REVENUES *VIA* THE ELECTRICITY INDUSTRY WITH AN ENERGY FINANCE DATA REPOSITORY

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ABSTRACT

A data warehouse is a sort of data management system that is intended to facilitate and assist business intelligence (BI) and analytics activities. Data warehouses are designed mainly for querying and analysis, and they frequently store vast amounts of historical data. To store and manage data, you'll need a relational database. The Climate Policy Initiative Energy Financing team is a multidisciplinary group of economists, analysts, and financial and energy industry professionals who develop novel finance and market solutions to help expedite the energy transition. Mortgage warehouse funding is essentially a short-term funding arrangement provided to a mortgage originator — usually by a financial institution — to provide funds for loan closings. These loans are held in the "warehouse" once they've been closed until they're sold in the secondary market, which usually takes a couple of weeks. The global floating power plant market is estimated to be worth around 1.0 billion dollars (USD) and is predicted to develop at a compound annual growth rate (CAGR) of Increases in the future. In order to understand financial relationships in the electricity sector, reliable data is required. Due to the fragmented nature of the power sector, obtaining meaningful data and visualising it can be difficult.

Keywords: Business Intelligence, Finance, Data Repository.

INTRODUCTION

Warehouse finance is a type of inventory financing in which a financial institution lends money to a business, manufacturer, or processor. Existing inventory, goods, or commodities are moved to a warehouse and used as loan collateral. Warehouse financing is most commonly employed by smaller privately-owned enterprises that do not have access to alternative financing options, notably those in commodities-related businesses. Warehouse finance allows firms to borrow money against their inventory as collateral (Kanitkar et al., 2019).

Collateral inventories will be relocated and kept at a designated location. A collateral manager inspects and certifies the warehoused goods to guarantee the borrower holds the inventory used to back the loan. Warehouse finance can typically provide borrowers with better terms than short-term working capital or unsecured loans, and the repayment schedule can be matched with the actual use of stocks or supplies. Warehouse finance is frequently less expensive than other types of borrowing because it is secured (Pargal & Banerjee, 2014). The warehouse's commodity inventory is contractually pledged to the lender so that if the borrower defaults on payments, the lender can seize the inventory and sell it to recoup the loan. Because the lender is not involved in protracted court fights to collect the money, as they would be if the loan were unsecured, this type of lending is often less expensive.

The Energy Financial Data Warehouse (EFDW) is a data warehouse where energy-related finance, economics, and market data may be preserved, integrated, expanded, and evaluated to grow in value over time (Kaur et al., 2021). EFDW intends to give a mechanism for newer analysts to build on earlier work by carefully tracking methods used for

computation and estimation, as well as pertinent sources. The use of EFDW to create different types of visualisation for energy-finance data (such as Sankey approaches), data source identification, and data provenance workflow must all be carefully handled.

Current version of EFDW as a data repository; however, needs and requires better database software and appropriate indices for faster data lookups to provide more extensive search, traverse, and browse functionality. In addition to database services, users must be able to find data sources by using a search and navigation user interface, as well as a proper search result ranking function. Additionally, allowing users to annotate data sources, capture links between data sources, and visualise data sources will be extremely beneficial to users (Thakur et al., 2017). EFDW process steps frequently entail data operations like joining tables, schema mapping, data deduplication, data standardisation, and so on. So far, subject matter experts have completed the majority of the jobs manually. Defining common data operations for subject matter experts and giving systematic ways/tools will be beneficial not only for speeding up the data provenance tracking process, but also for reducing errors (Kamat, 2000).

CONCLUSION

The Energy Finance Data Warehouse (EFDW) framework, which employs Sankey technologies and methods, can be used to gain a better understanding of how policy options affect the financial health of various electrical system operators and sectors. The model is useful for a simplified representation of revenue flows through the power sector value chain, from end users to transmission owners, generation owners, and fuel and operations and maintenance (O&M) providers, *via* load serving entities (LSE)/distribution, regional transmission organisations (RTO)/independent system operators (ISO), if applicable. Financial transactions were as closely as possible matched to actual electricity flows; for every dollar paid, a unit of electrical energy or delivery was received.

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