

Gigaton Spotlight: University of Oklahoma

How AT&T connectivity expertise enables emissions reduction and business value

About University of Oklahoma (OU)

OU's Project AIMNet focuses on advanced transdisciplinary research that integrates gas measurement, weather modeling, and artificial intelligence to develop innovative regional emission monitoring solutions that enhance automation, data analysis, and decision-making for addressing societally and economically pressing challenges.

Gigaton Pathway: Methane Waste to Value

- OU has developed an integrated sensing solution to enable a largely distributed IoT sensing network that can continuously monitor methane emissions in a large oil and gas production land in Oklahoma's Anadarko Basin.
- Using this advanced monitoring solution, OU aims to establish a web-based emissions reporting dashboard that makes it easier to identify and fix methane leaks - and even prevent them from happening in the first place.



OU is contributing to AT&T's Gigaton Goal

- Methane is a potent greenhouse gas responsible for about a third of the global temperature increase since the Industrial Revolution. Over a 20-year period, methane's global warming potential is about 83 times more powerful than carbon dioxide, emphasizing its significantly high short-term impact.
- While the fully functioning distributed IoT sensing network is under construction over the oil and gas production land, our small-scale version of the network has indicated a higher methane background concentration over the oil and gas production land than other regions.
- The AIMNet project has also identified several unexpected large methane leaks from other kinds of local sources, including wastewater treatment plants, landfills and cow farms.

Connectivity helps enable OU's success

- OU's methane sensing network relies on AT&T's IoT connectivity and expertise to help remotely and securely collect and transmit crucial environmental measurement data, such as methane levels and weather conditions.
- AT&T's reliable IoT infrastructure enables the timely data integration needed for the emissions modeling system and enabling prompt, data-driven decision-making for methane mitigation efforts.
- The work with OU is one example of how AT&T uses its network and expertise to enable forward-thinking solutions that tackle environmental issues.