Alinta Energy powers ahead with cloud-based data warehouse and AI infused analytics

Every time an Australian batsman heads to the crease, Alinta Energy's logo gets an outing. As principal partner of the men's cricket team Alinta knows quality when it sees it.

As one of the country's leading power generators and retailers, meeting the power needs of more than 1 million Australians, it also understands the importance of quality data to support decision making and operations.

Alinta Energy is one of the first companies in Australia to use Azure Synapse Analytics, the latest evolution of Azure SQL Data Warehouse which promises a limitless analytics service bringing together enterprise data warehousing and big data analytics.

The Alinta Data Warehouse is at the heart of Alinta's operations, providing the single source of information for the enterprise, its customers and for regulators.

> " We've drastically improved the quality of our accrual models, driving our financial positions and our reporting to the Board. There are about 22 models that are running in there. We're doing something like 150 million records per run."
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> Brad Walker, General Manager, Data and Analytics, Alinta Energy
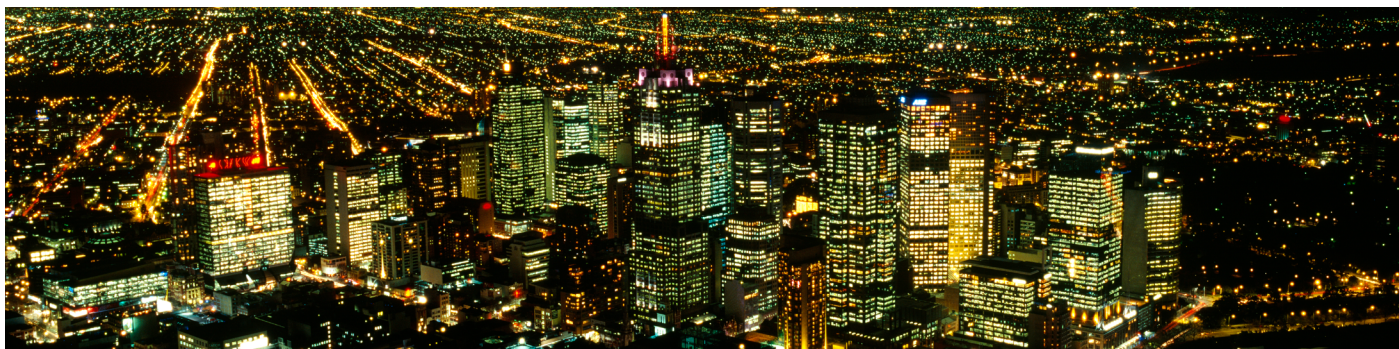
Alinta Energy has owned and operated power stations and the infrastructure to deliver power to Australian homes and businesses for more than 20 years. It operates in one of the most fiercely competed sectors of the economy, and faces immense flux in terms of supply and demand as well as regulation.

Originally a Western Australia business, the company has expanded to the East Coast.

As Brad Walker, General Manager, Data and Analytics, Alinta Energy says; "It's quite a complex business that has brought together a whole bunch of smaller and legacy assets over the years."

The organisation needed a modern digital platform able to support the growth of the business and to meet its regulatory obligations.

That landscape is now anchored by the Azure based Alinta Data Hub (ADH) which was designed, along with Alinta's data and analytics strategy, in association with Accenture.

One of the first projects to take advantage of the ADH is the Unbilled system that provides accurate and auditable accrual data to the business. Alinta worked with Microsoft partner Fujitsu Data & AI to design the Unbilled solution and develop the working architecture and platform.

Alinta has created models that track the amount of energy that the company buys, helps employees manage financials and use machine learning to predict future energy requirements.

Alinta has a very significant volume of data to interpret from the two billing systems it runs – one for WA customers, and one for East Coast customers. (These will shortly be combined in a single billing platform being developed by Alinta).

The ADH acts as a secure source of data detailing Alinta's energy generation, as well as data from market regulators and networks and Walker is planning to add feeds from weather agencies and other sources to help with trading in the future.

The data provides the intelligence to support operational and strategic decision making as well as acting as the foundations for Alinta to meet its reporting requirements.

"We have a dedicated project to support the regulators in their increasing needs for different amounts of insight," says Walker.

The ADH will also play a pivotal role in ensuring Alinta is ready to respond to the Five-Minute Settlement requirement when that is introduced by the Australian Energy Market Operator. "We have done the architecture and design at the high level for that, and ADH will be a core component of Alinta's response to make the markets meet the five-minute settlement data," he says.

It's access to accurate, up to the minute data, he adds that will allow Alinta to understand its position in the market, the needs of customers and also provide regulators with clarity about the efficient and fair operation of the sector.

One of Alinta's early wins has come from its retail pricing analytics engine which is fuelled by data from the ADH and has proved an enormous support for Alinta's retail pricing team. The ADH in fact underpins all of Alinta's back office functions, supporting everything from finance to HR.

Walker adds that ADH also supports Alinta's online presence and will be key to the new user experiences that it has on the drawing board.

"It plays a role in ensuring that our business teams have a detailed understanding of how we're meeting the needs of our customers. Standard analytics for internal use and supporting the teams in how they service the customers, everything from pricing analytics through to operational analytics to help with the back office functions and it also supports our merchant business. It really is the platform designed to support a completely modernised energy utility."

With the firm data foundations in place he is exploring how AI and machine learning can be more extensively deployed across the business, building models able to ingest data from weather services for example, to better predict demand.

The ADH, built using Azure Synapse, provides those strong data rich foundations that will allow Alinta to continue to grow, develop new customer services, meet regulatory requirements and power ahead. Hopefully so will the Australian cricket team.

"We fundamentally see the ability to: one, capture a significant amount of our historic data and have that available for machine learning and AI to run. Second is the ability to have a cloud-based platform that can acquire data both internally and externally, everything from weather and energy markets through to our internal transactions so that we can not only have a full history of data, but also have rapid application of real time data so that models can run. Then the third part is having that scalability in our processing so that we can run models real time, to drive real-time decisioning rather than just doing historical or trending analysis."

Brad Walker, General Manager, Data and Analytics, Alinta Energy

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