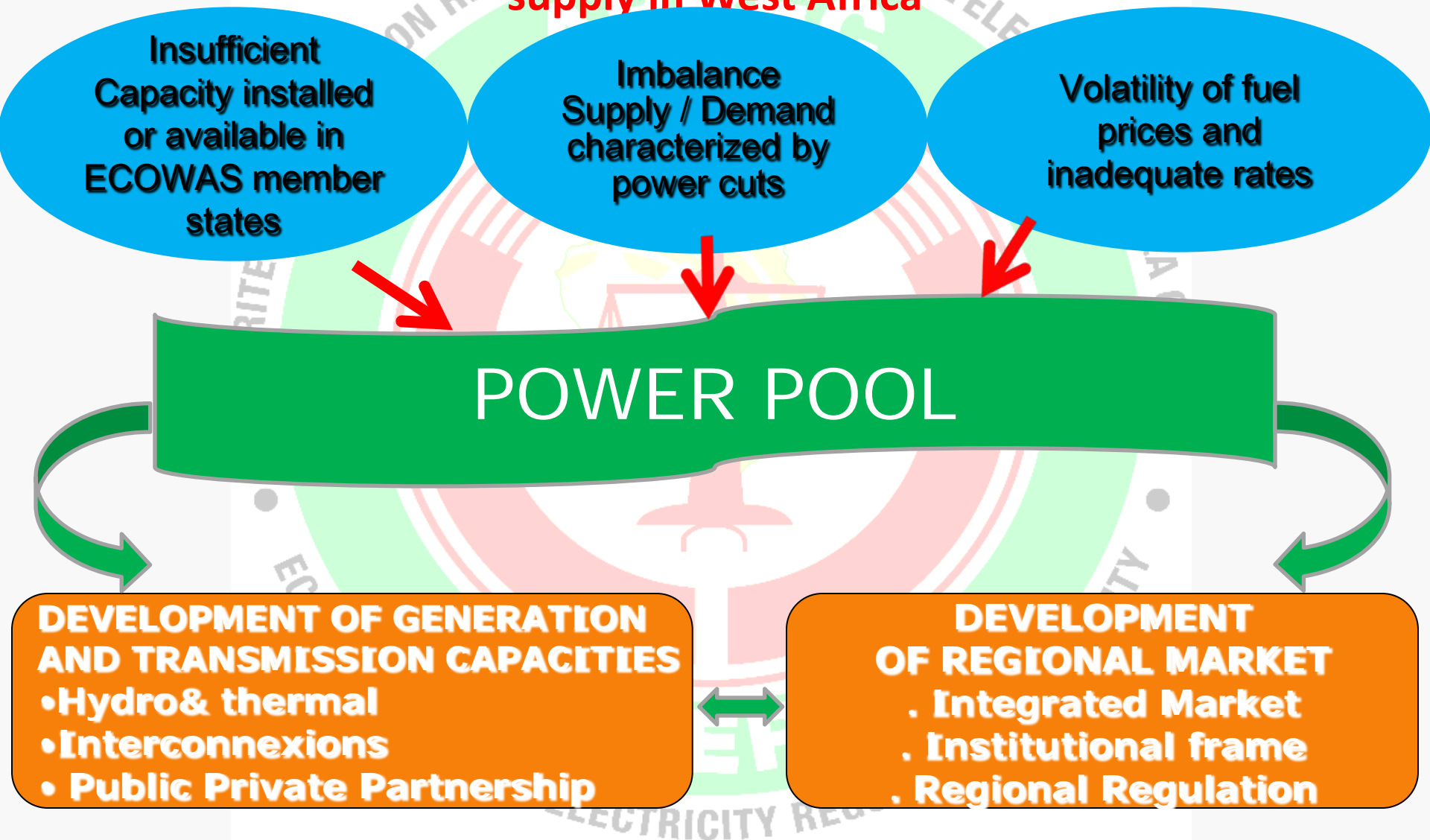


Presentation Outline

- Introduction
- Regional Strategy
- WAPP Masterplan
- Role of ERERA and National Regulators

INTRODUCTION: Bridging the gap between electricity demand and supply in West Africa



Regional Strategy

1. Pooling and sharing of regional resources by developing interconnections and electricity exchanges between the power systems of the States (WAPP)
2. Use the flared gas in Nigeria to supply under-resourced power plants of the States (WAGP Project)
3. Promote and protect private investments in energy projects (generation & transmission infrastructure).
4. Harmonize legislation and operation standards in the electricity sector.
5. Create an open and competitive regional electricity market

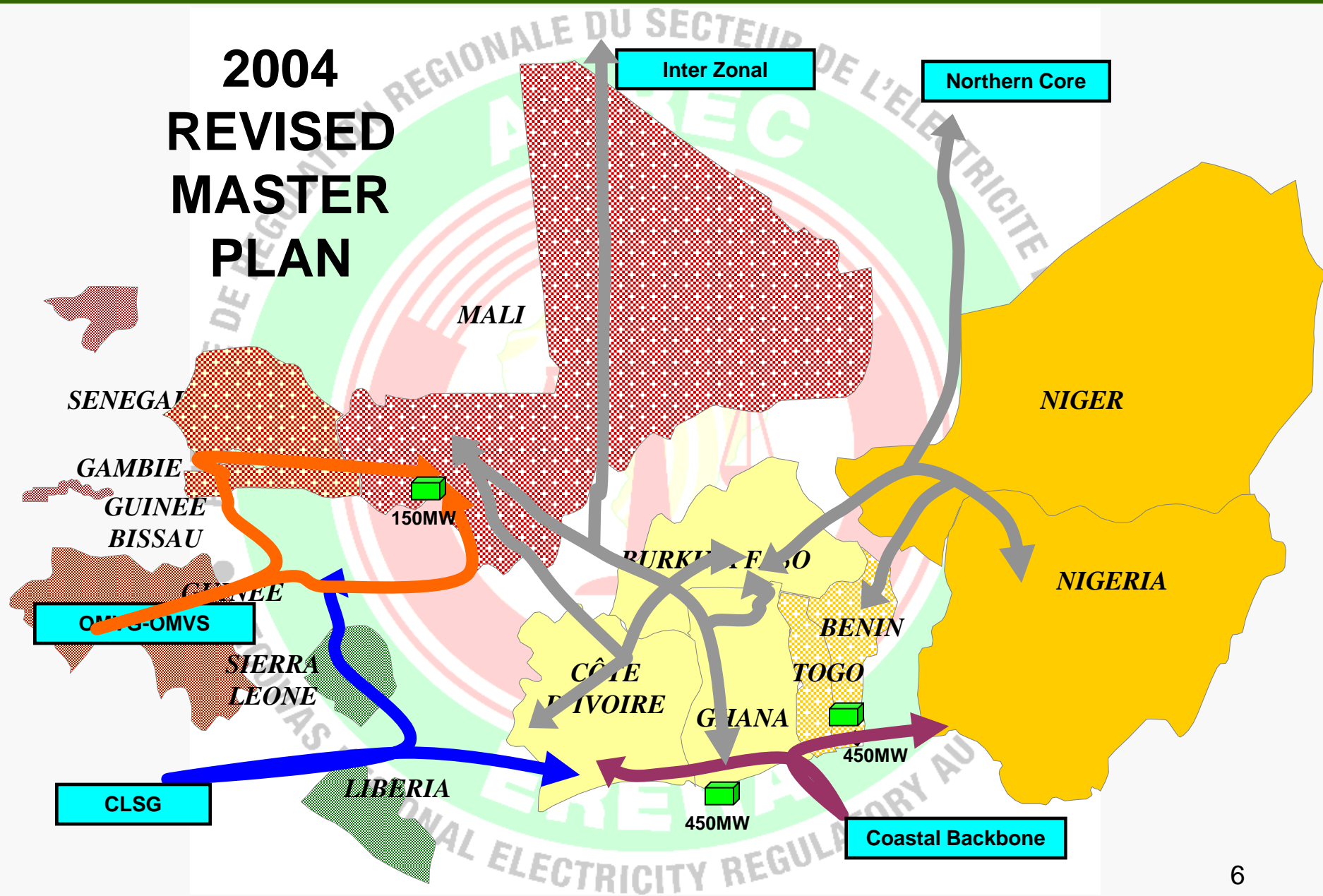
ERERA/ WAGPA REGULATORY WORKSHOP
In collaboration with NARUC, supported by USAID



The information on this plan are provided for information purposes only and does not constitute recognition of international boundaries or regions. Tractebel Engineering assumes no responsibility regarding the accuracy of the maps and use the information they contain.
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24 - 26 April 2012, Lomé - TOGO

2004 REVISED MASTER PLAN



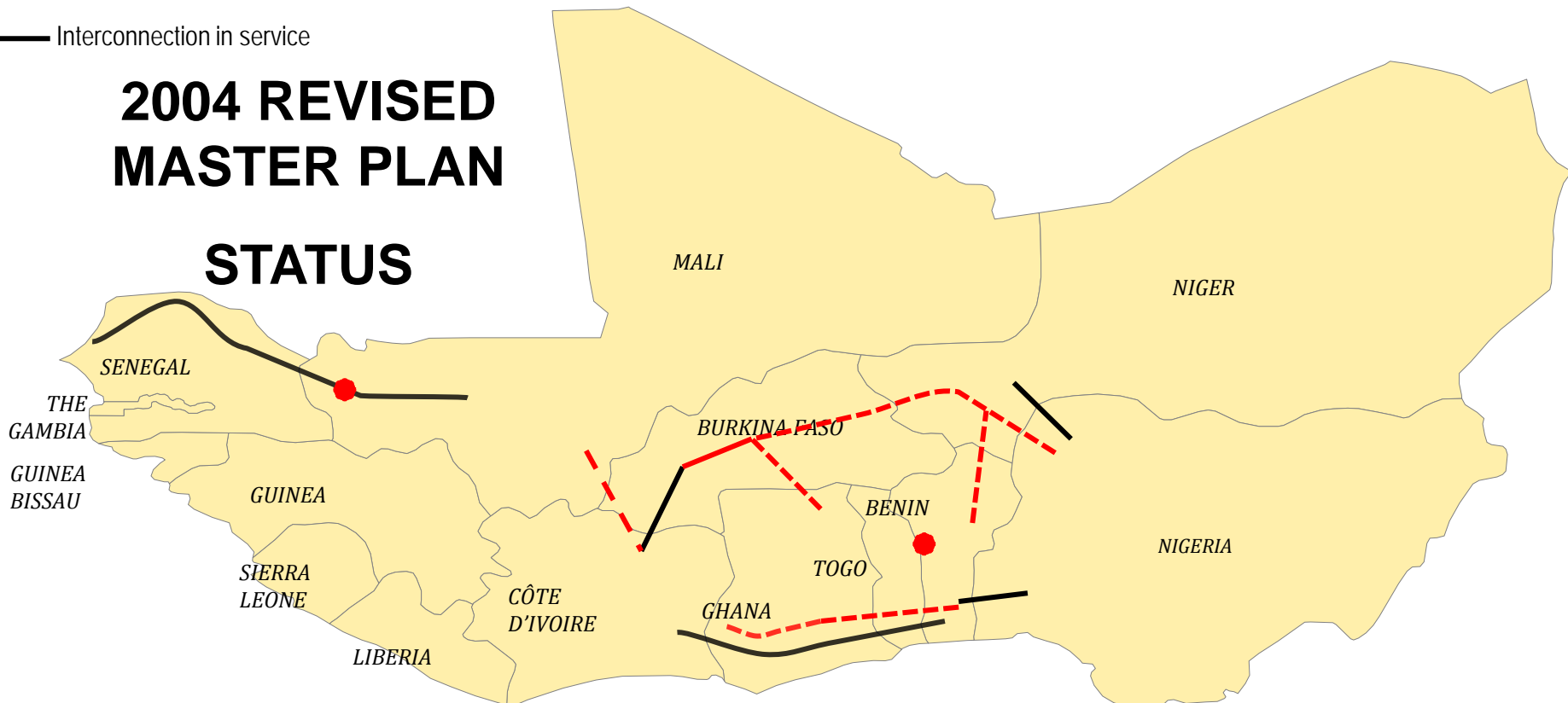
IMPLEMENTATION OF 2004 REVISED MASTER PLAN

- Difficulties related to the financial crisis and global energy crisis
- In some cases, development of national initiatives in place of the regional projects to meet the energy needs of countries
- Need to update the Master Plan of ECOWAS for a coherent framework for realization of the unified regional market

— Interconnection in service

2004 REVISED MASTER PLAN

STATUS



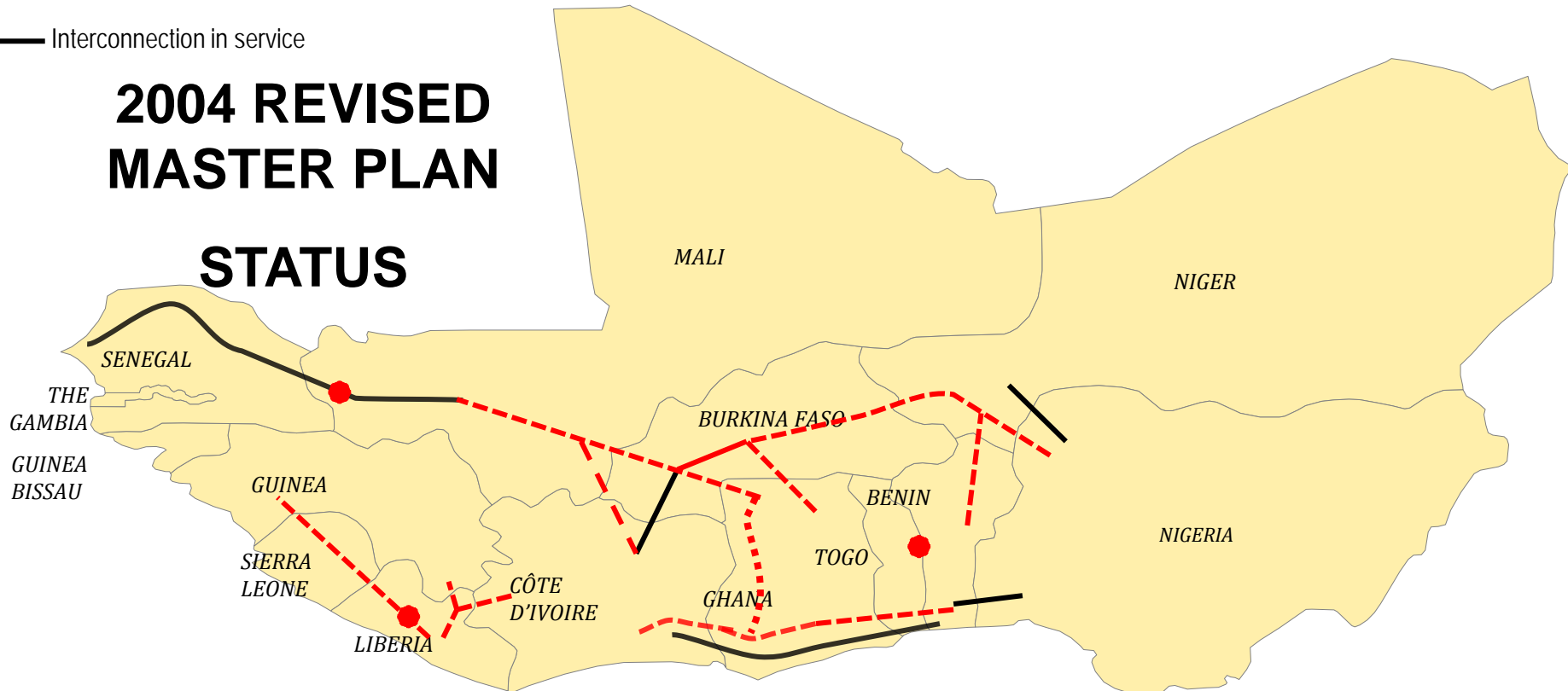
- ✓ 225 kV Bobo Dioulasso – Ouagadougou : OPERATIONAL SINCE **DECEMBER 2009**
- ✓ 330 kV Aboadze (Ghana) – Volta (Ghana); OPERATIONAL SINCE **SEPTEMBER 2010**
- 225 kV Cote d'Ivoire – Mali; IMPLEMENTATION :
- 330 kV Volta (Ghana) – Lome "C" (Togo) – Sakete (Benin); IMPLEMENTATION :
- 60 MW WAPP Felou Hydropower; IMPLEMENTATION :
- 225 kV Bolgatanga (Ghana) – Ouagadougou (Burkina Faso); IMPLEMENTATION :
- 147 MW WAPP Adjarala Hydropower – PRE- INVESTMENT
- 330 kV Birnin Kebbi (Nigeria) - Bembereke (Benin) – Niamey (Niger) – Ouagadougou (Burkina Faso); PRE-INVESTMENT :

24 - 26 April 2012, Lomé - TOGO

— Interconnection in service

2004 REVISED MASTER PLAN

STATUS

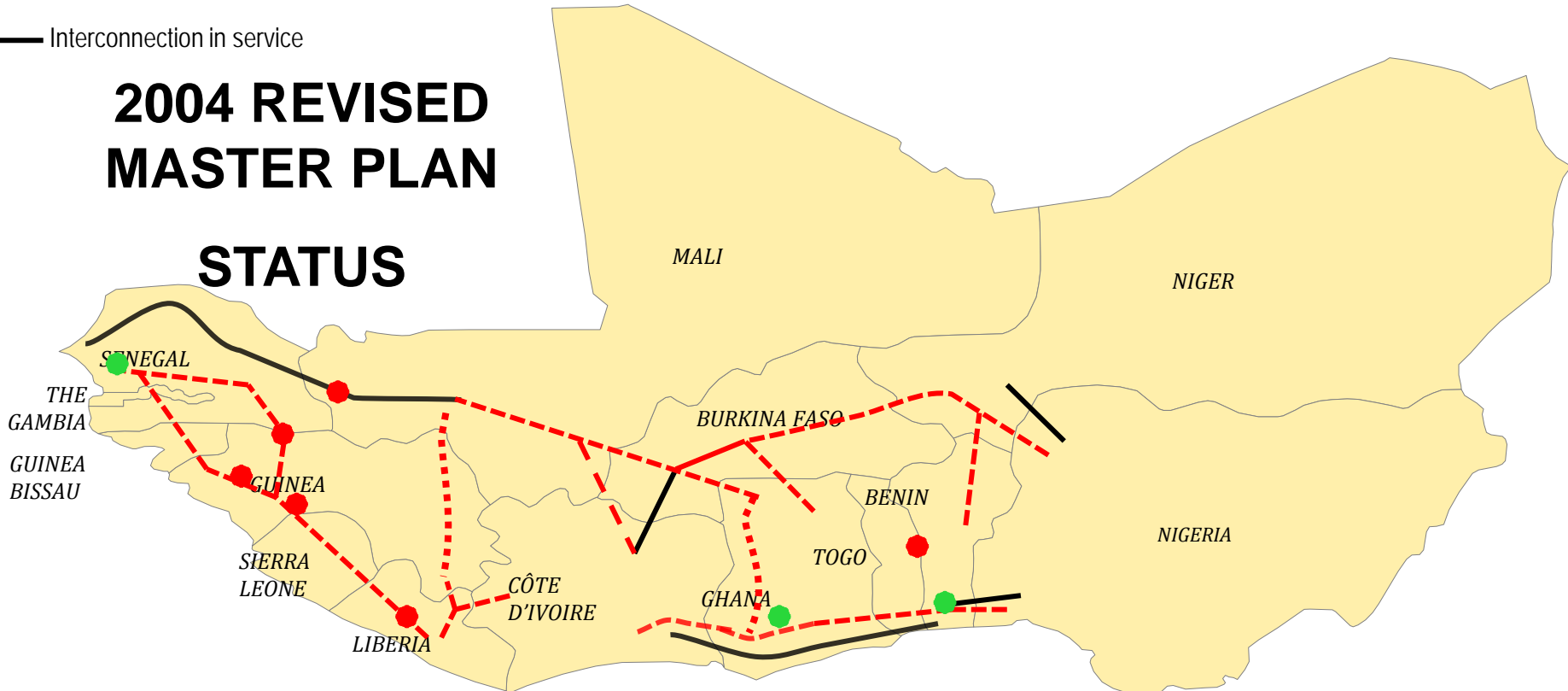


- Cote d'Ivoire – Liberia – Sierra Leone – Guinea Interconnection Project – PRE-INVESTMENT - FINANCING MOBILISED :
- 330 kV Aboadze (Ghana) – Prestea (Ghana) – Kumasi (Ghana) – Bolgatanga (Ghana) + Tumu (Ghana) – Han (Ghana) – Wa (Ghana); PRE-INVESTMENT -
- Han (Ghana) – Bobo Dioulasso (Burkina Faso) – Sikasso (Mali) – Bamako (Mali); - PRE-INVESTMENT
- 330 kV Riviera (Cote d'Ivoire) – Prestea (Ghana) – PRE-INVESTMENT :
- 64 MW WAPP Mount Coffee Hydropower – PRE-INVESTMENT :

— Interconnection in service

2004 REVISED MASTER PLAN

STATUS



- Hydropower sites at Kaleta, Sambangalou + 225 kV Interconnection Line - IMPLEMENTATION
- MOBILISATION OF FINANCING
- 450 MW WAPP EPSSP Maria Gleta Power Generation Facility; PRE-INVESTMENT :
- 200 MW WAPP EPSSP Power Generation Facility within OMVS Zone; PRE-INVESTMENT:
- 225 kV Nzérékoré (Guinea) – Fomi (Guinea) – Bamako (Mali); PRE-INVESTMENT –
- 118 MW Kassa 'B' Hydropower Facility; PRE-INVESTMENT :
- PHCN/TCN (Nigeria) – CEB (Togo-Benin) PRE-INVESTMENT :
- 400 MW WAPP EPSSP Aboadze/Domunli Power Generation Facility; PRE-INVESTMENT :

24 - 26 April 2012, Lomé - TOGO

ECOWAS MASTER PLAN UPDATED

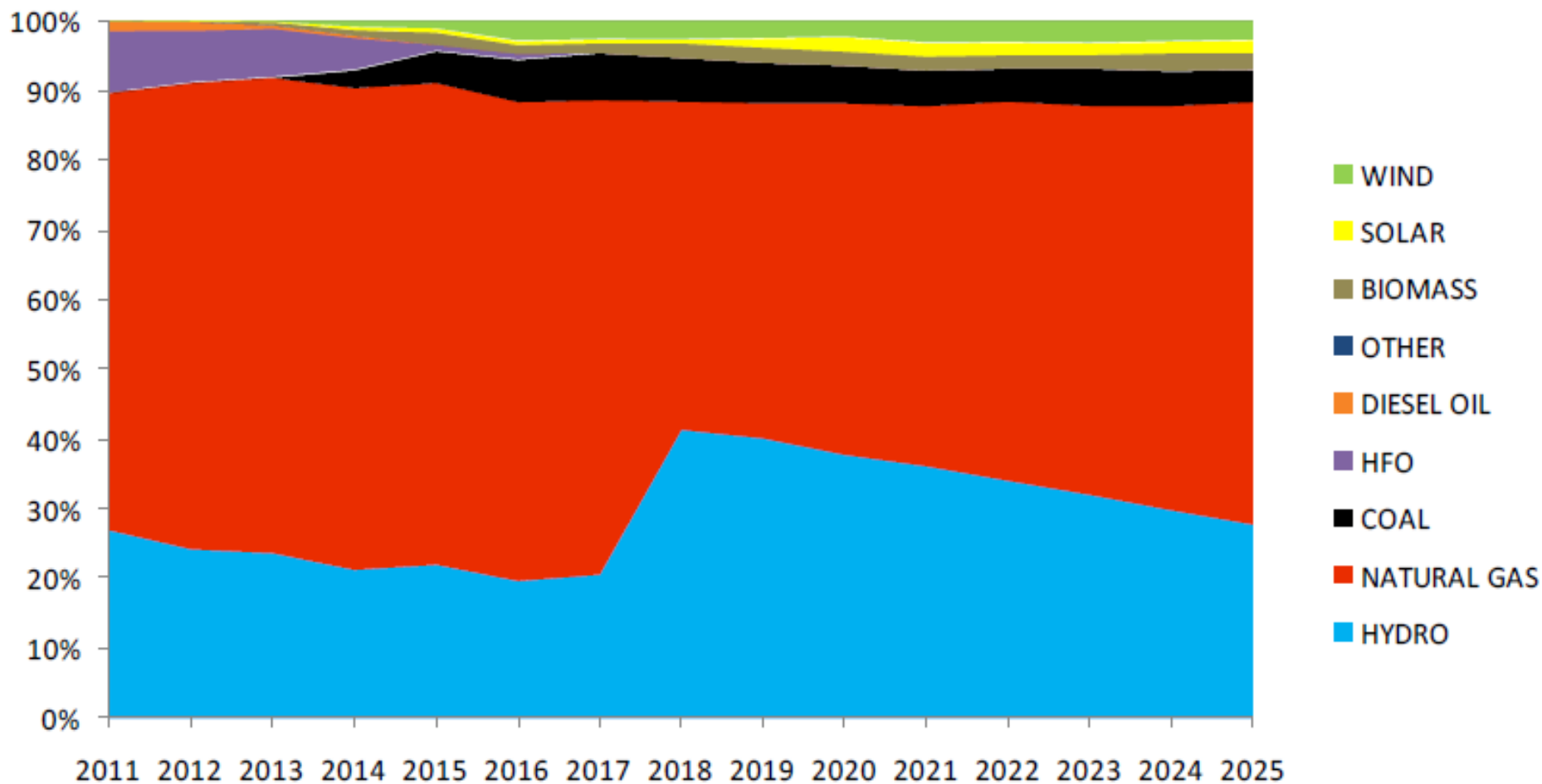
Regional Priority Projects 2011 – 2025:

- Generation: 10 000 MW including 7 000 MW of hydro
- Transmission: 16 000 km of interconnection line

**GLOBAL INVESTMENT : 24 BILLIONS US\$
INCLUDING 18 FOR GENERATION**

ECOWAS MASTER PLAN UPDATED : ENERGY MIX WITH 10% RENEWABLE ENERGY IN 2020

Energy mix in terms of produced energy



IMPLEMENTATION STRATEGY OF THE PROJECTS

Implementation Model

Traditional Model:

Implementation Unit to coordinate activities in each country

Regional Model :

- **Creation of Unique Entities for the implementation of the Projects**
- **Creation the Specific Purpose Companies (SPC):**

According to the Supplementary Act A/SA.3/01/08 adopted by the Heads of State and Government in January 2008.

IMPLEMENTATION STRATEGY OF THE PROJECTS

Sources of Funding

- *Traditional donors*
- *Public Private Partnership*
- *Creation of ECOWAS Fund dedicated to regional energy projects*
- *Operators*

CONDITIONS FOR ACCELERATING THE IMPLEMENTATION OF THE MASTER PLAN

- Diversification of funding sources through private sector involvement and bilateral cooperation
- Creation by ECOWAS Member States of appropriate institutional frameworks for the speedy implementation of projects, including a suitable environment for private sector involvement and implementation of cost based tariffs.
- Improvement of technical, commercial and financial performance of the power utilities.

ROLE OF ERERA and NATIONAL REGULATORS

- ERERA under Article 18 of Regulation C/REG.27/12/07 has to review and provide its opinion on the Master Plan proposed by WAPP for the development of regional infrastructure.
- Advise Governments to accelerate the establishment of appropriate frameworks for the effective involvement of private sector in energy programs
- Ensure proper implementation of programs to improve technical, commercial and financial performance of the power utilities
- Ensure the financial viability of operators in particular by ensuring the application of real pricing.
- Closely involved in developing the regional market.



THANK YOU

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REPUBLIC OF GHANA