1.	Record Nr.	UNINA9910458603603321
	Titolo	Guide to improved earthquake performance of electric power systems [[electronic resource] /] / prepared by Electric Power and Communications Committee, Technical Council on Lifeline Earthquake Engineering ; edited by Anshel J. Schiff
	Pubbl/distr/stampa	Reston, Va., : American Society of Civil Engineers, c1999
	ISBN	0-7844-7040-5
	Descrizione fisica	1 online resource (362 p.)
	Collana	ASCE manuals and reports on engineering practice ; ; no. 96
	Altri autori (Persone)	SchiffAnshel J
	Disciplina	621.31/21
	Soggetti	Electric power systems - Earthquake effects Lifeline earthquake engineering Electronic books.
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Note generali	Description based upon print version of record.
	Nota di bibliografia	Includes bibliographical references and index.
	Nota di contenuto	""TABLE OF CONTENTS"; ""PREFACE"; "ACKNOWLEDGMENTS"; ""EXECUTIVE SUMMARY""; ""1 INTRODUCTION""; ""1.1 Background""; ""1.2 Purpose"; ""1.3 Basis for Recommendations"; ""1.4 Scope"; ""1.5 Organization of the Manual"; ""2 EARTHQUAKES: SOURCES AND EFFECTS"; ""2.1 Sources of Earthquakes"; ""2.2 Quantifying the Size and Intensity of Earthquakes"; ""2.2.1 Earthquake Size"; ""2.2.2 Earthquake Intensity"; ""2.3 Effects of Earthquakes"; ""2.3.1 Ground Vibration"; ""2.3.2 Soil Liquefaction"; "2.3.3 Soil-Structure Interaction"; ""2.3.4 Earthquake-Induced Landslides"" ""2.3.5 Subsidence"""2.3.6 Ground Faulting"; ""2.3.7 Earthquake- Induced Water Waves"; ""2.4 Regional Differences in Earthquakes and Associated Hazards"; ""2.5 Regional Seismicity of the United States""; ""2.5.1 Western Region"; ""2.5.2 Central Region"; ""2.5.3 Eastern Region"; ""2.6 Summary of Differences between Earthquakes in California and Other Regions"; ""2.7 Commonly Used Terms"; ""2.7.1 Fault and Fault Trace""; ""2.7.4 Intensity Scales"; ""2.7.5 Tsunamis""; ""Endnotes"" ""3 OVERVIEW OF EARTHQUAKE PERFORMANCE OF POWER SYSTEMS AND FACILITIES"""3.1 Overall Power System Seismic Performance";

""3.2 Power Transmission and Distribution Systems""; ""3.2.1 Transmission Lines""; ""3.2.2 Distribution Lines""; ""3.2.3 Substations""; ""3.3 Power Generation Facilities""; ""3.4 Control, Protection, and Communications Facilities""; ""4 APPROACH TO IMPROVED EARTHQUAKE PERFORMANCE""; ""4.1 Overview of Improved Earthquake Performance""; ""4.2 Earthquake Hazard and System Vulnerability Evaluation""; ""4.2.1 Initial Earthquake Hazard and System Vulnerability Evaluation""

""4.2.2 Detailed Earthquake Hazard and System Vulnerability Evaluation""""4.3 Earthquake Planning""; ""4.3.1 Disaster Response Plans""; ""4.3.2 Corporate Recovery Plans""; ""4.3.3 Evaluation of System Vulnerabilities""; ""4.3.4 Emergency Operations Center""; ""4.3.5 Alternate Energy Control Center""; ""4.4 Earthquake Mitigation""; ""4.4.1 Implementing Tasks with a High Benefit-Cost Ratio""; ""4.4.2 Seismically Upgrading Manuals of Practice""; ""4.4.3 Detailed Vulnerability Assessment of System Facilities""; ""4.4.4 Implementation of Mitigation Plan"

""4.4.5 Periodic Review and Revision of Mitigation Program"""4.5 Comments on Implementing an Earthquake Damage Mitigation Program""; ""4.5.1 Initiating an Earthquake Mitigation Program""; ""4.5.2 Commitment of Top Management Is Needed""; ""4.5.3 Cost-Effectiveness""; ""4.5.4 Maintaining Mitigation Program""; ""4.5.5 Seismic Design Engineering""; ""Endnotes""; ""5 SUBSTATIONS""; ""5.1 Overview of Substations""; ""5.2 Substation Configuration and Components""; ""5.3 Earthquake Effects on Substations""; ""5.3.1 Earthquake-Induced Vibration""; ""5.3.2 Soil Deformation and Ground Faulting""

"5.3.3 Soil-Structure Interaction""