

EXHIBIT B

EXHIBIT B – ENVIRONMENTAL STUDIES

As stated in R14-3-219, Exhibits to Application, Exhibit B of the Rules of Practice and Procedure Before Power Plant and Transmission Line Siting Committee:

“Attach any environmental studies which applicant has made or obtained in connection with the proposed site(s) or route(s). If an environmental report has been prepared for any federal agency or if a federal agency has prepared an environmental statement pursuant to Section 102 of the National Environmental Policy Act, a copy shall be included as part of this exhibit.”

The following documents may be considered environmental studies for purposes of R14-3-219, Exhibits to Application, Exhibit B. Complete hard copies of Exhibits B-1 through B-4 have been included with the original Application filed with the Siting Committee and electronic copies are provided on the DVD attached to the bound copy of the Application.

Exhibit B-1	Southline Transmission Line Project Final Environmental Impact Statement (Volumes 1-4 & Appendices) (“Final EIS”) Final EIS Table of Contents provided below for convenience
Exhibit B-2	Proposed Southline Transmission Line Project Environmental Impact Statement Scoping Summary (“Final Scoping Report”)
Exhibit B-3	U.S. Department of the Interior, Bureau of Land Management Record of Decision: Southline Transmission Line Project and Attachments, including the Southline Transmission Line Project NEPA Plan of Development (Volumes 1-2 & Appendices) (“BLM ROD”)
Exhibit B-4	Western Area Power Administration Record of Decision: Southline Transmission Line Project (“WAPA ROD”)
Exhibit B-5	Summary of Final EIS

For the Siting Committee’s convenience, Southline has included the Final EIS Table of Contents below and provided a summary of the Final EIS at Exhibit B-5.

The attached environmental studies attached and the Exhibit B-5 summary of the Final EIS relate to the entire Southline Transmission Project and is not limited to the route for which Southline is seeking approval in this Application (the “CEC Proposed Route”). Further detailed inventory and impact assessments as it relates to the CEC Proposed Route were completed and are located in subsequent exhibits. Information on these studies include biological resources (Exhibits C and D), visual and cultural resources (Exhibit E), recreation (Exhibit F), land use (Exhibit H), and noise and interference (Exhibit I).

EXHIBIT B-1 – Final EIS Table of Contents¹

VOLUME 1 CONTENTS

EXECUTIVE SUMMARY	I
ACRONYMS AND ABBREVIATIONS.....	LIII
1. INTRODUCTION AND PURPOSE AND NEED	1
1.1 PURPOSE AND NEED.....	1
1.1.1 Introduction	1
1.1.2 Draft and Final EIS.....	4
1.2 AGENCY PURPOSE AND NEED	5
1.2.1 Bureau of Land Management – Purpose and Need.....	5
1.2.2 Western Area Power Administration – Purpose and Need.....	7
1.2.3 Role of Bureau of Land Management and Western Area Power Administration	9
1.3 OBJECTIVES OF SOUTHLINE TRANSMISSION, LLC	9
1.3.1 Improve Reliability of the Electric Transmission Grid in Southern New Mexico and Arizona	9
1.3.2 Mitigate Existing Congestion	10
1.3.3 Increase the Ability to Meet Electrical Demand Growth in the Region	12
1.3.4 Facilitate Renewable Generation Development and Achievement of Public Policy Goals	12
1.4 ELECTRIC TRANSMISSION REGULATION AND PLANNING.....	13
1.4.1 Federal Energy Regulatory Commission.....	14
1.4.2 North American Electric Reliability Corporation	14
1.4.3 Western Electricity Coordinating Council	14
1.4.4 WestConnect.....	15
1.4.5 Southwest Area Transmission.....	15
1.5 RELATIONSHIP TO POLICIES, PLANS, AND PROGRAMS	15
1.5.1 Bureau of Land Management Resource Management Plans	15
1.5.2 Coronado National Forest Plan.....	17
1.5.3 Local Jurisdiction Plans.....	17

¹ A hard copy of the entire Final EIS can be found at pages B-12.1 – B-12.2560 in the original Application filed with the Siting Committee and an electronic copy is provided at Exhibit B-1 on the on the DVD attached to the bound copy of the Application.

1.5.4	Permits Required or Potentially Required	18
1.5.5	Additional Federal Actions	18
1.6	FEDERAL AND STATE LAWS AND REGULATIONS	24
1.6.1	Key Agency Planning Orders and Statutes	24
1.7	MAJOR FEDERAL CONSULTATIONS.....	26
1.8	STATE CONSULTATION.....	26
1.8.1	New Mexico Public Regulation Commission	26
1.8.2	Arizona Corporation Commission	27
1.9	RIGHT-OF-WAY EASEMENT ACQUISITION PROCESS FROM NON-FEDERAL OWNERS.....	27
1.10	SCOPE OF THE ANALYSIS	28
1.12.1	Geographic Scope	28
1.12.2	Temporal Scope.....	28
1.12.3	Connected Action Consideration	28
1.11	COOPERATING AGENCIES	29
1.12	SCOPING AND PUBLIC INVOLVEMENT	29
1.12.1	Draft EIS Public Involvement.....	31
1.12.2	Route Variation Outreach.....	32
1.13	ISSUES TO BE ANALYZED	32
1.13.1	Resource Issues	32
2.	PROPOSED PROJECT AND ALTERNATIVES	37
2.1	INTRODUCTION.....	37
2.2	ROUTE SELECTION PROCESS.....	37
2.2.1	Southline Transmission’s Routing Study	37
2.3	LAND USE PLAN CONFORMANCE	39
2.4	PROPOSED PROJECT (PROPONENT PREFERRED)	40
2.4.1	Site Preparation and Preconstruction Activities.....	40
2.4.2	Project Components.....	52
2.4.3	Project Construction Activities.....	82
2.4.4	Right-of-Way Renewal	101
2.4.5	Decommissioning.....	101
2.4.6	Typical Design Features and Agency Mitigation Measures	102
2.4.7	Project Design Refinements (Variance Process)	115
2.5	NO ACTION ALTERNATIVE.....	116
2.6	ACTION ALTERNATIVES.....	117
2.6.1	Process	117
2.7	TRANSMISSION LINE ROUTE ALTERNATIVES.....	118

2.7.1	Route Group 1: Afton Substation to Hidalgo Substation.....	120
2.7.2	Route Group 2: Hidalgo Substation to Apache Substation.....	123
2.7.3	Route Group 3: Apache Substation to Pantano Substation.....	128
2.7.4	Route Group 4: Pantano Substation to Saguaro Substation.....	129
2.8	SUBSTATION ALTERNATIVES.....	133
2.9	ALTERNATIVES CONSIDERED BUT ELIMINATED FROM FURTHER ANALYSIS.....	133
2.9.1	Transmission Line Route Alternatives.....	134
2.10	COMPARISON OF ALTERNATIVES.....	143
2.10.1	Route Group 1: Afton Substation to Hidalgo Substation	144
2.10.2	Route Group 2: Hidalgo Substation to Apache Substation	144
2.10.3	Route Group 3: Apache Substation to Pantano Substation	145
2.10.4	Route Group 4: Pantano Substation to Saguaro Substation	145
2.10.5	Selection of the Agency Preferred Alternative	146
2.10.6	Environmentally Preferred Alternative.....	148
2.10.7	Action Alternatives Requiring BLM Plan Amendments	149
2.10.8	Proposed Plan Amendments	149

VOLUME 2 CONTENTS

3.	AFFECTED ENVIRONMENT	215
3.1	INTRODUCTION.....	215
3.1.1	General Setting of the Project	215
3.1.2	Resource Values and Uses Brought Forward	215
3.1.3	Analysis Area.....	216
3.2	AIR QUALITY.....	217
3.2.1	Analysis Area.....	218
3.2.2	Laws, Ordinances, Regulations, and Standards.....	218
3.2.3	Issues to Be Analyzed.....	223
3.2.4	Analysis Area Conditions	225
3.3	NOISE AND VIBRATION	227
3.3.1	Noise	228
3.3.2	Vibration.....	228
3.3.3	Analysis Area.....	228
3.3.4	Laws, Ordinances, Regulations, and Standards.....	228
3.3.5	Issues to Be Analyzed.....	231
3.3.6	Analysis Area Conditions	232
3.3.7	Noise-Sensitive Receptors.....	235

3.4	GEOLOGY AND MINERAL RESOURCES	235
3.4.1	Analysis Area.....	235
3.4.2	Laws, Ordinances, Regulations, and Standards	235
3.4.3	Issues to Be Analyzed	236
3.4.4	Analysis Area Conditions	237
3.5	SOIL RESOURCES	251
3.5.1	Analysis Area.....	251
3.5.2	Issues to Be Analyzed.....	252
3.5.3	Analysis Area Conditions	252
3.6	PALEONTOLOGICAL RESOURCES.....	255
3.6.1	Analysis Area.....	256
3.6.2	Laws, Ordinances, Regulations, and Standards	256
3.6.3	Issues to Be Analyzed	257
3.6.4	Analysis Area Conditions	257
3.6.5	Regional Overview	258
3.6.6	Paleontological Potential and Fossil Localities	259
3.6.7	Potential Fossil Yield Classification.....	261
3.6.8	Summary of Inventory Results	261
3.6.9	New Build Section.....	262
3.6.10	Upgrade Section	262
3.7	WATER RESOURCES.....	263
3.7.1	Groundwater, Surface Water, and Wetlands	263
3.7.2	Analysis Area.....	263
3.7.3	Laws, Ordinances, Regulations, and Standards	263
3.7.4	Issues to Be Analyzed.....	268
3.7.5	Analysis Area Conditions	269
3.8	BIOLOGICAL RESOURCES	280
3.8.1	Vegetation	280
3.8.2	Wildlife	298
3.9	CULTURAL RESOURCES	327
3.9.1	Analysis Area.....	328
3.9.2	Laws, Ordinances, Regulations, and Standards	328
3.9.3	Definition of Terms Used.....	331
3.9.4	Issues to Be Analyzed.....	332
3.9.5	Class I Records Search Methods	332
3.9.6	Analysis Area Conditions	335
3.9.7	Cultural Resource Types.....	348

3.9.8	Known Cultural Resources.....	351
3.9.9	New Build Section.....	352
3.9.10	Upgrade Section	357
3.9.11	Archaeological Sensitivity Analysis	361
3.9.12	Visual Effects	362
3.9.13	Tribal Concerns	368
3.10	VISUAL RESOURCES	370
3.10.1	Analysis Area.....	370
3.10.2	Laws, Ordinances, Regulations, and Standards	371
3.10.3	State and Regional Plans	372
3.10.4	County and Regional Plans	372
3.10.5	Local Plans	373
3.10.6	Issues to Be Analyzed.....	373
3.10.7	Inventory Methods	374
3.10.8	Establishing the Area of Exposure.....	374
3.10.9	Identifying the Sensitive Receptors within the Area of Exposure	374
3.10.10	Identifying Concern Levels	374
3.10.11	Methods for KOP Selection.....	375
3.10.12	Assessment of Scenic Values	375
3.10.13	Assessment and Description of the Degree of Effect on Public Scenic Value.....	375
3.10.14	Bureau of Land Management Direction	376
3.10.15	Analysis Area Conditions	376
3.11	LAND USE, INCLUDING FARM AND RANGE RESOURCES AND MILITARY OPERATIONS.....	409
3.11.1	Land Use.....	409
3.11.2	Farmlands and Rangelands	432
3.11.3	Military Operations.....	439
3.12	SPECIAL DESIGNATIONS	452
3.12.1	Analysis Area.....	453
3.12.2	Issues to Be Analyzed.....	453
3.12.3	Analysis Area Conditions	453
3.12.4	Designated Wilderness, Including Wilderness Study Areas.....	454
3.12.5	National Trails/Trails Recommended as Suitable for National Trail Designation	455
3.12.6	National Monuments.....	457
3.12.7	Areas of Critical Environmental Concern and Research	

	Natural Areas.....	458
3.12.8	Bureau of Land Management Resource Management Plans and other Administrative Designations.....	459
3.12.9	County and City	461
3.12.10	New Build Section.....	464
3.12.11	Upgrade Section	464
3.13	WILDERNESS CHARACTERISTICS	466
3.13.1	Analysis Area.....	468
3.13.2	Issues to Be Analyzed.....	468
3.13.3	Analysis Area Conditions	468
3.14	RECREATION.....	471
3.14.1	Analysis Area.....	471
3.14.2	Laws, Ordinances, Regulations, and Standards	472
3.14.3	Analysis Area Conditions	473
3.15	SOCIOECONOMICS AND ENVIRONMENTAL JUSTICE.....	487
3.15.1	Analysis Area.....	487
3.15.2	Laws, Ordinances, Regulations, and Standards	487
3.15.3	Issues to Be Analyzed.....	488
3.15.4	Analysis Area Conditions	488
3.15.5	Housing	491
3.15.6	Property Values.....	493
3.15.7	Employment and Income.....	494
3.15.8	Fiscal Conditions and Public Services.....	502
3.15.9	Tourism and Recreation.....	505
3.15.10	Environmental Justice	506
3.16	PUBLIC HEALTH AND SAFETY.....	511
3.16.1	Analysis Area.....	511
3.16.2	Laws, Ordinances, Regulations, and Standards	511
3.16.3	Issues to Be Analyzed.....	513
3.16.4	Analysis Area Conditions	513
3.17	HAZARDOUS MATERIALS AND HAZARDOUS AND SOLID WASTE...	516
3.17.1	Analysis Area.....	516
3.17.2	Laws, Ordinances, Regulations, and Standards	517
3.17.3	Issues to Be Analyzed.....	520
3.17.4	Analysis Area Conditions	520
3.18	TRANSPORTATION	524
3.18.1	Analysis Area.....	525

3.18.2	Laws, Ordinances, Regulations, and Standards	525
3.18.3	Issues to Be Analyzed.....	530
3.18.4	Analysis Area Conditions	530
3.19	INTENTIONAL ACTS OF DESTRUCTION	536
3.19.1	Analysis Area.....	536
3.19.2	Laws, Ordinances, Regulations, and Standards	536
3.19.3	Issues to Be Analyzed.....	536
3.19.4	Analysis Area Conditions	536

VOLUME 3 CONTENTS

4.	ENVIRONMENTAL CONSEQUENCES.....	629
4.1	INTRODUCTION.....	629
4.1.1	Impact Assessment	629
4.1.2	Cumulative Effects.....	630
4.1.3	Significance and Impact Indicators	630
4.1.4	Analysis Approach Summary	631
4.2	AIR QUALITY.....	633
4.2.1	Introduction	633
4.2.2	Methodology and Assumptions	634
4.2.3	Impacts Analysis Results	637
4.3	NOISE AND VIBRATION	662
4.3.1	Introduction	662
4.3.2	Methodology and Assumptions	662
4.3.3	Impacts Analysis Results	665
4.4	GEOLOGY AND MINERAL RESOURCES.....	684
4.4.1	Introduction	684
4.4.2	Methodology and Assumptions	684
4.4.3	Impacts Analysis Results	686
4.5	SOIL RESOURCES	697
4.5.1	Introduction	697
4.5.2	Methodology and Assumptions	698
4.5.3	Impacts Analysis Results	701
4.6	PALEONTOLOGICAL RESOURCES.....	711
4.6.1	Introduction	711
4.6.2	Methodology and Assumptions	711
4.6.3	Impacts Analysis Results	713
4.7	WATER RESOURCES.....	727

4.7.1	Groundwater, Surface Water, and Wetlands – Introduction.....	727
4.7.2	Methodology and Assumptions	728
4.7.3	Impacts Analysis Results	731
4.8	BIOLOGICAL RESOURCES	748
4.8.1	Vegetation	748
4.8.2	Wildlife	806
4.9	CULTURAL RESOURCES	908
4.9.1	Introduction	908
4.9.2	Methodology and Assumptions	908
4.9.3	Impacts Analysis Results	916
4.10	VISUAL RESOURCES	968
4.10.1	Introduction	968
4.10.2	Methodology and Assumptions	968
4.10.3	Impacts Analysis Results	972
4.11	LAND USE, INCLUDING FARM AND RANGE RESOURCES AND MILITARY OPERATIONS.....	1008
4.11.1	Land Use Introduction	1008
4.11.2	Farmlands and Rangelands Introduction.....	1032
4.11.3	Military Operations Introduction	1046
4.12	SPECIAL DESIGNATIONS	1058
4.12.1	Introduction	1058
4.12.2	Methodology and Assumptions	1058
4.12.3	Impacts Analysis Results	1059
4.13	WILDERNESS CHARACTERISTICS	1071
4.13.1	Introduction	1071
4.13.2	Methodology and Assumptions	1071
4.13.3	Impacts Analysis Results	1073
4.14	RECREATION.....	1078
4.14.1	Introduction	1078
4.14.2	Methodology and Assumptions	1078
4.14.3	Impacts Analysis Results	1080
4.15	SOCIOECONOMICS AND ENVIRONMENTAL JUSTICE.....	1103
4.15.1	Introduction.....	1103
4.15.2	Methodology and Assumptions.....	1103
4.15.3	Impacts Analysis Results.....	1107
4.16	PUBLIC HEALTH AND SAFETY.....	1136
4.16.1	Introduction	1136

4.16.2	Methodology and Assumptions	1136
4.16.3	Impacts Analysis Results	1138
4.17	HAZARDOUS MATERIALS AND HAZARDOUS AND SOLID WASTE..	1145
4.17.1	Introduction	1145
4.17.2	Methodology and Assumptions	1145
4.17.3	Impacts Analysis Results	1148
4.18	TRANSPORTATION	1152
4.18.1	Introduction	1152
4.18.2	Methodology and Assumptions	1152
4.18.3	Impacts Analysis Results	1155
4.19	INTENTIONAL ACTS OF DESTRUCTION	1164
4.19.1	Introduction	1164
4.19.2	Methodology and Assumptions	1164
4.19.3	Impacts Analysis Results	1165
4.20	IMPACTS OF DRAFT RESOURCE MANAGEMENT PLAN AMENDMENTS.....	1167
4.20.1	Introduction	1167
4.20.2	Land Use.....	1169
4.20.3	Special Designations	1169
4.20.4	Visual Resources	1170
4.21	CUMULATIVE IMPACTS	1172
4.21.1	Introduction	1172
4.21.2	Analysis Parameters	1172
4.21.3	Methodology.....	1183
4.21.4	Cumulative Effects by Resource	1184
4.21.5	Summary	1234

VOLUME 4 CONTENTS

5.	CONSULTATION AND COORDINATION	1251
5.1	INTRODUCTION.....	1251
5.2	PUBLIC INVOLVEMENT	1251
5.2.1	Southline’s Pre-NEPA Public Coordination.....	1251
5.2.2	NEPA Public Scoping Period	1252
5.2.3	Draft EIS Comment Period	1255
5.2.4	Route Variation Outreach	1258
5.2.5	Project Status.....	1258
5.2.6	Records of Decision.....	1259

5.3	AGENCY CONSULTATION AND COORDINATION	1259
5.4	TRIBAL CONSULTATION AND COORDINATION	1262
5.5	FORMAL CONSULTATION.....	1268
	5.5.1 Section 106 of the National Historic Preservation Act.....	1268
	5.5.2 Section 7 of the Endangered Species Act.....	1270
5.6	LIST OF PREPARERS AND REVIEWERS.....	1271
5.7	THIRD-PARTY CONTRACTOR – SWCA ENVIRONMENTAL CONSULTANTS.....	1273
	5.7.1 Contract Disclosure Statement.....	1273
	5.7.2 SWCA Team.....	1274
5.8	FIRST-PARTY CONTRACTOR – CH2M HILL	1275
	5.8.1 Independent Review Process	1276
5.9	RECIPIENTS OF THE ENVIRONMENTAL IMPACT STATEMENT	1276

APPENDICES

A	Construction Workforce, New Build and Upgrade Sections
B	Supplemental Air Quality Information
C	Supplemental Noise and Vibration Information
D	Special Status Plant Species and Noxious Weed Species in the Analysis Area
E	Federal Endangered Species Act Listed Species in the Analysis Area
F	National Scenic and Historic Trails Assessment
G	Cultural Resources within the Representative Right-of-Way
H	Previous Cultural Surveys in the Analysis Area
I	Final Key Observation Points and Visual Contrast Rating Worksheets
J	BLM Land Use Authorizations
K	Visual Simulations
L	Programmatic Agreement
M	Biological and Conference Opinion and Conference Report and Amendment for the Southline Transmission Line Project
N	NEPA Plan of Development