

## Introduction

Bharat Oman Refineries Limited (BORL) operates a crucial 935-kilometer petroleum pipeline transporting crude oil and refined products such as petrol, diesel, LPG, and naphtha from Vadinar, Gujarat, to the Bina refinery in Madhya Pradesh. Wavesight implemented a tailored wireless transmission network providing secure, continuous surveillance for over 150 strategically located cameras along the pipeline. This solution enables real-time monitoring and rapid response, safeguarding this vital energy infrastructure across two states.

## Challenge

Securing an extensive petroleum pipeline with varying terrain and limited communication infrastructure requires a reliable transmission solution to maintain real-time video feeds from surveillance cameras. The network must withstand environmental challenges and support secure data transfer to centralized control rooms, ensuring uninterrupted protection of critical crude oil and refined product transport routes.

## Solution

Wavesight deployed a robust wireless transmission system integrating advanced radios to connect the surveillance cameras with control centers seamlessly. The scalable network supports 24/7 video transmission over long distances, integrating Indigo Vision cameras installed and managed by Neural Integrated Systems. This wireless approach overcomes infrastructure limitations, providing a resilient and secure surveillance backbone for BORL's pipeline security needs.

## Results

The wireless surveillance network significantly enhanced BORL's ability to monitor and protect its petroleum pipeline infrastructure effectively. It enabled continuous oversight along the 935-kilometer pipeline stretching from Gujarat to Madhya Pradesh, ensuring swift incident detection and response. This scalable and secure solution mitigates traditional communication challenges, underpinning long-term pipeline security and operational continuity.

