

CMP Platform and Database

The **Continental Power System Masterplan (CMP)** was initiated in 2019, following a decision of the African Energy Ministers to serve as a blueprint for the **African Single Electricity Market (AfSEM)**.

The Energy Ministers also issued a directive for the development of a common place for the storage of the historical and projected electricity data in a shared Energy Information System (EIS). This report, developed with support from the European Union - Global Technical Assistance Facility (EU-GTAF), details the conceptual model of this platform, including the scope of work, functionality and software architectural design.

The synergy and complementarity of the AfSEM and CMP assignments will ensure that efficient generation facilities and resilient electricity interconnections will support adequate and efficient market-based mechanisms for trading.

CMP Platform and Database



OBJECTIVE

To develop a conceptual model for the CMP platform and database, with an EIS that integrates with the modelling tools of choice for demand forecasting, generation expansion and transmission simulations and a Geographic Information System (GIS) tool.



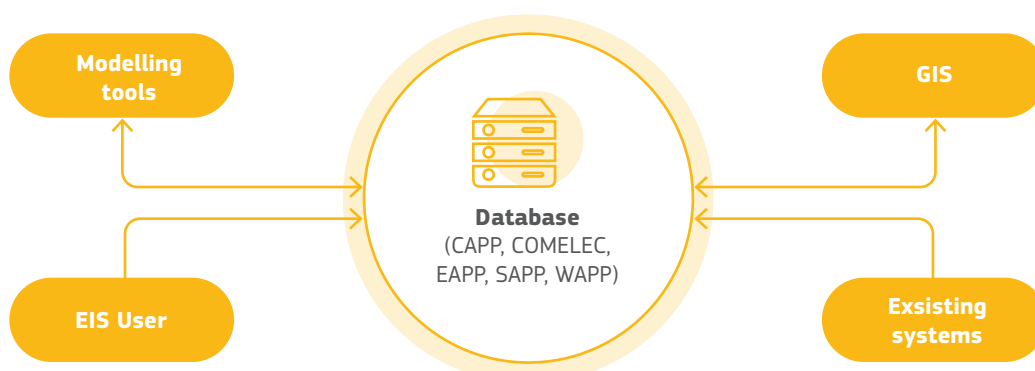
METHODOLOGY AND SCOPE

A participatory approach that involved several discussions with the regional power pools, a survey on the existing systems and databases across each power pool and consultations on the EIS prototype.

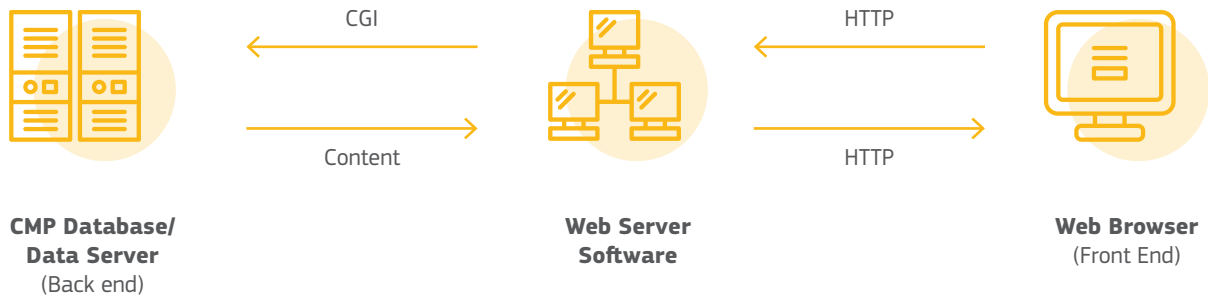
Main features of the CMP Platform

- The electricity data will be used for developing demand forecast models, planning scenarios, energy generation expansion and transmission network models through an interface to the modelling tools.
- The platform and database will be password-protected.
- The data will be stored in a single database for all the five power pools.
- Users will be granted access according to the activities they need to perform and will be able to:
 - search for existing information
 - view existing data records
 - download the records in a spreadsheet format (excel and csv)
 - insert new records
 - edit/delete existing records

CMP Platform and Database conceptual model



CMP Information System Schematic



Mwanga CMP Platform

The Mwanga CMP Platform interface is shown in three stages:

- Welcome Page:** Features logos for SAPP, AUDA-NEPAD, and ERECA. It includes a "Log in" link and a welcome message: "Welcome to the Mwanga CMP Platform". Below this, it defines "Mwanga" as "light (source of illumination)" and "Noun, mwanga (m-mi class, plural mianga) light (source of illumination)".
- Login Page:** A dark-themed page with a "LOGIN" form. The form includes fields for "Email Address" and "Password", a "Remember Me" checkbox, a "Login" button, and a "Forgot Your Password?" link.
- Demand Data List:** A user interface for viewing demand data. It shows a "Demand data list" for user "Carlos Corao". The page includes a search bar and a table of data records.

Year	Country	Electrical Energy Demand (GWh)	Peak Load Demand (MW)	Scenario	Data Source	Action
2040	Egypt	402717	54051	Basecase	CMP Del2	[Edit] [View] [Delete]
2040	Equatorial Guinea	1429	272	Basecase	CMP Del2	[Edit] [View] [Delete]
2040	Zambia	43236	700	Basecase	CMP Del2	[Edit] [View] [Delete]
2040	Libya			Basecase	CMP Del2	[Edit] [View] [Delete]