1 INTRODUCTION

Executive Order (E.O.) 10485 (September 9, 1953), as amended by E.O. 12038 (February 7, 1978), requires that a Presidential permit be issued by the U.S. Department of Energy (DOE) before electric transmission facilities may be constructed, operated, maintained, or connected at the U.S. international border. On February 27, 2001, Baja California Power, Inc. (hereafter referred to as Intergen), filed an application with the Office of Fossil Energy of DOE for a Presidential permit. Intergen proposed to construct a double-circuit, 230,000-volt (230-kV) transmission line across the U.S.-Mexico border. In a separate but similar application, Sempra Energy Resources (hereafter referred to as Sempra) requested a Presidential permit on March 7, 2001, also proposing to construct a double-circuit, 230-kV transmission line across the U.S.-Mexico border. Because of the similarities of these proposals, DOE decided to consider them together in a single environmental review.

In each of these projects, the applicants would use the proposed international transmission lines to connect separate natural-gas-fired power plants in Mexico to the existing San Diego Gas & Electric (SDG&E) Imperial Valley (IV) Substation located about 6 mi (10 km) north of the border in Imperial County, California. Within the United States, both transmission lines are proposed to be constructed on lands managed by the U.S. Department of the Interior (DOI), Bureau of Land Management (BLM), parallel and adjacent to the existing SDG&E 230-kV transmission line (IV-La Rosita line) that connects the IV Substation with Mexico's La Rosita Substation. Both Intergen and Sempra applied to BLM for right-of-way (ROW) grants in order to be able to construct their respective projects across Federal land. Construction of the two natural gas-fired power plants in Mexico started in 2001 and has been completed.

Both DOE and BLM are required by law to review the potential environmental impacts of these projects under the National Environmental Policy Act (NEPA), 42 USC §§ 4321–4347.

1.1 BACKGROUND

1.1.1 Previous NEPA Review and Litigation

DOE and BLM originally determined that the appropriate level of NEPA review for the Intergen and Sempra Presidential permit applications was an environmental assessment (EA). DOE and BLM prepared a single EA that assessed the potential impacts that would accrue in the United States from the two transmission lines and from operation of the two related power plants in Mexico. DOE and BLM completed and issued the EA in December 2001 (DOE 2001). DOE relied on the EA to issue a Finding of No Significant Impact (FONSI) and Presidential permits for both projects on December 5, 2001. The Presidential permits authorized each company to construct, operate, maintain, and connect electric transmission facilities crossing the international border between the United States and Mexico. BLM issued two FONSIs on December 19, 2001, and two Decision Records to grant the ROWs on December 20, 2001, which allowed Intergen and Sempra to construct and maintain transmission facilities on Federal land. Following the

authorizations by DOE and BLM, Intergen and Sempra constructed the transmission lines[1] and began commercial operation to export electricity from Mexico in July 2003.

On March 19, 2002, the Border Power Plant Working Group (hereafter referred to as Border Power) sued DOE and BLM in the United States District Court for the Southern District of California (Case No. 02-CV-513-IEG (POR)), alleging violations of NEPA and the Administrative Procedure Act. Border Power sought to have the EA, DOE's and BLM's FONSIs, the Presidential permits, and the ROW grants determined to be illegal and requested an injunction forbidding the use of the transmission lines. The District Court issued two orders in May and July of 2003 (Appendix A) after briefings and oral arguments by the various parties. On May 2, 2003, the court held that the EA and the FONSIs did not comply with NEPA. On July 8, 2003, the court sent the matter back to DOE and BLM for additional environmental review. The court declined to enjoin operation of the transmission lines immediately; instead, it deferred the setting aside of the Presidential permits and the FONSIs until July 1, 2004, or until such time as superseding NEPA documents and permits were issued, whichever was earlier. Thus, the transmission lines could operate while DOE and BLM conducted this additional NEPA review. In light of the concerns raised by the court and to increase opportunities for public and stakeholder participation in the environmental review process, DOE and BLM prepared this environmental impact statement (EIS). The court has twice extended a date for setting aside the permits; that date is now March 14, 2005.

In its July 8, 2003, order, the court expressly prohibited DOE and BLM from considering completion of construction and interim operation of the transmission lines or the court's analyses of environmental impacts of the proposed actions in conducting additional NEPA analyses. DOE and BLM interpreted this language as requiring that they conduct their NEPA review from a fresh slate, as if the transmission lines had not been built. Accordingly, DOE and BLM have based their EIS analysis on the same purpose and need as was evaluated in the EA: whether to grant or deny Presidential permits and ROWs to Intergen and Sempra. The discussion of the transmission lines (proposed) and the environmental analysis will be presented as if the lines did not yet exist. At the same time, DOE considered the Mexico power plants as already constructed and operating.

While the DEIS analyzed the alternative technologies alternative in terms of hypothetical, "to-be-built" plants, DOE and BLM now believe that the court ruling to treat the transmission lines as having never been built does not extend to the connected power plants. Such an assumption would limit DOE's and BLM's ability to perform an analysis of sufficient detail to fully support an effective evaluation of Alternative 3, which would be implemented in the context of a retrofit of alternative technologies to the existing plants.

This EIS was prepared in accordance with Section 102(2)c of NEPA, Council of Environmental Quality (CEQ) regulations (*Code of Federal Regulations*, Title 40, Parts 1500–1508 [40 CFR Parts 1500–1508]), and DOE NEPA implementing procedures

[1] The Sempra Presidential permit and ROW grant were subsequently reissued and transferred to Termoeléctrica-U.S., LLC, after appropriate applications to DOE and BLM, respectively.

(10 CFR Part 1021). DOE is the lead Federal agency as defined by 40 CFR 1501.5. BLM is a cooperating agency.

1.1.2 Overview of the Transmission Line Projects

Table 1-1 is a time line for the projects that describes the milestones and sequence of events for construction and operation of the transmission lines and power plants. It also includes dates of DOE and BLM actions that pertain to the Presidential permit and grant of ROW approvals, and subsequent actions leading to the publication of this EIS.

1.1.2.1 Intergen Transmission Line Project

Intergen proposed to construct and operate a double-circuit, 230-kV transmission line that would extend from the La Rosita Power Complex (LRPC), located about 10 mi (16 km) west of Mexicali, Mexico (see Figure 1.1-1), northward for approximately 3 mi (4.8 km) to the U.S-Mexico border at a point west of Calexico, California. From the border, the line would extend about 6 mi (10 km) north across Federal land managed by BLM and terminate at the IV Substation. The LRPC consists of two natural-gas-fired combined-cycle generating units. The first unit (LR-1) is owned by Energiá Azteca X, S. de R.L. de C.V. (EAX) and consists of three 160-MW gas turbines and one 270-MW steam turbine, for a total generating capacity of 750 MW. The second combined-cycle unit (LR-2) is owned by Energiá de Baja California (EBC) and consists of one 160-MW gas turbine and one 150-MW steam turbine, for a total generating capacity of 310 MW. The capacity of the entire LRPC is a nominal 1,060 MW (see Figure 1.1-2).

The electrical output of LR-2 is designated exclusively to the U.S. market and can be exported to the United States only over the proposed new international transmission line. The electrical output of one gas turbine (160 MW) at LR-1 and one-third (90 MW) of the electrical output of the LR-1 steam turbine (270 MW) are also designated for export to the U.S. market. However, the 160-MW electrical output of the LR-1 export gas turbine could be transmitted to the United States over either the proposed new international transmission line or over the existing IV-La Rosita line owned by SDG&E. The 90-MW electrical output of the LR-1 steam turbine designated for export to the United States may be transmitted to the United States only over the existing IV-La Rosita line. In addition, at times, there may be as much as 40 to 50 MW of additional output from the EAX plant that would be available for export over the existing IV-La Rosita line. Delivery of the electrical output of the export turbines would be scheduled by the California Independent System

California Independent System Operator

The Cal-ISO is the independent system operator of California's wholesale power grid, maintaining reliability and directing the flow of electric power along the long-distance, high-voltage power lines that connect California with neighboring states, as well as Mexico and British Columbia. The Cal-ISO evaluates energy schedules in the so-called "day-ahead" and "hour-ahead" markets and allocates the available transmission capacity to support the implementation of these schedules.

TABLE 1.1-1 Time Line for Imperial-Mexicali 230-kV Transmission Lines

	Sempra (TDM)		Intergen (LRPC)	
Date	Permits and Contracts	Construction and Operations	Permits and Contracts	Construction and Operations
2000				
Jan.	Land Use and Zoning Permit			
June			Project bid for EAX awarded by CFE	
Aug.			MIA for EAX submitted for approval to SEMARNAT	
Nov.			• EPC contract for EAX signed • MIA for EAX receives approval from SEMARNAT	
2001				
Jan.	TDM receives approval of MIA from SEMARNAT			
Feb.	Sempra applies to BLM for ROWs		• Intergen applies to DOE for Presidential permit • Intergen applies to BLM for ROWs	
Mar.	Sempra applies to DOE for Presidential permit			• Construction of EAX and Sewage Treatment Plant at LRPC begins
Apr.	LNTP for power plant engineering		• MIA for EBC submitted for approval to SEMARNAT • EPC contract signed for EBC	
June	• CRE Import Permit • Power plant EPC contract executed and Full Notice to Proceed		EBC receives approval of MIA from SEMARNAT	
July				EBC construction begins
Aug.	• CRE Export Permit			
Sept.	Transmission line EPC contract executed	Groundbreaking for power plant		
Nov.		Groundbreaking for transmission lines on Mexico side		
Dec.	• DOE issues EA, FONSI, and Presidential permit to Sempra allowing interconnection of transmission lines at the U.S.-Mexico border • BLM issues FONSIs and Decision Records to grant ROWs		• DOE issues EA, FONSI, and Presidential permit to Intergen allowing interconnection of transmission lines at the U.S.-Mexico border • BLM issues FONSIs and Decision Records to grant ROWs	
2002				
Jan.	BLM transmission line ROW Notice to Proceed	• Groundbreaking for transmission lines on U.S. side		

TABLE 1.1-1 (Cont.)

	Sempra (TDM)		Intergen (LRPC)	
Date	Permits and Contracts	Construction and Operations	Permits and Contracts	Construction and Operations
2002 (Cont.)				
Feb.	U.S. International Boundary & Water Commission authorization			
Mar.	Complaint on Presidential permit filed with court		Complaint on Presidential permit filed with court	
Apr.	CILA Permit			
Sept.				Intergen places transmission line in service
Nov.		Sempra places transmission line in service		
2003				
Feb.		• Transmission line energized • Power plant construction completed		
May	• Court issues an order that the EA and FONSI do not comply with NEPA • District court order grants and denies, in part, plaintiff's motion for summary judgment		• Court issues an order that the EA and FONSI do not comply with NEPA • District court order grants and denies, in part, plaintiff's motion for summary judgment	
July	• Court orders additional environmental analyses • District court order denies plaintiff's specific requests for injunctive relief (allows plants to run pending further NEPA review)	Sempra begins commercial operation of TDM	• Court orders additional environmental analyses • District court order denies plaintiff's specific requests for injunctive relief (allows plants to run pending further NEPA review)	• EAX begins commercial operation • Intergen begins commercial operation of LRPC
Oct.	DOE publishes NOI to prepare an EIS			EBC begins commercial operation
Nov.	Public scoping meetings held in El Centro and Calexico, California		Public scoping meetings held in El Centro and Calexico, California	
2004				
Mar.				Intergen completes installation of SCR on LR-1 export gas turbine
May	DOE issues Draft EIS		DOE issues Draft EIS	
July	Public comment period on Draft EIS closes		Public comment period on Draft EIS closes	
Dec.	DOE issues Final EIS		DOE issues Final EIS	

CFE = Federal Electricity Commission; CILA = Mexican Commission for Borders and Waters; CRE = Mexican Energy Regulatory Commission; EAX = Energiá Azteca X, S. de R.L. de C.V.; EBC = Energiá Baja California; EIS = environmental impact statement; EPC = engineering, procurement, and construction; INE = Instituto Nacional de Ecologia; LNTP = Limited Notice to Proceed; LRPC = La Rosita Power Complex; MIA = Manestifación de Ambientale; NOI = Notice of Intent; SCR = selective catalytic reduction; SEMARNAT = Secretaria De Medio Ambiente y Recursos Naturales; STP = sewage treatment plant; TDM = Termoeléctrica de Mexicali.

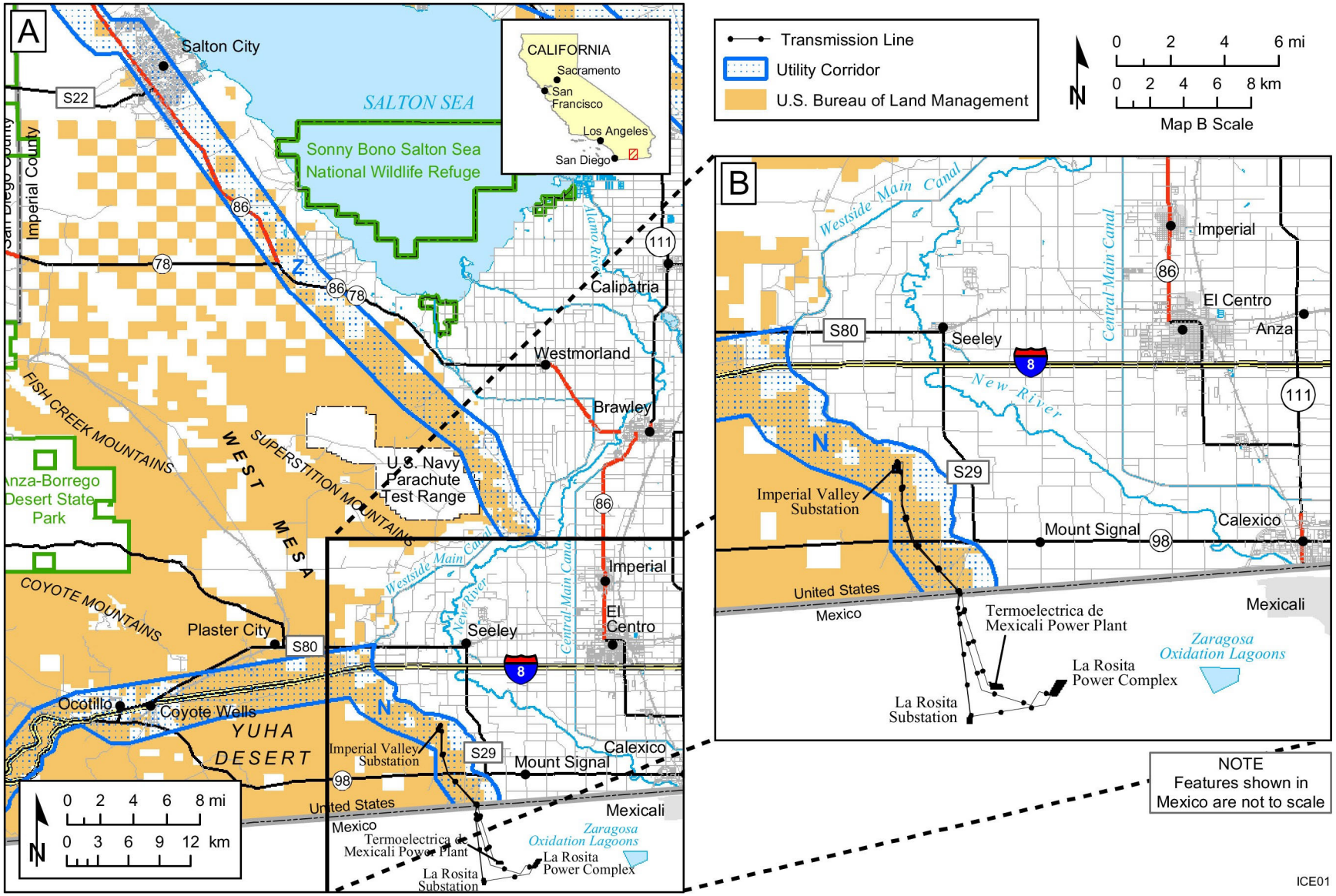

FIGURE 1.1-1 Regional Setting for Imperial-Mexicali 230-kV Transmission Lines

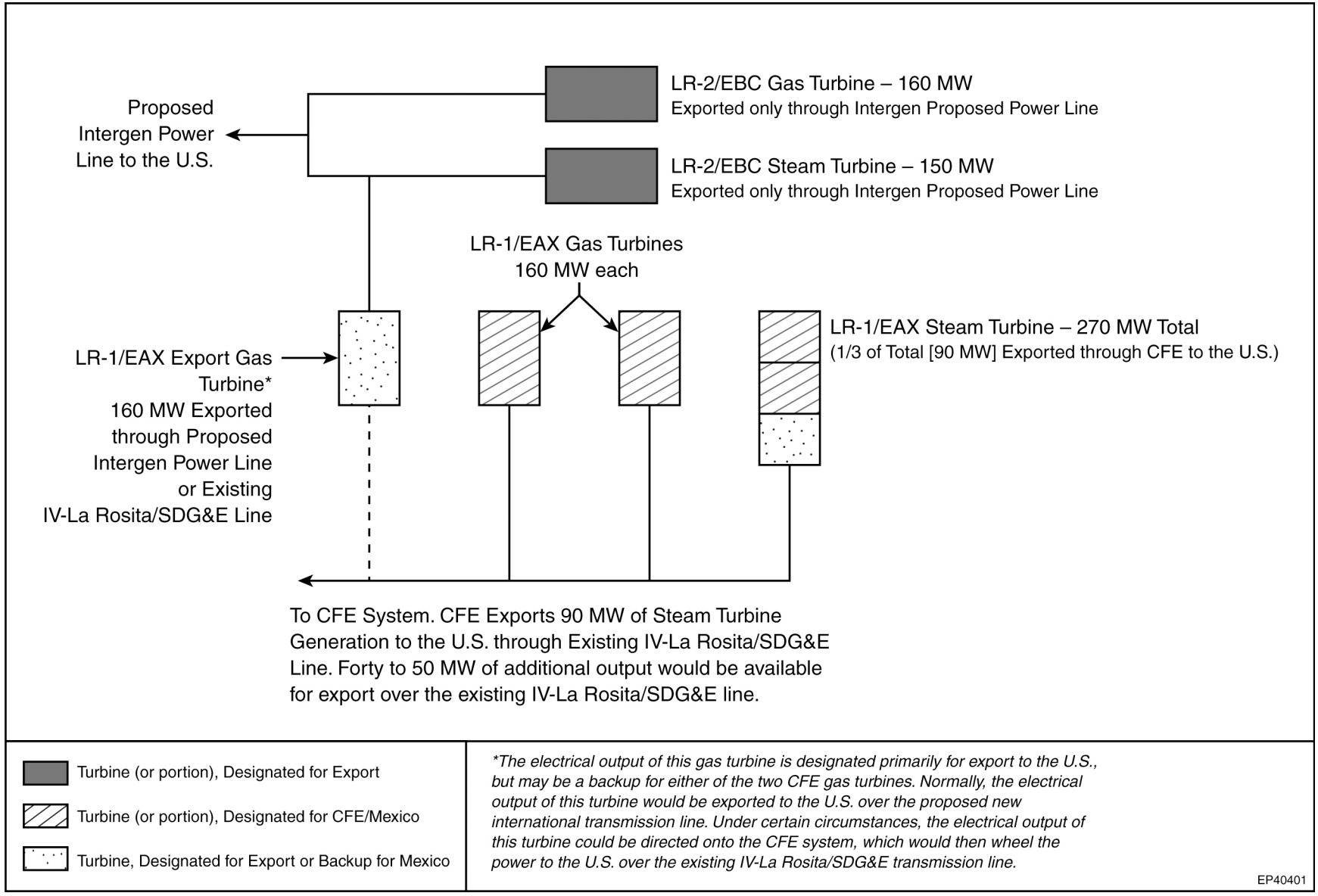

FIGURE 1.1-2 La Rosita Power Complex: Electrical Distribution

Operator (Cal-ISO). The remaining two EAX gas turbines and two-thirds of the electrical output of the EAX steam turbine are designated directly for the Mexico market and are connected to the Mexican electrical grid operated by the Comisión Federal de Electricidad (CFE), the national electric utility of Mexico. Waste water from the cooling towers would be discharged into the canal that flows into the New River at a point in Mexico near the border (Figure 2.2-17). The New River flows northward into the United States and terminates at the Sonny Bono Salton Sea National Wildlife Refuge.

To reduce nitrogen oxides (NO_X) emissions, all gas turbines at the LRPC have been equipped with dry low-NO_X burners, and ultimately with selective catalytic reduction (SCR) systems. The EBC export gas turbine (310 MW) has been built with SCR. The EAX export turbine has also been equipped with SCR. Intergen has indicated that the other two EAX gas turbines, those designed for the Mexico electricity market, will have SCR systems installed by March 2005. The combination of dry low-NO_X burners and SCR will limit NO_X emissions to 4 parts per million (ppm). Carbon monoxide (CO) emissions are guaranteed by the gas turbine vendor to not exceed 30 ppm.

Cooling water for operation of the LRPC is obtained from the inlet to the Zaragoza Oxidation Lagoons and treated before use.

1.1.2.2 Sempra Transmission Line Project

Sempra proposed to construct a double-circuit, 230-kV transmission line that would extend from a natural-gas-fired power plant located 13 mi (21 km) west of Mexicali, Mexico, developed by Termoeléctrica de Mexicali (TDM), northward approximately 3 mi (4.8 km) to the U.S.-Mexico border west of Calexico, California. The line would parallel the existing IV-La Rosita line in the United States northward from the border, across Federal land managed by BLM, a distance of about 6 mi (10 km) to the IV Substation.

The power plant consists of one natural-gas fired combined-cycle generating unit, with a nominal capacity of 650 MW. The unit consists of two 170-MW gas turbines and one 310-MW steam turbine. The power plant produces electricity exclusively for export to the United States that could be transmitted only over the proposed new transmission line. Delivery of the electrical output of the export turbines is scheduled by Cal-ISO.

The power plant is equipped with dry low-NO_X burners and SCR systems to reduce NO_X emissions to a maximum of 2.5 ppm, and an oxidizing catalyst system to reduce CO emissions to a maximum of 4 ppm.

Cooling water for operation of the power plant is obtained from the outlet of the Zaragoza Oxidation Lagoons and treated before use. Wastewater, which is discharged to the same canal as for the Intergen project, then flows into the New River, which flows northward into the United States.

1.2 PURPOSE AND NEED

Intergen and Sempra each need approvals from BLM and DOE, respectively, to allow construction of the approximately 6 mi (10 km) of new 230-kV transmission lines in the United States and connection of the lines at the U.S.-Mexico border, with similar facilities in Mexico. DOE and BLM will use this Final EIS (FEIS) to ensure that they have the environmental information needed for purposes of informed decision making. The decisions will be issued subsequently in the form of separate Records of Decision (RODs) by DOE and BLM.

1.2.1 DOE

DOE will use this EIS to determine whether it is in the public interest to grant Presidential permits to Sempra and Intergen for the construction, operation, maintenance, and connection of the proposed 230-kV transmission lines that would cross the U.S.-Mexico border. DOE's action responds to each applicant's request for a Presidential permit. DOE must comply with NEPA and, in this instance, is the lead Federal agency for NEPA compliance.

In determining whether a proposed action is in the public interest, DOE considers the impact of the proposed action on the environment and on the reliability of the U.S. electric power supply system. DOE also must obtain the concurrence of the Departments of State and Defense before it may grant a Presidential permit. If DOE determines that granting a Presidential permit is in the public interest, the information contained in the EIS will provide a basis upon which DOE decides which alternative(s) and mitigation measures, if any, are appropriate for the applicants to implement. In a process that is separate from NEPA, DOE will determine whether a proposed action will adversely impact the reliability of the U.S. electric system. Issuance of a Presidential permit only indicates that DOE has no objection to the project; it does not mandate that the project be completed.

Both the Sempra and Intergen proposed transmission lines would be used to export small amounts of electricity from the United States for the purpose of initial start-up and restarting their respective power plants in the event of a plant shutdown. This is known as "black start." In order to export power from the United States, both companies must obtain separate export authorizations from DOE under Section 202(e) of the Federal Power Act. Before authorizing exports to Mexico over the proposed transmission lines, DOE must ensure that the export would not impair the sufficiency of the electrical power supply within the United States and would not impede, or tend to impede, the coordinated use of the regional transmission system.

1.2.2 BLM

BLM will use this EIS to determine whether to approve electric transmission line ROW requests for the projects proposed by Sempra and Intergen. To obtain the ROW approval, Sempra submitted an "Application for Transportation and Utility Systems and Facilities on Federal Lands" to BLM on February 13, 2001. The proposed ROW would be within Utility Corridor N (Figure 1.1-1) of the BLM's California Desert Conservation Area (CDCA) Plan.

Intergen filed its application for ROW approval with BLM on February 26, 2001, also for use of a ROW in Utility Corridor N. The Sempra and Intergen transmission line ROWs would each be 120 ft (36 m) wide and are both proposed to be located along the east side of the existing IV-La Rosita line. In reviewing the applications for ROW grants, BLM must consider land status, consistency with land use plans, affected resources, resource values, environmental conditions, and concerns of various interested parties. Complete guidance for implementing the NEPA process within BLM can be found in *H-1790-1 — National Environmental Policy Act Handbook* (DOI 1988) and DOI guidance (1977).

These projects must be consistent with BLM's regional and local plans. The proposed projects fall within the CDCA. BLM administers a comprehensive land use management plan for this area, which is referred to in this EIS as the CDCA Plan (BLM 1999). The goal of the CDCA Plan is to provide for the educational, scientific, and recreational uses of public lands and resources within the CDCA in a manner that enhances and does not diminish the environmental, cultural, and aesthetic values of the desert and its productivity. According to the CDCA Plan, this goal is to be achieved through the direction given for management actions and resolution of conflicts. Direction is stated first on a geographic basis in guidelines set forth in each of four multiple-use classes. Within those guidelines, further refinement of direction is expressed in the goals for each CDCA Plan element (e.g., cultural resources, wildlife, vegetation, wilderness, recreation, motorized-vehicle access, geology, and energy production and utility corridors).

The proposed projects are located within an area designated as Multiple Use Class L (limited) in the CDCA Plan. Class L protects sensitive, natural, scenic, ecological, and cultural resource values. Public lands designated as Class L are managed to provide for generally lower-intensity, carefully controlled multiple use of resources, while ensuring that sensitive values are not significantly diminished.

The CDCA Plan states that "applications for utility rights-of-way will be encouraged by BLM management to use designated corridors." The proposed projects are consistent with the CDCA Plan because they are located entirely within a designated utility corridor (N). Utility applications that do not conform to the corridor system would require a plan amendment.

The area of the projects for the proposed transmission lines is located in the Yuha Basin Area of Critical Environmental Concern (ACEC), designated by the CDCA Plan. The Yuha Basin ACEC Management Plan (BLM 1981) was prepared to give additional protection to unique cultural resource and wildlife values found in the region while also providing for multiple use management. The ACEC Management Plan allows for the "traversing of the ACEC by proposed transmission lines and associated facilities if environmental analysis demonstrates that it is environmentally sound to do so."

The *Flat-tailed Horned Lizard Rangewide Management Strategy* (hereafter referred to as the Strategy) was prepared to provide guidance for the conservation and management of sufficient habitat to maintain extant populations of flat-tailed horned lizards, a BLM-designated sensitive species. A major step toward that objective was the establishment of five flat-tailed horned lizard Management Areas (Flat-tailed Horned Lizard Interagency Coordinating Committee 2003). The project area is within the Yuha Desert Management Area. The Strategy

encourages surface-disturbing projects to be located outside of Management Areas. However, it does not preclude such projects from the Management Area. If a project must be located within a Management Area, effort should be made to locate the project in a previously disturbed area or in an area where habitat quality is poor, and the project should be timed to minimize mortality. The applicants have agreed to accept all applicable mitigation measures identified in the Strategy (Section 2.2.1.4.1).

1.2.3 Applicants' Purpose and Need

The Sempra and Intergen Presidential permit applications each described a need for their 230-kV transmission lines to transport electrical power generated by the Mexico power plants to the United States. In its application, Sempra indicated that all power generated by its proposed Mexico power plant would be exported to the United States to "reduce the region's dependence upon conventional oil-burning generation plants, and improve the region's ability to meet future electrical capacity and energy requirements."

In its application, Intergen stated it would utilize its 230-kV transmission line to export 310 MW from its EBC unit and 250 MW from its EAX unit to the United States. Intergen stated that this would reduce the need for power producers in southern California to build new oil- or gas-fired generation facilities, provide additional reserve capacity to California, and improve system reliability.

1.3 PUBLIC PARTICIPATION AND THE NEPA PROCESS

1.3.1 Public Scoping and Comment Period

The "Notice of Intent to Prepare an Environmental Impact Statement (EIS) and to Conduct Public Scoping Meetings and Notice of Floodplain and Wetlands Involvement" was published in the *Federal Register* (Volume 68, page 61796 [68 FR 61796]) on October 30, 2003. Announcements were also placed in local newspapers. A project Web site maintained for DOE (http://web.ead.anl.gov/bajatermoeis) provides background information on the proposed projects, including previous NEPA review and DOE's NEPA process. DOE and BLM held public scoping meetings at two California locations on November 20, 2003 — the City Hall of El Centro and the City of Calexico City Hall. A total of 20 individuals presented oral comments at the two public scoping meetings. Written comments were also solicited. Seventeen individuals submitted written comments during the scoping period, which closed on December 1, 2003.

Commentors focused mainly, but not exclusively, on the impacts of construction and operation of the two transmission lines and operation of the two power plants on environmental resources in Imperial County, California. An account of comments received during public scoping is included in Appendix B. To ensure that all issues with respect to the permit applications are considered, this EIS addresses issues that were raised during the litigation before

the United States Ninth District Court. The major issues raised in the declarations and their disposition in this EIS are included in Appendix C.

1.3.1.1 Issues within the Scope of the EIS

The issues described below were raised by commentors during scoping and were addressed in the Draft EIS (DEIS).

Several commentors suggested that operation of the natural gas-fired power plants in Mexico would have adverse impacts on water volume and water quality of the New River and the Salton Sea and water availability to the Imperial Valley in California. Specific issues included impacts to the New River caused by an increase in temperature, the increase in total dissolved solids (TDS), and the reduction of dissolved oxygen (DO).

Many commentors were concerned that the two power plants would lead to further degradation of air quality in the region. Imperial County is classified as nonattainment for particulate matter (particles with a mean aerodynamic diameter of 10 µm or less [PM_{10}]) and ozone (O_3). Specifically, issues were raised about possible increases in NO_x, CO, O_3, and particulate matter (both $PM_{2.5}$ and PM_{10}) that would be caused by power plant operations. Commentors questioned the assumptions for the ammonia (NH_3) concentrations released at the plants used in calculations of secondary PM_{10} generation. One commentor suggested that the air samples taken at the border do not reflect maximum exposure concentrations and requested that stack heights and proximity to the border of the power plants be taken into consideration when estimating air emission concentrations.

There were several requests that a comprehensive health risk assessment related to air pollution be conducted as part of the EIS process. Appendix H contains a health risk assessment.

Many commentors were concerned about human health impacts from the power plants. Individuals expressed concern over possible effects of emissions on incidences of asthma in Imperial Valley.

Many commentors expressed the need for the EIS to discuss mitigation measures to offset impacts from power plant operations, mainly related to air emissions. Suggestions included establishing a mitigation fund, identifying offsets (ways to reduce air emission amounts from other sources to compensate for emissions from the power plants in Mexico) in the United States, and completing projects to mitigate impacts from power plant operations.

Commentors raised issues related to alternative technologies that could be used at the power plants to reduce water use in plant cooling and air emissions from the facilities. Issues included the use of dry cooling or a combination of wet-dry cooling to reduce water required for plant operation, installation of CO controls and SCR systems on all power plant units, and use of best available technology to reduce air emissions.

Ecological concerns raised by commentors related to transmission line construction and operation included potential impacts to endangered species and suggestions that birds protected by the Migratory Bird Treaty Act be addressed in the impact analysis. Issues raised related to aquatic habitats included salinity increases in the New River and Salton Sea, potential effects on fish and bird populations in the Salton Sea, and water quality degradation that would affect recreational fishing in the Salton Sea.

Commentors suggested that the EIS examine the visual impact of the two new transmission lines and that the EIS analysis address the potential effects of the projects on tourism and recreational fishing in the Salton Sea. Environmental justice was raised as an issue by a commentor who said that the new power plants could affect low-income populations. One commentor requested that the EIS address impacts of the project on cultural resources.

1.3.1.2 Issues outside the Scope of the EIS

The issues below were raised by commentors during scoping, and DOE has determined that they are outside the scope of the FEIS and the DEIS. Several commentors asked DOE and BLM to evaluate the impacts associated with the power plants on the environment in Mexico, not just in the United States. The agencies do not agree that such an analysis is appropriate for the following reasons.

NEPA does not require an analysis of environmental impacts that occur within another sovereign nation that result from approved actions by that sovereign nation. E.O. 12114 (January 4, 1979) requires Federal agencies to prepare an analysis of significant impacts from a Federal action in certain defined circumstances and exempts agencies from preparing analyses in others. The Order does not require Federal agencies to evaluate impacts outside the United States when the foreign nation is participating with the United States or is otherwise involved in the action [Section 2-3(b)]. Here, the Mexico government has been involved in evaluating the environmental impacts associated with the power plants in Mexico and had issued permits authorizing the construction and operation of the two power plants and ancillary facilities. An overview of the permitting of the power plants and associated environmental impacts analysis that was performed by the Mexico government has been added to the EIS as Appendix J. In addition, the Federal action does not affect the global commons (e.g., outer space or Antarctica), and the Federal action does not produce a product, emission, or effluent that is "prohibited or strictly regulated by Federal law in the United States because its toxic effects on the environment create a serious public health risk," or which involves regulated or prohibited radioactive materials.

The Federal action evaluated in the EIS is not to build the power plants, but only to permit the transmission lines to be built in the United States. The agencies' position in this regard (1) is consistent with applicable Federal laws, including the generally held legal presumption that Acts of Congress do not ordinarily apply outside U.S. borders; (2) avoids the appearance of the assertion of extraterritorial control over actions that were approved by and occur within the lands of another sovereign nation; and (3) prevents interference in the foreign relations of the United States. Application of this policy is particularly appropriate where, as

here, the power plants are located in Mexico and the foreign sovereign itself has both reviewed the environmental impacts of the projects and approved the projects.

Several commentors suggested that the Intergen and Sempra applications for Presidential permits, construction of the two power plants in Mexico, and approval of the North Baja Pipeline, LLC, by the Federal Energy Regulatory Commission (FERC) are related actions and should be assessed as a single undertaking because the power plants would burn natural gas supplied by the pipeline. While the transmission lines and pipeline are related and complementary in that they would facilitate the operation of the electricity-generating facilities in Mexico, they are independent actions that serve distinct functions and that can proceed separately. Intergen and Sempra stated that if FERC had chosen not to grant a Presidential permit for the gas pipeline, the power plants would operate by using alternate fuel sources. North Baja Pipeline, LLC, submitted information to FERC indicating that the gas pipeline would be a viable project even without the Intergen and Sempra power plants. FERC issued a Final EIS for the pipeline in January 2002 and a Presidential permit and a certificate for the pipeline on January 16, 2002. The pipeline is currently in service.

One commentor suggested that a 50-year comprehensive cumulative impact assessment be conducted as part of the EIS. This EIS does contain a cumulative impact analysis (Chapter 5). CEQ guidance (CEQ 1997b) on conducting cumulative impact assessments states that projects be reasonably foreseeable. DOE and BLM believe that for purposes of estimating cumulative impacts, reasonably foreseeable projects are generally projects to be executed within the next 10 years. Projects predicted to occur beyond 10 years are generally presumed to be speculative and thus not reasonably foreseeable.

A commentor requested that a national policy be developed to define the minimum distance that transmission lines can be constructed relative to gas pipelines. It is not the purpose of this EIS to consider such a national policy; therefore, this issue is outside the scope of the EIS.

Commentors requested that information pertaining to emergency outage plans and homeland security issues be examined as part of the EIS. The development of emergency outage response plans is the purview of local public safety officials and is outside the scope of the EIS. The proposed transmission lines and power plants present no greater target for terrorists than any other high-voltage transmission lines or power plants in the United States. Also, outside of the NEPA process, DOE will perform an electric reliability study to ensure that the existing U.S. power supply system would remain fully operational upon the sudden loss of power, regardless of the cause of the outage.

1.3.2 Public Review of the Draft EIS

On May 14, 2004, the U.S. Environmental Protection Agency (EPA) published a Notice of Availability in the *Federal Register* (69 FR 26817) for the DEIS evaluating the impacts in the United States of constructing, connecting, and operating and maintaining two transmission lines from two power plants in Mexico. In accordance with CEQ and DOE NEPA regulations, the DEIS was distributed to interested agencies, organizations, and the general public to allow them

to provide oral and written comments. It was also made available in its entirety on the project Web site (http://web.ead.anl.gov/bajatermoeis/index.cfm). E-mail notification was sent to those on the project Web site mailing list. The May 14, 2004, date marked the beginning of a 45-day comment period, which was to end on June 19, 2004. However, at the request of the plaintiff (Border Power Working Group), the comment period was extended to July 30, 2004. (A Notice of Comment Period Extension was published in the *Federal Register* on May 26, 2004 [69 FR 29934].) To facilitate public involvement, stakeholders could submit comments on the DEIS via telephone, letter, e-mail, or the project Web site.

DOE and BLM held two public hearings during the review period in the City Halls at El Centro, California (11:00 a.m. to 1:00 p.m.), and Calexico, California (6:00 p.m. to 8:00 p.m.), on July 14, 2004. The dates and times of the public hearings were announced on the project Web site and in local newspapers. The hearings on the DEIS were an important component in the agencies' continuing efforts to provide the public with opportunities to participate in the decision-making process. The hearings included a presentation by DOE, a question and answer period, and an oral comment session where reviewers were invited to formally enter their comments into the public record. Transcripts of the public hearing proceedings were recorded by a court reporter and are available on the project Web site and in this EIS (Chapter 2 of Volume 2).

DOE received 4,804 comment submissions. These comments came from individuals, Federal and State agencies, local governments, and nongovernmental organizations such as environmental groups. All but 108 of these were campaign letters. An index of the commentors, copies of the actual letters or other documents containing public comments submitted to DOE (including comments identified in the transcripts), a summary of key issues in response to comments, and specific responses to each comment received are provided in Volume 2 of this EIS.

Comments on the DEIS were received by e-mail, fax, mail, or as oral statements at one of the public hearings from individuals, nongovernmental organizations, and government agencies. This resulted in 113 comment documents: 26 from the hearings, 5 representative campaign letters, and 82 from individuals or organizations. The vast majority (98%) of commentors submitted what is referred to as a campaign letter. DOE has responded to each of the oral and written comments, including the campaign letters.

While reviewing the comments, DOE identified 18 key issues that it believes reflect major concerns related to the EIS:

1. Extension of NEPA analysis into Mexico;

2. Use of significant impact levels (SLs) to evaluate impacts on air quality and human health;

3. The conditioning of permits, enforcement of emission levels;

4. Definition of the alternatives with regard to the three LRPC Energía Azteca X, S. de R.L. de C.V. (EAX) gas turbines; and inclusion of the EAX-export unit in both the proposed action and no action alternatives;

5. Analysis of power plant impacts for all alternatives in terms of the existing plants rather than the hypothetical, "to-be-built" plants analyzed in the Draft EIS (DEIS);

6. Analysis of dry and parallel wet-dry cooling;

7. Scope of the EIS with respect to the gas pipeline that supplies the power plants;

8. Characterization of air quality in terms of ambient air quality standards and exceedances;

9. Estimating additional violations of ambient air quality standards in Imperial County resulting from plant emissions;

10. Estimation of secondary PM_{10} from plant ammonia and nitrogen oxides (NO_x) emissions;

11. Characterization of ozone and PM_{10} episodes in Imperial County;

12. Discussion of the uncertainty and sensitivity of the DEIS ozone analysis using the EPA's O_3 Ozone Isopleth Plotting Program Revised (OZIPR) methodology; and description of the methodology;

13. Estimates of additional adverse health impacts;

14. Documentation of total dissolved solids (TDS) removal in power plant water treatment systems;

15. Analysis of power plant impacts on the regional 4,000-mg/L TDS surface water objective;

16. The use of the second circuits on the respective transmission lines;

17. The applicability of conformity review to direct PM_{10} emissions from the Mexico power plants and to indirect PM_{10} emissions from dry lakebed at the Salton Sea exposed as a result of consumptive water use at these plants; and

18. Conservatism in the analysis and interpretation of impacts.

As noted above, many revisions were made to the DEIS on the basis of the comments received. Although a good portion of the changes were made to provide clarification and

additional detail, the more substantial changes pertained to the impacts analyses for water resources and air quality. The changes made in response to public comments did not affect the overall significance of the environmental impacts presented in this EIS.

1.4 ORGANIZATION OF THIS ENVIRONMENTAL IMPACT STATEMENT

This Imperial-Mexicali 230-kV Transmission Lines EIS consists of two volumes. Volume 1 contains 14 chapters and 13 appendixes. Volume 2 contains the comment and response document for the review of the DEIS. Brief summaries of the main components of the EIS follow:

Volume 1 — Main Text and Appendixes:

- Chapter 1 introduces the EIS, discussing pertinent background information; the purpose of and need for the DOE, BLM, and applicant actions; public participation; and EIS organization.
- Chapter 2 defines the alternatives considered in the EIS.
- Chapter 3 discusses the environmental setting in the area of the projects.
- Chapter 4 discusses the potential environmental impacts of the alternatives.
- Chapter 5 discusses the potential cumulative impacts.
- Chapter 6 identifies the unavoidable adverse impacts.
- Chapter 7 discusses the major irreversible and irretrievable commitments of natural and man-made resources.
- Chapter 8 discusses the relationship between short-term use of the environment and long-term productivity.
- Chapter 9 identifies the major laws, regulations, and other applicable requirements.
- Chapter 10 provides a list of agencies and individuals contacted during preparation of this EIS.
- Chapter 11 is an alphabetical listing of the references cited in the main text of the EIS.
- Chapter 12 lists the name, education, and experience of persons who helped prepare the EIS. Also included are the subject areas for which each preparer was responsible.

- Chapter 13 presents brief definitions of the technical terminology used in the EIS.
- Chapter 14 is a subject matter index that provides the page numbers where important terms and concepts are discussed.
- Appendix A contains copies of the court orders.
- Appendix B summarizes the comments received during public scoping.
- Appendix C is an index for major issues that arose in scoping, in court declarations, and in court orders, and that have been addressed in the EIS.
- Appendix D presents ambient air quality data used in preparing this EIS.
- Appendix E contains copies of consultation letters regarding the preparation of this EIS that were sent to and received from Federal and State agencies.
- Appendix F discusses water modeling used to support calculations for assessing water resource impacts.
- Appendix G provides data in support of the air quality analysis.
- Appendix H contains the health risk assessment for the proposed projects.
- Appendix I contains the contractor disclosure statements.
- Appendix J contains an overview of the Mexico permits and approvals required for the LRPC and TDM power plants.
- Appendix K discusses the use of zero-liquid discharge technologies at the LRPC and TDM power plants.
- Appendix L contains photographs of the LRPC and TDM power plants.
- Appendix M contains the distribution list for this EIS.

Volume 2 — Responses to Public Comments:

- Chapter 1 provides an overview of the public participation and comment process.
- Chapter 2 provides copies of actual letters or documents that contain comments on the DEIS.
- Chapter 3 discusses key issues raised in the comments.

- Chapter 4 lists responses to all comments received.
- Chapter 5 is an alphabetical listing of all the references cited in the responses.