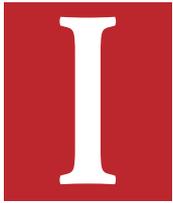


Undergrounding and ESG

Answering the Ultimate
Sustainability Question



By Mike Beehler



Investors are increasingly socially aware. They invest in value but also examine how a company sustains the environment, engages the community, and operates the organization. Investors evaluate the environmental, social, and governance scores of publicly traded companies, and many electric utilities have responded by producing annual ESG or sustainability reports.

The Edison Electric Institute has worked with member companies and investors since 2018 to develop a standard template for utilities to consider as they produce these important reports. A quick search for ESG templates by EEI reveals a dozen current ESG reports from some of the largest investor-owned utilities in America.

The ESG template provides a consistent reporting mechanism and metrics for investors, regulators, and other stakeholders to evaluate as they consider investment risks, future opportunities and growth strategies, and the assumptions they are based on.

Recently, many IOUs have embarked on pilots and programs to enhance the resiliency of their electric transmission and distribution grid. Beyond operational safety and traditional reliability, resiliency is the ability of a utility to provide critical electric service during high-impact, low-frequency events.

How can investments in resiliency improve a utility's ESG score, and potentially, how could undergrounding current overhead T&D lines improve ESG?

Consider the comment by Pacific Gas & Electric CFO Chris Foster after the utility announced a plan to spend fifteen to thirty billion dollars to underground just ten percent of its overhead T&D system. Foster states that undergrounding these lines takes the risk (of wildfire threat) out of their system and answers the ultimate sustainability question.

How could T&D undergrounding help meet the challenges of sustainability and answer the ultimate sustainability question? Consider the following possible environmental benefits of underground versus overhead T&D lines:

Better use of rate-based capital expense to lower annual operation and maintenance costs due to fewer truck rolls for outages, aerial and ground line inspections, and vegetation management, which saves on fuel, manpower, and equipment costs. These costs are submitted to FERC by large IOUs in Form 1-Electric Annual Utility Report, as a comprehensive financial and operating report used for rate regulation and financial audits:

Better underground reliability means fewer emergency truck rolls and increased worker and public safety;

Elimination of climbing hazards or downed electrified components especially during high impact storm events improves public safety;

Modern twenty-first century materials have a longer expected life than common overhead components leading to less material

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waste over the life of the asset;

No landfilling with storm-damaged structures and wires after high-impact, low-frequency events;

No trimming damage to trees and property or need for vegetation waste disposal;

No use of chemical herbicides and growth retardants on rights of way;

Better resiliency in times of critical electric need due to underground allows for focused triage on the remaining overhead and a reduced total time of line restoration;

Help to prevent wildfires and the massive amount of smoke, ash, and debris put into the air and flowing into watersheds, and can help protect human life, wildlife, and the long-term forest ecosystem;

No aircraft or bird impacts;

Improved aesthetics;

Potential efficiencies of underground versus overhead work processes should be explored.

While quantifying the value of improved ESG is difficult, industry should consider the environmental benefits of underground electric T&D systems over the life of the asset.

An evaluation of the total cost of ownership is another consideration that could be applied to overhead versus underground T&D assets and added to ESG scores. Investors, regulators, and other stakeholders sensitive to ESG would appreciate the consideration, as well as appreciate the leadership our industry demonstrates as we help to answer the ultimate sustainability questions. **PUF**

Mike Beehler has over forty years of electric T&D experience at Tucson Electric Power, Hawaiian Electric Co. and Burns & McDonnell. He was educated as a civil/structural engineer at the University of Arizona and is a registered professional engineer in eight states. He serves as national spokesperson for the Power Delivery Intelligence Initiative found at www.pdi2.org and is a fellow in ASCE and member of CIGRE and IEEE.