Public Statement: Advancing Wyoming's Energy Infrastructure through Innovative Leak Detection

Background and Context

Wyoming plays a pivotal role in the nation's energy sector as underscored by its extensive pipeline network. This network is crucial in supporting the state's oil and gas operations, emerging hydrogen transportation initiatives, and carbon capture and sequestration efforts. However, ensuring the safety and efficiency of these assets presents unique challenges. Traditional leak detection methods fall short due to the complex properties of these fluids, leading to financial, safety, environmental, and regulatory risks.

Solution

Building on our success in using machine learning for leak detection in oil pipelines, Flowstate is now focusing on adapting this technology for Wyoming's more challenging pipeline systems. We propose an innovative, AI-driven leak detection solution for real-time monitoring specifically tailored for pipelines transporting natural gas, CO_2, and hydrogen. This project involves the collection of operational pipeline data, development of advanced AI systems, construction of validation equipment, and extensive testing. Our goal is to integrate this advanced technology into an existing commercial platform, significantly enhancing leak detection accuracy and sensitivity for Wyoming's pipeline infrastructure.

Project Objectives

- **Supporting Core Industries**: Our project aims to enhance pipeline transport safety and efficiency for Wyoming's core energy sectors including coal, natural gas, and oil. By providing advanced leak detection for CO_2 pipelines (captured from coal plants and used in EOR activities) and natural gas, we ensure fewer disruptions, reduce product loss and revenue impacts, and help companies comply with regulations.
- **Safety and Environmental Stewardship**: Advanced leak detection plays a crucial role in preventing accidents and health hazards associated with pipeline leaks. By accurately identifying and addressing leaks quickly, we significantly reduce the risk of incidents that could impact populated areas. At the same time, our technology is a vital tool in preserving Wyoming's pristine environment. Effective monitoring minimizes the risk of environmental contamination, protecting our diverse ecosystems and maintaining the natural beauty that defines our state. This dual focus on safety and environmental stewardship ensures that Wyoming continues to be a safe, healthy, and attractive place to live, work, and visit.

We believe our project addresses a significant market need with an innovative solution. By enhancing leak detection capabilities, we're supporting Wyoming's core energy industries and driving job creation within the state. Our commitment is to contribute to Wyoming's energy sector with a forward-thinking approach that benefits both the economy and the community.