

**AMERICAN ELECTRIC POWER**

# **INTEREST RATE DERIVATIVE ANALYTICS (IRDA) WITH SAS**

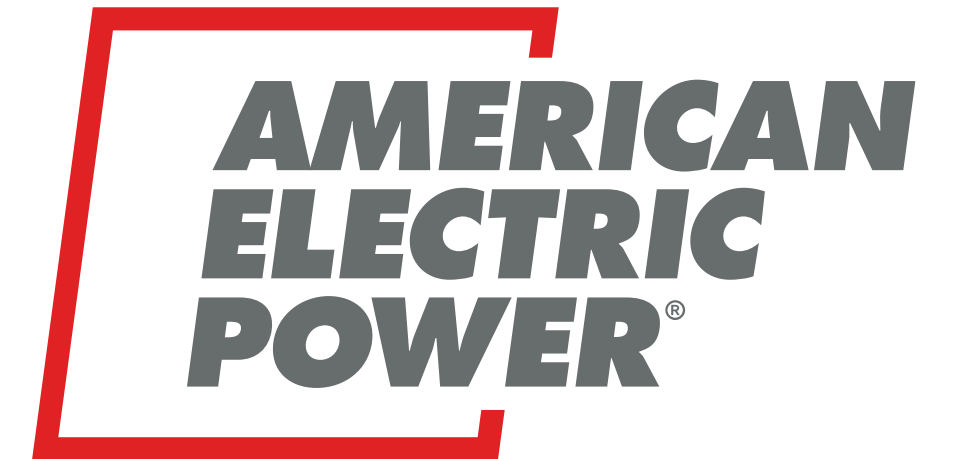
**Joseph Davis**

**Data Scientist**

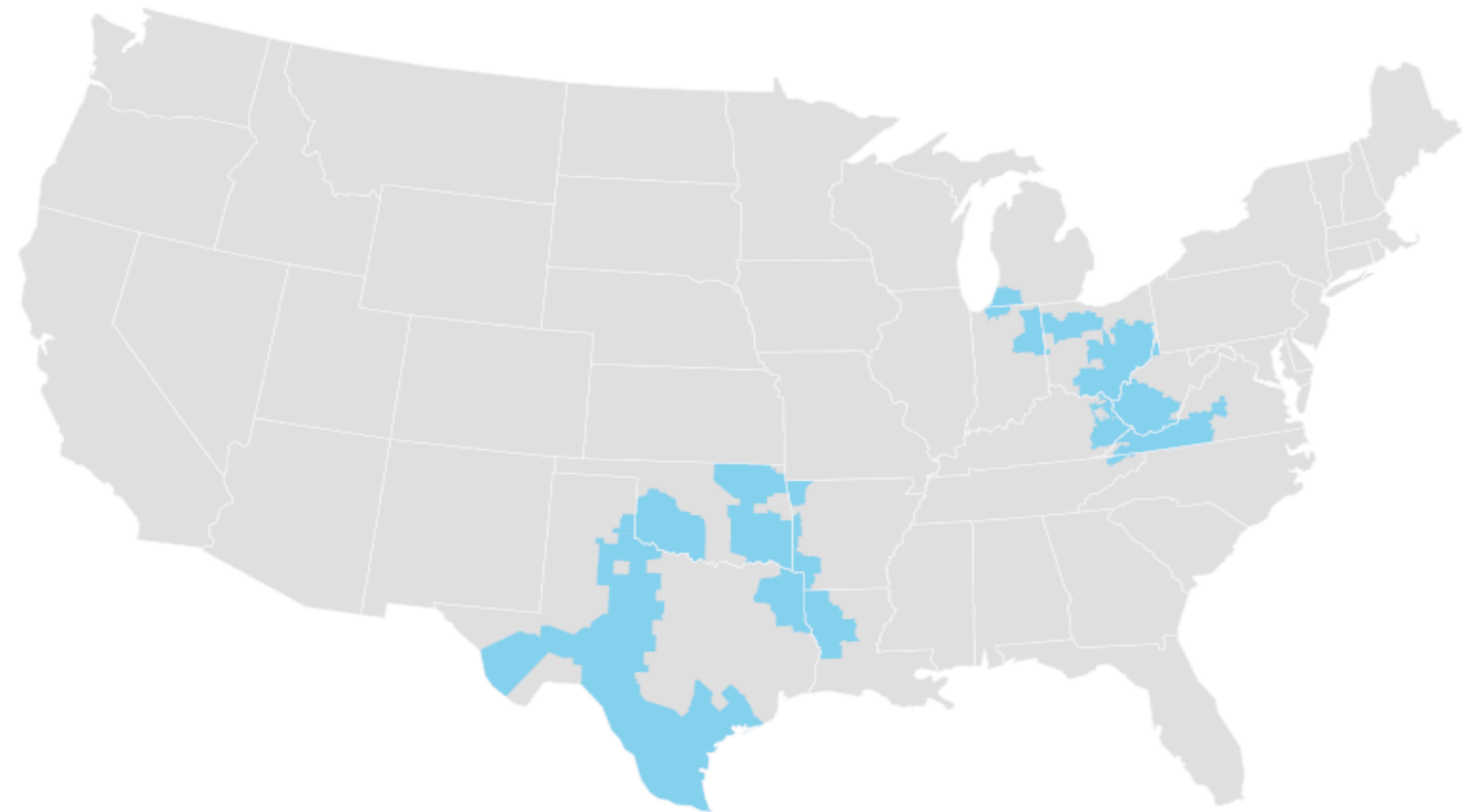
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# AMERICAN ELECTRIC POWER

American Electric Power is an electric utility in United States and ranks among the nation's largest generators of electricity. We're redefining the future of energy and powering a new and brighter future for our customers



- 17,000 Employees
- 30GW Owned Generation
- 5.5M Customers in 11 States
- \$91B Total Assets
- 40,000 Transmission Miles
- 223,000 Distribution Miles





# AEP FINANCE

In finance present value is a method of estimating current value of future cashflows. To ensure compliance with fair value accounting standards, it is important to best estimates of present value of cashflows.

To do this we need to construct daily interest rate zero curve to discount the energy positions in our portfolio from trading operations.

The daily zero curve is also used in valuing interest rate derivatives executed by the Corporate Finance department.



# LIBOR TO SOFR TRANSITION



## PROBLEM

LIBOR (London Inter-Bank Offered Rate) was a benchmark interest rate banks lent to one another. However, LIBOR has been subject to manipulation and is no longer considered a reliable benchmark.

SOFR (Secured Overnight Financing Rate) is a new benchmark interest rate that became the alternative LIBOR.

The problem was our current infrastructure relied upon pulling LIBOR rates to evaluate and make financial decisions. Such we needed new infrastructure for SOFR.



# INTEREST RATE DERIVATIVE ANALYTICS

Using Server SAS 9.4 we created multiple SAS scripts and macros to produce daily evaluations which are then pulled into reporting software.

These scripts and macros were then automated on our SAS GRID server in a batch run (xml driven).

This allowed us to save at least \$500K annually if we had to go with third-party vendor software as well as human effort.





# QUESTIONS?

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