

Book Review

Environmental Impacts on Underground Power Distribution

Reviewed by ARBA, American Reference Book Annual

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405pp.
\$225.00
ISBN 978-1-4666-6509-5

Environmental Impacts on Underground Power Distribution begins to explore the impact that an environment can have on distribution of power. The book observes the factors that affect the maximum rating of subterranean power cables as well as various methods to maximize electrical current transmission. The book begins to explore ways that the environment can impact power distribution, and shares the latest research into the aforementioned. Topics covered include artificial backfill materials, cable losses, cross-bonding systems, dry zones, electric power transmission, heat flux density, and thermal resistivity.

This book is another entry in IGI's Engineering Science Reference series, which aims to provide a reference material for students, academics, and practitioners for the best practices in engineering science.

While the topic of underground power distribution may seem convoluted at first blush, the aims behind using underground cables are simple. A cable, if underground, is less susceptible to severe weather such as high wind or damaging ice and rain storms. Additionally, from an aesthetic perspective, many communities prefer their power distributions underground as such a method of distribution is more aesthetically pleasing. No matter the community's motivation for underground power distribution, the fact remains that distributing power underground is much more expensive on the front end (the installation period) than it is on the back end (maintenance). As such, a community would do well to ensure that power lines installed underground is done properly the first time.

This book begins to discuss getting the installation right the first time. Containing pages on the latest research, graphs, and formulas for installing underground power distribution correctly, this book can hardly be described as light reading. The book will likely be of most use to practitioners, academics, and advanced students. Additionally, the book can almost certainly serve as a reference point for practitioners. While the book does offer an introduction to underground power distribution in its early chapters, it also offers an easy reference for practitioners to refer to in particular situations that arise over the course of engineering practice.

Overall, the book will nestle well on the shelves of practitioners. While it may not be a daily reference, it will be a useful reference in specific situations. This book is recommended for academic libraries.