

Cloudwick's Amorphic Data Platform for AWS provides a State Energy Office with the centralized data management and analytic tools to achieve its' clean energy goals

Executive Summary

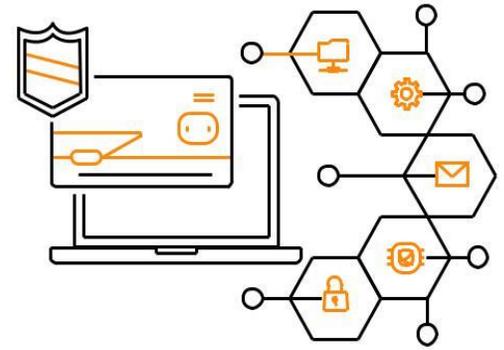
The State Energy Office of a US state is committed to ending its dependence on fossil fuels by creating a 100 percent clean energy ecosystem by 2045. The transition to renewable energy supports the state's economy by generating new quality jobs, expanding investment opportunities, and accelerating overall economic growth. To achieve these goals, the State Energy Office had to find a way to consolidate the consumption and curation of energy-related data across eighty disparate data sources, and to communicate the program results directly to its citizens.

With Cloudwick's Amorphic Data Platform for AWS, the State Energy team is now able to ingest data from heterogeneous sources, present the transformed data throughout the organization in an accessible and understandable format, and share key information with its citizens. With Amorphic's Data Platform-as-a-Service capabilities, actionable data from Amazon Quicksight is presented in easily consumable dashboards, enabling the State Energy Office to effortlessly track and share progress towards their clean energy goals.

Customer challenge

As with many organizations, data at the State Energy Office was siloed, with data management semi-automated at best, often requiring manual intervention. Its' IT teams had to check new data at the source and manually trigger corresponding scripts to load and process data. Many extra steps were required to clean, process, and store transformed data.

The State Energy Office had been unable to find a third-party solution to consolidate data or create dashboards for denormalized datasets. The time, cost, and skill required to build a home-grown solution was prohibitive. The State Energy Office was looking for a way to automate data ingestion from a variety of sources, manage all their data in a single location, and share high quality information throughout the organization. It also needed to enable sharing of visual analyses to communicate progress to citizens.



About the Customer

The State Energy Office is a division of the state's Department of Business, Economic Development and Tourism. This governmental agency is leading the state's charge towards clean energy independence with a goal to reach 100 percent renewable energy generation by 2045. Through effective policies and innovative programs, the State Energy Office has positioned its state as a leader in clean energy innovation.

The Solution: Cloudwick's Amorphic Data Platform

With the Amorphic Data Platform for AWS, the State Energy Office gains a centralized cloud data platform for migrating, managing, transforming and the ability to act on data instantly using 60+ on-demand AWS data and analytic services. The State Energy Office now can automate data ingestion from heterogeneous sources – SFTP servers, AWS S3 buckets, external APIs, relational data, and weblinks for lookup data – and load raw data directly into the Amorphic Platform. With Amorphic's support for multiple file types such as Parquet, flat files, etc., the ingestion process has been streamlined. Data cleansing, CDC, data transformation, and denormalization are now automated processes and are a part of end-to-end data pipelines.

Amorphic enables data ingestion and processing natively with AWS using Amazon Glue for serverless data pipelines. Once data is stored in a structured and denormalized format on Amazon Redshift, the HSEO team achieves an end-goal of creating performant and insightful dashboards using Amazon Quicksight to share progress.

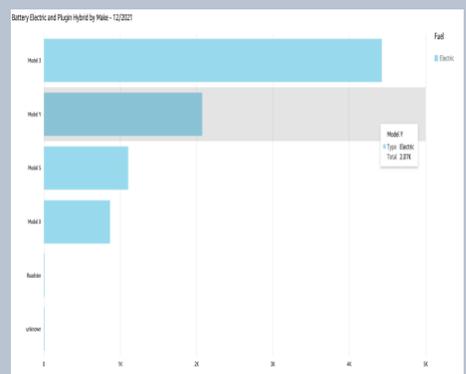
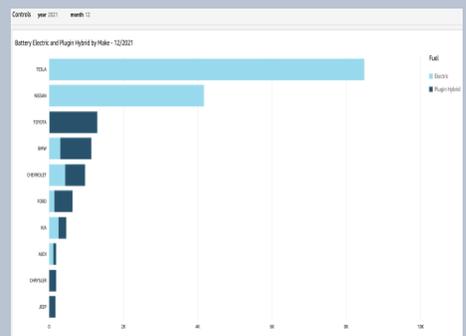
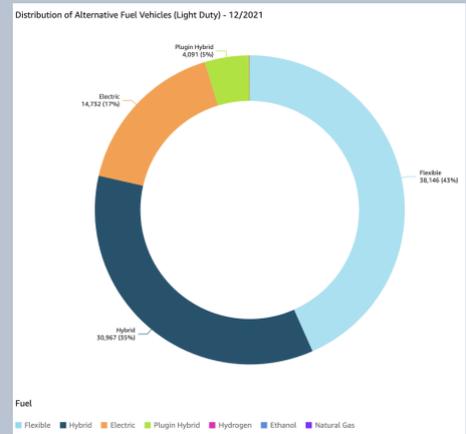
Customer success metrics

A key criterion for success was the ability for the State Energy Office to use the Amorphic Data Platform to build dashboards with drilldowns in Amazon Quicksight. With the Amorphic Data Platform, the State Energy Office was able to embed dashboards into the State's website to share progress metrics directly with its' citizens, giving 50,000 daily visitors access to these metrics. The dashboards provide data regarding the number of newly registered plugin EVs by geo, maps of alternative fuel stations, and tracking of vehicle fuel efficiency.

For dashboards requiring geospatial capabilities, location intelligence was added to specific datasets by leveraging publicly available zip code data and applicable latitude/longitude information. Amorphic was able to partition the data and exclude unnecessary details.

To enable detailed vehicle data analysis, Amorphic was able to clean source data by identifying faulty VIN numbers using Vehicle Descriptor data provided by the National Highway Traffic Safety Administration (NHTSA) as the source of truth.

The Amorphic Data Platform Dashboards



Key AWS Technologies

- ✓ **Amazon Redshift**
- ✓ **AWS Glue**
- ✓ **Amazon S3**
- ✓ **AWS Lake Formation 2.0**
- ✓ **Amazon SageMaker ML***
- ✓ **Amazon Kendra***
- ✓ **Amazon Textract***
- ✓ **Amazon Forecast***
- ✓ **Amazon QuickSight**
- ✓ **Amazon OpenSearch**
- ✓ **Amazon EC2**
- ✓ **AWS CloudWatch**
- ✓ **AWS CloudTrail**
- ✓ **AWS DMS**
- ✓ **AWS Lambda**
- ✓ **AWS CloudFront**
- ✓ **Amazon Appflow 2.0***

* Specific AWS Services not used by customer in this use case. All Services Listed are Enabled in the Amorphic Data Platform for AWS.

Why AWS & Amorphic?

The State Energy Office team approached AWS with its requirements. AWS recommended Cloudwick's Amorphic Data Platform since Amorphic natively manages over 60 AWS services and was available through Carahsoft, an experienced government IT solution provider for AWS. Cloudwick successfully demonstrated Amorphic's ability to drive forward the State Energy Office's goals: 1) to transform and analyse data, quickly and easily with support for multiple data types and data sources, 2) to provide role-based access control for users, 3) to build dashboards with complex drill-downs to track progress, and 4) to provide a repository for collaborative coding.

Customer Benefits of the Amorphic Data Platform

- No IT skills required to build and manage a cloud data platform on AWS.
- A centralized data platform as a single source of truth to transform and analyze data, natively integrated with 60+ AWS services
- Department and system data from multiple sources organized into usable domains
- Support for multiple data types (CSV, Parquet, etc.) and data sources (SFTP, S3, Rest APIs, RDBMS)
- Role-based access control for users to share and consume datasets
- Ability to transform data in multiple stages of the pipeline
- Automate end-to-end data pipelines with no manual intervention
- Code-Commit repository for collaborative coding
- Easy access to tools for location-based dashboard creation
- No IT cost to develop and no support barriers for migration and modernization.

About Cloudwick's Amorphic Data Platform:

Cloudwick's Amorphic Data Platform is a fully managed AWS ISV Certified data platform that provides organizations with the ability to migrate data and modernize analytics with zero IT development or support required. Amorphic natively integrates over 60 AWS services into one cloud data platform, enabling organizations to gain better insights from data using the modern cloud analytic stack.

About Cloudwick:

Cloudwick is an AWS-certified APN Advanced Consulting Partner and APN Advanced Technology Software Partner offering the Amorphic Data Platform for AWS. Cloudwick's Professional Services provides organizations with trusted and high impact data and analytic migration and modernization outcomes.

Founded in 2010 in Newark, CA, Cloudwick has over 140 technology professionals with 400+ Big Data certifications and over 100 AWS Certifications serving customers throughout the US, EMEA, and APAC. Cloudwick's Amorphic Data Platform is available direct, through the AWS Marketplace and through select resellers.

Cloudwick

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