

CASE STUDY

HECLA INNOVATION



Innovation is the bedrock on which we operate at Hecla. To us, innovation is about investing in new technologies to make our workers safer on the job. It's about discovering new mining techniques to help us decrease our impact on the environment and increase production, and it's about extending the lifespan of our mines so we can continue to provide real, long-term job opportunities to rural communities.

One of the key innovations we've implemented at Hecla is Ventilation On Demand, an optimization approach that targets the vital process of supplying fresh air to underground miners in their scattered workplaces while exhausting the used air that has acquired excess heat, noxious gases, and dust.



Clean air quality underground is of utmost importance to the safety of our workers. As the mine expands, even with a steady production rate, the Ventilation On Demand infrastructure continues to increase to ensure that a healthy volume of airflow is provided to those working underground.

Ventilation On Demand is based on the concept of delivering the 'just right' amount of air to where it is needed, when it is needed, and for the duration of time it is needed. A critical, complementary part of the optimization approach includes not delivering air to those areas where it is not needed at a given point in time.

Solutions range from simple to complex, and enabling technologies exist today to dial in the desired level of optimization. Our earliest adopting site was at our Greens Creek mine in Alaska where they use location tracking technology for personnel and equipment combined with programmed logic controllers interfaced with monitoring and control software.

Ventilation operating costs are primarily focused on the amount of energy used, so a reduction in consumption by the mine translates to using less power upstream and lower energy costs downstream. In addition, this lowers our carbon footprint. At Greens Creek, once all the Ventilation On Demand fans are converted we expect to save more than \$1M per year in energy costs and reduce our direct electricity usage by nearly 7 percent.



\$1M PER YEAR SAVINGS IN ENERGY COSTS EXPECTED

DIRECT ELECTRICITY USAGE EXPECTED TO BE REDUCED BY NEARLY 7%

Ventilation On Demand is a technology-enabled approach that provides tools to responsible mining companies like Hecla to better manage and shrink our carbon footprint, provide a safer environment for our workers and to reduce energy costs, all while meeting our business goals.