



Pros and Cons of Undergrounding Power Lines

When external factors cause a power outage, there are often calls to underground power lines. While undergrounding may seem like a logical solution, there is more to consider.

Indeed, undergrounding provides benefits. Removing power lines and poles from view, particularly in neighborhoods and scenic areas, improves aesthetics. Undergrounding also prevents power outages caused by line contact from trees, Mylar balloons, animals, snow, and ice load.

Notwithstanding these benefits, undergrounding is not always the answer because other factors must be considered.

Undergrounding is often not logistically feasible. In geographical areas with a high water table or rocky subsoil, undergrounding is not a viable option. It is also often not possible to get the necessary equipment to remote, steep wilderness areas. Even where access exists, undergrounding electric infrastructure is very expensive. Underground electric infrastructure costs two to three times more than standard overhead infrastructure, which would cause customers' average electric bills to increase drastically, even up to 10 times existing rates.

Maintenance and repairs are much more difficult and time-consuming when something fails underground because it can be difficult to determine the precise location of the interruption. Although undergrounding may eliminate the causes of some outages, underground cable and equipment can still fail, and other issues can lead to power outages. Underground outage repair time is often three to four times longer than overhead outage repair time and even longer if there is significant snow on the ground. Underground lines must be located and then excavated before troubleshooting can even begin. Undergrounding may reduce the number of outages, but most underground power outages last significantly longer than overhead power outages because of these repair challenges.

Each undergrounding opportunity is carefully evaluated. Liberty embarks on some undergrounding projects every year, sometimes working with local counties via the Rule 20A program to select projects that can maximize benefits while minimizing cost and negative impacts. These projects have county government approval and provide maximum public benefit. Practically speaking, undergrounding electrical infrastructure is not always the answer.