

# ESG+E

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# What is ESG?

- **ESG Investing** is the consideration of environmental, social and governance factors alongside financial factors in the investment decision-making process.
- An **ESG Management Framework** identifies and measures the impact of an organization's policies and procedures related to environmental sustainability and social standards.

# ESG + E Impacts to Energy Infrastructure Development

## Environmental Impacts

- Increasing focus on emissions and carbon footprint
- Greater restrictions limit traditional infrastructure development, increase cost and may delay or terminate proposed projects

## Social Impacts

- Environmental and Social Justice impacts are key criteria in project evaluation and regulatory review

## Governance – “Walk the Talk”

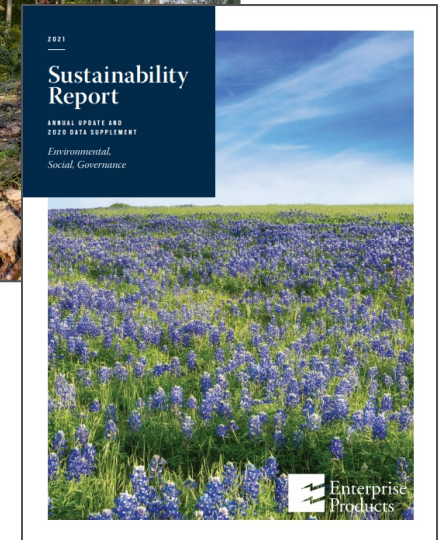
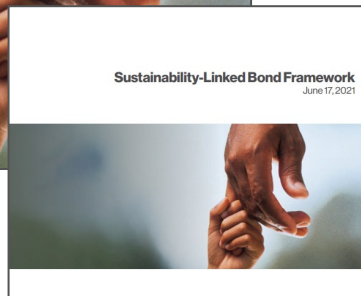
- Investors demand alignment with stated ESG principals
- Infrastructure and corporate financing are increasingly tied to sustainability and ESG metrics

## Economic Opportunity and Alignment

- Advanced technology creates new opportunities for successful and profitable projects aligned with ESG principals

# ESG Impact

The ESG framework now underpins corporate strategy, capital allocation and financing structures



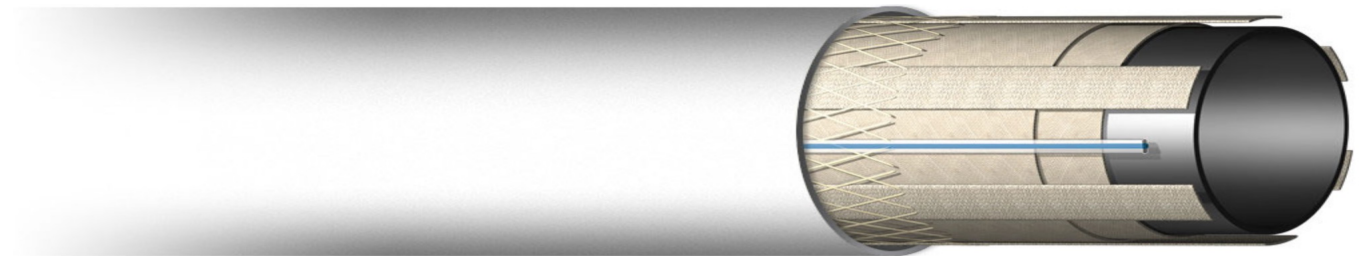
At MSCI, we define ESG Investing as the consideration of environmental, social and governance factors alongside financial factors in the investment decision-making process.

Remy Briand, Managing Director, MSCI ESG Research

# How Can Smartpipe<sup>®</sup> Help Meet Your Integrity and ESG Objectives

## Minimally-Invasive, High-Pressure Composite Pipeline

- High-Pressure, Large Diameter and Long Continuous Lengths
- Minimizes Environmental & Social Impacts
- Enables Integrity Investment in difficult-to-access locations
- Embedded Fiber Optics provide continuous predictive and preventive safety capabilities for Advanced Integrity Management
- Restores commercial viability of derated or abandoned assets
- U.S. DOE tested, making your Smartpipe'd steel pipelines suitable for Hydrogen and CO<sub>2</sub> transmission



# E Environmental

- **Smartpipe<sup>®</sup> Reduces Carbon Footprint by >70%**
- **Targeting Zero Methane Emissions by end of 2022**
- **Reduces Environmental Impact**
  - Trenchless installation process
  - Reduces surface disturbance by > 90%
- **US DOE Qualified Pipeline Solution to Transport Hydrogen**
  - Investment in Hydrogen projects is quickly scaling
  - Avoids Blended Hydrogen/Natural Gas embrittlement issues
  - Repurpose existing infrastructure for use with hydrogen
- **CO<sub>2</sub> Sequestration Transport**
  - High pressure capabilities
  - Materials compatibility

# S Social

- **Enables Social License for Operators**
  - Restores safety profile, utilization and economic viability to aging infrastructure
- **Less disruptive to communities**
  - Removes the need for open trenches that damage public infrastructure and increase project cost
- **Proactive and Predictive Safety**
  - Can identify dangerous activity in ROW to exact locations
  - Currently developing predictive pipeline failure capabilities through Advanced Machine Learning and AI technology
- **Added economic and social benefits**
  - Able to monitor street traffic, waterborne traffic, and seismic activity

# G Governance

- **Increases the number of accessible integrity projects**
  - Greater access
  - Reduced project time
  - Less collateral damage
- **Technology + Increased Data = Better Decisions**
  - High consequence pipelines are continuously monitored
  - ROW activity continually monitored to avoid dangerous line strike accidents
  - Increased utilization provides greater value to Stakeholders
- **Greater Transparency**
  - Continuous, real-time data from embedded Fiber Optics
  - Ability to share access to real-time data with Stakeholders



**+E**  
**Economic**

- **Enhances operator's ability to address aging pipeline assets**
- **Less Expensive than Traditional Dig and Replace in Environmental or Urban locations**
- **Retired assets transition to potential growth projects**
  - Transitions an Obligation to an Opportunity
  - Enables repurposing of legacy pipelines
    - Hydrogen
    - CO<sub>2</sub> Sequestration
- **Redefines Integrity Capital**
  - Recaptures lost MAOP
  - Increases Both Safety and Economic Return

# Smartpipe<sup>®</sup> Environmental, Social and Governance Framework

## Environmental

Independent analysis<sup>1</sup> estimated Smartpipe **reduces the carbon footprint** compared to a steel pipeline replacement by 78% - 81%.

Smartpipe's **trenchless installation** technology minimizes environmental impact through reduced surface disturbance, and significantly reduces social impacts such as disruption of public infrastructure and local businesses.

**Constant, real-time data capture** provides increased information flow and transparency to infrastructure operators and regulators, which ensures more effective environmental security, increased social safety and enhanced governance.

Smartpipe is qualified by the U.S. Department of Energy<sup>2</sup> for **transportation of hydrogen**, which provides producers, infrastructure providers and regulators an engineering and technology based tool to transition existing infrastructure to serve the next generation of clean energy.

## Social

## Governance

1. Quanta Services analysis of Smartpipe project, utilizing steel pipeline carbon footprint standards developed by Nacap.
2. Qualified for hydrogen service by US Department of Energy, Savannah River National Laboratory. ASME B31.12.

Contact  
Information

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