PUTTING ENERGY INTO Environmentalism

More Efficient Operations = Reduced Environmental Impact

The oil & gas industry must increase efficiency to offset losses from reduced demand, while continuing to meet increasingly stringent policies for decarbonization.

Directly and indirectly, the oil & gas industry accounts for **42% OF GLOBAL EMISSIONS.**[1]

The sector must **REDUCE EMISSION BY 90% BY 2050** to play its part in mitigating climate change.[1]

Putting a Stop to Leaking Costs & Carbon

Site performance and carbon footprint are inextricably linked. Without **complete information** on the status of remote operations and equipment, operators can't continually optimize productivity—nor can they identify process inefficiencies causing negative environmental impact.

Uncapped Inefficiency

McKinsey has estimated the oil & gas industry's **PERFORMANCE GAP AT $200B** due to production inefficiencies.[2]

McKinsey found that nonroutine flaring—due to poor reliability—accounted for **UP TO 70% OF ALL FLARING EMISSIONS** for one large operator.[2]

The EPA estimates there are **2.1M UNPLUGGED ORPHAN WELLS** in the US alone, which emit 9.5M metric tons of carbon dioxide per year.[3]

Untapped Potential

Throughput from existing upstream assets can be **IMPROVED BY MORE THAN 20%** by scaling up technology, digital, and artificial intelligence (AI) investments.[4]

Oil & gas operators can abate the majority of their emissions—at an average cost of **LESS THAN $50 PER TON** of carbon-dioxide equivalent—by prioritizing cost-effective interventions that also improve productivity.[1]

Putting Technology to Use to Power Clean Initiatives

Many oil & gas leaders have already taken steps to substantially decrease their carbon footprint using advanced applications. You can think of the path to sustainability as a process:

STEP 1

SENSORIZE Equipment

To provide the ability to remotely monitor & respond to field conditions in real-time.

Automated condition monitoring can improve asset stability—with the **MOST STABLE ASSETS EMITTING 3X LESS** on average than those in the third quartile of production efficiency.[5]

STEP 2

INTEGRATE Diverse Data

To holistically analyze performance and find the true source of inefficiencies & emissions.

Advanced analytics have been found to help operators **INCREASE DRILLING SPEED BY 25%** or more and reduce emissions tied to drilling **BY NEARLY 10%.**[6]

STEP 3

AUGMENT Decision-Making

With autonomy and machine learning (ML) to improve precision and reliability & reduce errors.

On average, a **10% INCREASE IN PRODUCTION EFFICIENCY** using automation delivers a **4% REDUCTION IN EMISSION INTENSITY.**[5]

Putting the Right Network to Work

Many mature onshore sites are **poorly connected,** with **40% OF PRODUCTION COVERED BY OUTDATED TECHNOLOGY** that experiences **significant reliability and bandwidth issues.**[6]

The only way to truly capitalize on the value of efficiency- and sustainability-driving technologies is with a network foundation that offers:

High Bandwidth
To support real-time access to large & diverse volumes of field data

Industrial-Grade Reliability
To function without fail in rugged environments, keeping mission-critical insights flowing

Full Mobility
To enable autonomy & the nonstop performance of automated machinery

Multi-Application Capacity
To run everything from remote well monitoring to predictive analytics to automated emissions reporting on one network

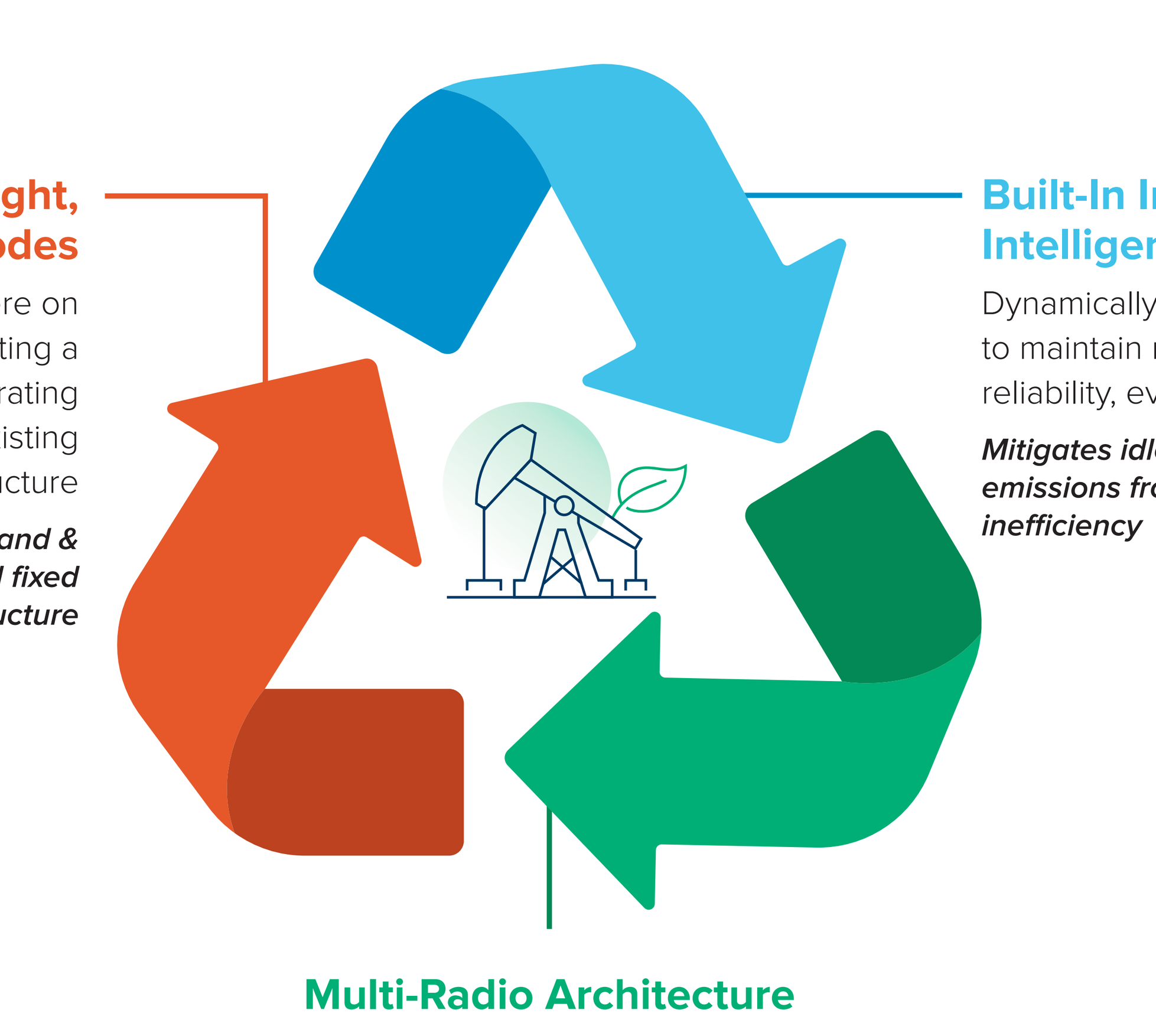
In fact, McKinsey estimates the oil & gas sector can **REDUCE COSTS BY 20-25% PER BARREL** using **enhanced connectivity** to deploy digital tools & analytics.[6]

RAJANT KINETIC MESH

Enhanced Connectivity to Advance Oil & Gas Efficiency & Environmental Initiatives

Future-thinking oil & gas organizations turn to Rajant's private wireless network to help them evolve on two critical fronts—**optimizing performance while enabling a smooth transition to cleaner exploration and production.**

Kinetic Mesh delivers enhanced connectivity through:



Lightweight, Ruggedized Nodes
Deployable virtually anywhere on fixed or moving assets, creating a network ad hoc or integrating with and enhancing existing network infrastructure
Reduces need for land & resources to build fixed infrastructure

Built-In InstaMesh® Intelligence
Dynamically self-optimizes to maintain mission-critical reliability, even on the move
Mitigates idle time to reduce emissions from equipment inefficiency

Multi-Radio Architecture
Provides ultra-reliability and high availability for any number of real-time applications
Ensures monitoring apps never miss a leak or out-of-range emissions

Rely on Rajant to help unlock the efficiency potential in your existing assets, and lock in your place as a leader in the shift to cleaner energy.

Start by visiting rajant.com/environmentalism.

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www.rajant.com

1. https://www.mckinsey.com/industries/oil-and-gas/our-insights/the-future-is-now-how-oil-and-gas-companies-can-decarbonize
2. https://www.worldfutureenergysummit.com/en-gb/future-insights-blog/8-ways-the-oil-and-gas-industry-is-making-better-use-of-sustainable-technologies.html
3. https://www.rff.org/publications/testimony-and-public-comments/virtual-forum-reclaiming-orphaned-oil-and-gas-wells/
4. https://www.mckinsey.com/industries/oil-and-gas/our-insights/oil-and-gas-after-covid-19-the-day-of-reckoning-or-a-new-age-of-opportunity
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