

# IEEE Guide for the Design, Construction, and Operation of Electric Power Substations for Community Acceptance and Environmental Compatibility

IEEE Power and Energy Society

Sponsored by the

Substations Committee

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USA

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(Revision of  
IEEE Std 1127-1998)



# **IEEE Guide for the Design, Construction, and Operation of Electric Power Substations for Community Acceptance and Environmental Compatibility**

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**Substations Committee**  
of the  
**IEEE Power and Energy Society**

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**Abstract:** Significant community acceptance and environmental compatibility items to be considered during the planning and design phases, the construction period, and the operation of electric supply substations are identified, and ways to address these concerns to obtain community acceptance and environmental compatibility are documented. On-site generation and telecommunication facilities are not considered.

**Keywords:** A-weighted sound level, commercial zone, community involvement, hazardous material, IEEE 1127™, industrial zone, noise, permitting process, residential zone, wetlands

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## Introduction

This introduction is not part of IEEE Std 1127-2013, IEEE Guide for the Design, Construction, and Operation of Electric Power Substations for Community Acceptance and Environmental Compatibility.

IEEE Std 1127-2013 was revised by members of Working Group E1 and is under the sponsorship of the Transmission and Distribution Substations Operations Subcommittee of the Substations Committee of the IEEE Power and Energy Society. This guide provides guidance and information to substation engineers on factors to consider for the public acceptance and environmental compatibility of electric substations. Major changes in this revision include reformatting of the document so that community involvement is discussed under each phase of project development instead of a stand-alone clause. The site-selection clause (Clause 4) has also been significantly expanded. Finally, a separate design clause (Clause 6) has been added.

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## 1. Overview

### 1.1 Scope

This guide identifies significant community acceptance and environmental compatibility items to be considered during the planning and design phases, the construction period, and the operation of electric supply substations, and documents ways to address these concerns to obtain community acceptance and environmental compatibility. On-site generation and telecommunication facilities are not considered.

### 1.2 Purpose

This guide provides guidance on community acceptance and environmental compatibility for new substations or substation expansions.