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UNITED STATES-MEXICO ELECTRICITY TRANSFERS: OF ALIEN ELECTRONS AND THE MIGRATION OF UNDOCUMENTED ENVIRONMENTAL BURDENS

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In my opinion . . . you [are] free to control the [importation of electric current] under your plenary power to prevent any physical connection . . . between any foreign country and the United States.[1]

[N]o alien ever lawfully sets his foot on the soil of this Nation, except by the permission of the nation, expressed or implied . . . . Much more must be true of the physical connecting of our shores with foreign shores.[2]

The national power to repel invasion or violence or a foreign physical connection has only a remote, and we think a very strained, relation to the laying . . . by a citizen of the United States . . . of a lifeless, helpless, unarmed wire . . . .[3]

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1. 30 Op. Att'y Gen. 217, 221 (1913).

2. Brief for Appellant at 34, United States v. Western Union Tel. Co., 260 U.S. 754 (1922) (No. 47).

3. Brief for Appellee at 12-13, United States v. Western Union Tel. Co., 260 U.S. 754 (1922) (No. 47).

I. INTRODUCTION

Many metaphorical expressions have been used to describe the relationship between the United States and Mexico.[4] Among such expressions are those which state that the destinies[5] of the two countries are linked,[6] intertwined,[7] interlocked,[8] or connected.[9] Literal links, however, do exist

4. TOM BARRY ET AL., THE GREAT DIVIDE: THE CHALLENGE OF U.S. MEXICO RELATIONS IN THE 1990S (1994); SIDNEY WEINTRAUB, A MARRIAGE OF CONVENIENCE: RELATIONS BETWEEN MEXICO AND THE UNITED STATES (1990); ALAN RIDING, DISTANT NEIGHBORS: A PORTRAIT OF THE MEXICANS (1985); DAVID F. RONFELDT & CAESAR D. SERESERES, RAND CORP., TREATING THE ALIEN(ATION) IN U.S.-MEXICO RELATIONS, P-6186 (1978). The use of such wide-ranging, often contradictory metaphorical expressions may be indicative of a continuing difficulty, arising from a rather prickly history, in settling on the defining aspects of the relationship between the United States and Mexico.

5. This destiny is sometimes spoken of in terms of a "special relationship."

> Traditionally the United States has promoted a 'special relationship' with Mexico and in the past Mexico has accepted it. Rooted in close cooperation during WWII, it signified that the United States would provide a relatively open and unfortified border, close consultation over problem issues, and some advantageous treatment for Mexico in financial, trade, and migration matters. Recently the 'specialness' in relations between the two nations has lost meaning in both countries.

ARTURO GÁNDARA & CAESAR SERESERES, RAND CORP., U.S.-MEXICO RELATIONS: TOO IMPORTANT TO BE LEFT TO PRESIDENTS?, P-6400, at 4 (1979).

At its best, it brings to mind the complex relationship of the Dioscuri who eventually took their place together in the firmament. *See generally* CLINT E. SMITH, THE DISAPPEARING BORDER: MEXICO-UNITED STATES RELATIONS IN THE 1990S (1992). At its worst, from a U.S. perspective, it brings to mind the presumed struggle of Sherlock Holmes and Professor Moriarity at the Reichenbach Falls. MEXICO AND THE UNITED STATES, NEIGHBORS IN CRISIS (Daniel G. Aldrich & Lorenzo Meyer eds., 1989). At its worst, from a Mexican perspective, it brings to mind an anticipated fate similar to that of Remus at the hands of Romulus. *See generally* Jorge Castaneda, *Don't Corner Mexico!*, 60 FOREIGN POL'Y 75 (1985). But perhaps it has been summed up most aptly by Sidney Weintraub: "The talk of a special relationship with Mexico arises from time to time, but 'special' always had a different degree of warmth when applied to Mexico compared with other countries where the word is used, such as Great Britain." WEINTRAUB, *supra* note 4, at 205.

6. SIDNEY WEINTRAUB, A MARRIAGE OF CONVENIENCE: RELATIONS BETWEEN MEXICO AND THE UNITED STATES 8 (1990).

7. *Id.*

8. *Id.* at 11.

9. *Id.* at 13.

in the electricity interconnections between the two countries.[10] These interconnections have resulted in an intertwining of the United States and Mexican electricity transmission grids.[11]

Through these interconnections there is a daily transfer of power, in the literal and metaphorical sense. Power flows through these interconnections in the form of electric energy as well as in the form of the strategic value[12] of the energy transfers between the power utilities at each end of the interconnection. On the United States side are some of the country's largest electric utilities.[13] On the Mexican side is the state-owned national electrical utility, the Comisión Federal de Electricidad (CFE).[14]

The generation of the electrical power transferred is accompanied by the generation of an environmental burden. That environmental burden does not, however, flow through the electrical interconnection. Power transfers permit the separation of the benefits and the environmental con-

10. A joint study by the U.S. Department of Energy and Mexico's counterpart, Secretaria de Energia, Minas e Industria Paraestatal, lists nine bulk power interconnections (69 kv and above) between the United States and Mexico. UNITED STATES DEPARTMENT OF ENERGY AND SECRETARIA DE ENERGIA, MINAS E INDUSTRIA PARAESTATAL, UNITED STATES/MEXICO ELECTRICITY TRADE STUDY, at 6 tbl. 1.2 (1991) [hereinafter 1991 TRADE STUDY]. A more detailed accounting lists 36 interconnections with line voltages ranging from 2.3 kv to 230 kv. OFFICE OF FUELS PROGRAMS, U.S. DEPARTMENT OF ENERGY, ELECTRICITY TRANSACTIONS ACROSS INTERNATIONAL BORDERS—1992 app. B (1993). This more detailed accounting lists twelve bulk power interconnections. The increase in the number of bulk power interconnections from the number in the 1991 TRADE STUDY results from the construction of three new interconnections, the inclusion of a prior existing 161 kv interconnection that was not listed in the 1991 TRADE STUDY, and the deletion of an interconnection that was taken out of service.

11. Seven major interconnections exist between San Diego, California and El Paso, Texas. These connect the Mexican Comisión Federal de Electricidad (CFE) power grid with the rest of the Western Systems Coordinating Council (WSCC) power grid which is comprised of the individual power grids of the electric utilities of the Western United States, including the Rocky Mountain states, and of the Canadian provinces of British Columbia and Alberta. Five major interconnections exist between Presidio, Texas and Brownsville, Texas. These connect the CFE power grid with the power grid of the utilities comprising the Electric Reliability Council of Texas (ERCOT) which includes most of the Texas utilities. *See* 1991 TRADE STUDY, *supra* note 10.

12. The oil embargoes of 1973 by Middle East suppliers and the subsequent energy crisis resulted in a concerted effort by the United States during the Carter presidency to lessen energy dependence on Middle East oil and to increase energy supplies from more reliable sources. The encouragement of electricity transfers from Mexico was one element of the U.S. strategy, with respect to Mexico, to diversify its energy sources. This tact was strongly supported in an internal Department of Energy (DOE) analysis that read, in part: "In order to preserve the Administration's option to facilitate the expansion of Mexican oil and gas production, [DOE] should ensure that the department's ad hoc resolution of issues such as the Mexican electricity proposal does not preempt development of a comprehensive energy policy toward Mexico." *Road to Energy Freedom: Can Mexico Help?*, INSIDE D.O.E., Sept. 25, 1978, at 9-10.

13. In 1989, the utilities in WSCC had 148.7 gigawatts of generating capacity; the utilities in ERCOT had 51.9 gigawatts of generating capacity. 1991 TRADE STUDY, *supra* note 10, at 20 fig. 2.2. To put this in perspective, in 1989 the total generating capacity in the United States was 730.9 gigawatts. 1991 TRADE STUDY, *supra* note 10, at 11 tbl. 2.1.

14. In 1989 CFE had 23.2 gigawatts of generating capacity. 1991 TRADE STUDY, *supra* note 10, at 20 fig. 2.2. To put CFE's generating capacity in a Latin American perspective, it should be noted that it has over 18% of the total electric utility generation in Latin America, is the second largest producer of electricity in Latin America after Brazil, and is the largest producer of electricity from thermal sources. 1991 TRADE STUDY, *supra* note 10, at 90-91.

sequences of electricity generation. Usually, power generated in one country is exported to the other, and the exporting country retains the environmental burden. The clearest example would be the power generated in the Mexican geothermal field of Cerro Prieto across the border from Calexico, California. Since 1984, power generated in Cerro Prieto has been exported to two utilities in Southern California, San Diego Gas & Electric (SDG&E) and Southern California Edison (SCE).[15] The environmental burden of geothermal development is, in general, quite localized.[16] Accordingly, the environmental burden of the Cerro Prieto geothermal power production remains in Mexico.[17]

Conversely, by obviating the need for power that would otherwise have to be generated within United States borders, the imported Mexican power has a beneficial effect on the United States environment. This beneficial effect could occur in several ways. First, such imported power could displace power that would otherwise be generated in the already over-polluted air basins of Southern California. Second, such imported power could also displace the need for hydroelectric power generated in the Sierras thereby mitigating the effects of the extensive hydroelectric development there. Finally, the Mexican generated power could displace power imported into Southern California from adjacent regions of the United States, thus alleviating the environmental burdens of coal and hydroelectric generated power in the Southwest and Northwest respectively.

It might also be the case, however, that the imported Mexican power could displace environmentally benign power generated by alternative energy power producers who would otherwise supply that portion of the purchase power needs of United States utilities. The Public Utilities Regulatory Policy Act of 1978 (PURPA) obligated electric utilities in the United States to purchase power from certain alternative energy producers.[18] However, utility and regulatory hostility to these purchase power contracts has led to modifications of the terms and conditions of the contracts in ways that increase utility discretion over acceptance of alternative energy

15. *See* Presidential Permit for Proposed Imperial Valley—La Rosita Transmission Line, 48 Fed. Reg. 54,859 (Dep't Energy 1983) (finding no sifnificant impact); 1991 TRADE STUDY, *supra* note 10, at 8.

16. PHYLLIS ELLICKSON, RAND CORP., BALANCING ENERGY AND THE ENVIRONMENT: THE CASE OF GEOTHERMAL DEVELOPMENT, R-2274-DOE, at 23-40 (1978); CELIA CAMPBELL-MOHN ET AL., ENVIRONMENTAL LAW: FROM RESOURCES TO RECOVERY § 11.6(B)(1)(b) (1993).

17. *See* Juan Eibenschutz, *Recursos Geotermicos en la Frontera Noroccidental, in* THE U.S. MEXICO BORDER REGION: ANTICIPATING RESOURCE NEEDS AND ISSUES TO THE YEAR 2000, at 263-69 (César Sepúlveda & Elbert E. Utton eds., 1982). *See generally* MEXICO'S ENERGY RESOURCES: TOWARD A POLICY OF DIVERSIFICATION, at 77-85 (Miguel S. Wionczek & Ragaei El Mallakh eds., 1985) (explaining the role of geothermal resources in CFE's plans to develop Mexican generating capacity).

18. Public Utility Regulatory Policies Act § 210, 16 U.S.C. § 824a-3 (1988 & Supp. V 1993).

power.[19] It may very well be the case that there is less contractual discretion, or utility willingness, to refuse imported Mexican power.[20]

There is also the possibility that power generated in one country can result in an environmental burden that can literally migrate across the border. A vivid example is provided by CFE's operation of two coal-fired power plants, Carbon I and II at Piedras Negras, Mexico, across the border from Eagle Pass, Texas.[21] It is also across the border from Big Bend National Park. The emissions from these Mexican power plants are apparently affecting the air quality in the national park.[22] Planned expansion of these facilities threatens to deteriorate the air quality even further.[23] Ironically, it is not certain that power generated from these power plants will be exported, thus the environmental burden suffered by the United States is,

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19. *See* Independent Energy Producers Ass'n v. California Pub. Util. Comm'n, 36 F.3d 848 (9th Cir. 1994). The California Public Utilities Commission (CPUC) had devised a program authorizing utilities to monitor the qualifying facilities (QFs) they had contracts with for compliance with federal operating and efficiency standards—the proverbial fox guarding the henhouse. Under the CPUC program the utilities also had the power to reduce their payments to the QFs if they determined the QF did not meet federal standards. The Ninth Circuit held that the CPUC program was preempted by PURPA insofar as it authorized the utilities to determine that a QF was not in compliance with FERC's operating and efficiency standards. The utilities could not impose a reduced avoided cost rate on a "non-complying" QF and did not have the power to disconnect a "non-complying" QF. Determination of QF status is a purely FERC power. *See generally* Arturo Gándara, *Contracts in Wonderland: A Fable Regarding the Administrative Adjudication of Qualifying Facility Contracts in California,* 31 SAN DIEGO L. REV. 307 (1994).

20. When the staff of the California Public Utilities Commission suggested that the contract with CFE for imported power from Cerro Prieto should be modified because the contract price was above the utility's avoided cost, the utility rebuffed the staff on the basis that the contract terms could not be modified because CFE had an "enforceable contract." *See Merger Target SDG&E Asks Fuel Rate Cut: The Second Revision Since June,* ELEC. UTIL. WK., Sept. 26, 1988, at 9. The utility had been considerably less reticent with respect to similar suggestions regarding contracts with alternative energy facilities. *See* Gándara, *supra* note 19.

21. Carbon I, as the first plant is known, is comprised of four 300 megawatt units. Carbon II, the second plant, is comprised of four 350 megawatt units. It has been reported that this complex of power plants will become the tenth largest source of sulfur dioxide pollution in the continent. *See* Andy Pasztor, *SCE Drops Electric Plant Under Political, Environmental Pressure,* WALL ST. J., Oct. 12, 1993, at A4.

22. One writer chronicles:

> The sulfury cloud comes from the smokestacks of two coal-fired electrical plants on the outskirts of Piedras Negras, and prevailing winds are carrying it straight across the border into Big Bend National Park, a wilderness area 100 miles to the Northwest that is one of the most popular outdoor recreational sites in Texas.

Tod Robberson, *Cloud Over Trade Pact—Texas Too; Mexican Pollution Fuels U.S. Criticism,* WASH. POST, June 22, 1993, at A1.

23. Robberson continues: "EPA and National Park Service staff remain concerned that existing and planned units may significantly impact U.S. national park areas." *Id.* Another writer supports this proposition by stating:

> [A]ccording to the latest U.S. Park Service estimate, the plume from CARBON II could reduce visibility by 30% or more at Big Bend National Park about 150 miles to the Northwest. U.S. regulators say that the roughly 230,000 tons of sulfur dioxide the plants together are expected to spew out each year would make them the 10th-largest source of sulfur dioxide on the continent. Interior officials say that will contribute to acid rain and exacerbate formation of haze in pristine areas, probably drifting all the way to Arizona's Grand Canyon.

Andy Pasztor, *Power Plants in Mexico Cast Pall Over Nafta,* WALL ST. J., Sept. 8, 1993, at B1.

in this instance, absent any accompanying United States beneficial use of the power generated. However, there has been discussion in the past,[24] and there continues to be discussion, about siting significant generating capacity on the Mexican side of the border,[25] both to meet Mexican demand as well as for exporting power to the United States.[26]

Not surprisingly, Mexican electrical demand along the border has also been seen as an opportunity for United States power exports.[27] A selling point of this opportunity is that it would obviate the need for the Mexican power plants and their associated environmental problems.[28] It is argued that power production from plants subject to United States environmental regulations would be better for the environment.[29] Nevertheless, it is clear that the effect of such a scheme is that, as United States power is exported south of the border, the environmental burden is shifted north of the border to the United States.

In summary, the importation of power results in the exportation of its environmental burden, and the exportation of power results in the importation of an environmental burden. Speaking metaphorically, the environmental burden is migrating back and forth across the border, in step but out of phase with the power transfers.

It is unavoidable that there would be an environmental burden produced by the generation of electricity and that it would be shifted back and forth across the border by power exports and imports. The problem, however, is that this environmental effect is not being addressed. The private agreements for power transfers do not take into account the public's interest in the environmental commons,[30] and neither do the procedures for federal approval of the power exports from the United States. With respect to power imports to the United States, no federal approval is required at all.[31] Consequently, any mitigation of the environmental consequences of power transfers is serendipitous.

It would be a significant policy oversight for matters to continue unchanged. Profound changes in electricity regulation in the United States and Mexico will result in significant opportunities to increase power transfers. An accompanying increase in the environmental burden is inescapable. The generation and distribution of such environmental burdens should be addressed directly. Consideration should be given to utilizing the permitting and approval process to condition the power transfer agreements with an eye towards maximizing benefits to the publics involved,

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24. *See infra* notes 72-86 and accompanying discussion.

25. Tod Robberson, *Cloud Over Trade Pact—Texas Too; Mexican Pollution Fuels U.S. Criticism,* WASH. POST, June 22, 1993, at A1 ("[A]t least two more large, coal-burning power plants along the border are being considered.").

26. *See infra* notes 72-86 and accompanying discussion.

27. Alexander Platt, *Selling U.S. Power to Mexico,* MEX. TRADE & L. REP., June 1, 1992.

28. *Id.*

29. *Id.*

30. *See* discussion *infra* part IV.C.

31. *See* discussion *infra* part IV.B.

minimizing environmental burdens, and distributing both benefits and burdens fairly between the United States and Mexico.

This article intends to set forth the necessity for reform in United States policy and procedures regarding approval of power transfers between the United States and Mexico. In order to do this, the article will review the history of electrical power transfers between the United States and Mexico (Part II), analyze recent regulatory changes in the United States and Mexico which may result in increased power exports to Mexico (Part III), evaluate the extent to which the present permit and authorization system in the United States considers the increased environmental burden of such power transfers (Part IV), and, where appropriate, propose some procedural and policy reforms that could take into account the environmental burdens generated by the production of power destined for transfer across the United States-Mexico border (Part V).

II. HISTORY OF POWER TRANSFERS

Power has been transferred between the United States and Mexico since 1905.[32] Power transfers in those early years, and for about half a century thereafter, bore little resemblance to the power transfers which are the subject of this article. During this period, only minor amounts of power were transferred to Mexico to serve the needs of small adjacent border towns across interconnections of low voltage and low capacity.[33] Some of those power transfers occurred between a United States electric utility and a Mexican utility under common United States ownership.[34] Some of those power transfers were the result of a United States utility supplying an affiliated facility it owned and operated in Mexico.[35] Some of those power

32. UNITED STATES DEPARTMENT OF ENERGY AND SECRETARIA DE ENERGIA, MINAS E INDUSTRIA PARAESTATAL, ELECTRICITY EXCHANGES: UNITED STATES/MEXICO 7 (1980) [hereinafter 1980 ELECTRICITY EXCHANGES STUDY]; 1991 TRADE STUDY, *supra* note 10, at 4. *See also* WILLIAM A. MYERS, IRON MEN AND COPPER WIRES: A CENTENNIAL HISTORY OF THE SOUTHERN CALIFORNIA EDISON COMPANY 127, 133, 137 (1983) (explaining that by the late 1920s Southern Sierras Power and its subsidiaries were operating a utility system which included service to Mexicali where service had been initiated in 1916 under the name of Industrial Electrica Mexicana.); IRIS ENGSTRAND & KATHLEEN CRAWFORD, REFLECTIONS: A HISTORY OF THE SAN DIEGO GAS & ELECTRIC COMPANY, 1881-1991 91 (1991) (stating that San Diego Gas & Electric sold electricity to Compania de Telefonos y Luz Electrica in Tijuana in the 1920s); DAWN ON THE DESERT: AN AMERICAN SAGA OF . . . PEOPLE . . . POWER . . . PROGRESS 37 (1961) (stating that Arizona Public Service Company provided power to El Tigre Mining Company, 75 miles south of the border in Sonora, Mexico in the 1930s).

33. *See* sources cited *supra* note 32.

34. *See California Elec. Power Co.*, 13 F.P.C. 946 (1954) ("More particularly, Applicant seeks authorization to transmit electric energy to its wholly-owned Mexican subsidiary, Industrial Electrica Mexicana S.A. . . . ."). *See generally* JOHN T. MILLER, JR., FOREIGN TRADE IN GAS AND ELECTRICITY IN NORTH AMERICA: A LEGAL AND HISTORICAL STUDY 53 (1970). Such ownership would not have been unusual. The Mexican power system was largely built by British and American companies, initially at the invitation of the pre-revolutionary Mexican government and later with the pragmatic tolerance of post-revolutionary governments. *See generally* Miguel S. Wionczek, *The State and the Electric-Power Industry in Mexico, 1895-1965*, 39 BUS. HIST. REV. 527 (1965) (providing a helpful history of the Mexican hydroelectric industry).

35. *See* OSCAR J. MARTINEZ, BORDER BOOM TOWN: CIUDAD JUAREZ SINCE 1848, at 58 (1978) (stating that El Paso Electric Company co-owned a street car company which operated between El

transfers were between a United States utility and a Mexican private utility.[36] In some instances, the United States power was the sole source of electricity for some Mexican border towns.[37] In one instance, the United States power was sold directly for private residential use in Mexico.[38]

Until the mid-1950s power flowed only one way, from the United States to Mexico.[39] In 1954, Mexican generating facilities from the newly constructed Falcon Dam on the Rio Bravo transferred their entire power output to the United States.[40] The Mexican power grid was not sufficiently interconnected to permit the transfer of this power to Mexican demand centers.[41] In the meantime, isolated thermal power generating units were

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Paso, Texas and Juarez, Mexico). *See also El Paso Elec. Co.*, 4 F.P.C. 531 (1944) (El Paso Electric had a Presidential Permit to transmit electricity from El Paso, Texas to Juarez, Mexico to operate its electric railway system); MILLER, *supra* note 34, at 57.

36. *See Central Power & Light Co.*, 59 F.P.C. 2301 (1977) ("Central Power and Light Company for many years supplied electric energy to small privately owned electric systems in Mexico. These systems have been taken over by Comisión Federal de Electricidad Division Golfo Norte, an agency of the Federal Government of Mexico, which has been constructing integrated electric systems within that country to supply its customers from its own bulk power resources."); *O. Losoya*, 3 F.P.C. 773 (1942) (providing an example of a transmission to a privately-owned Mexican utility); *F.N. Garcia*, 3 F.P.C. 772 (1942) (providing another example of a transmission to a privately-owned Mexican utility). The nationalization or, as they would say in Mexico, the "Mexicanization" of the foreign-owned electric companies occurred over a long period of time. For much of this time CFE, the national utility, coexisted with these foreign private companies and with Mexican municipal utilities. *See* MIGUEL S. WIONCZEK, ELECTRIC POWER: THE UNEASY PARTNERSHIP IN PUBLIC POLICY AND PRIVATE ENTERPRISE IN MEXICO (Raymond Vernon ed., 1964). Since most of the foreign-owned generating capacity was hydroelectric at the time of CFE's creation, it is reasonable to assume that CFE focused its early efforts on "Mexicanizing" the foreign-owned hydro-based electric companies and on thermal power plants serving large load centers. Therefore, it is highly likely that the Mexican border electric utilities, most of them isolated and remote from a hydro resource, were thermal-based municipal utilities serving small loads and of little immediate interest to CFE.

37. MILLER, *supra* note 34, at 48-59. There are many authorizations and permits that are examples of situations in which the U.S. supply was the only source for the Mexican town. *Arizona Pub. Serv. Co.*, 49 F.P.C. 842 (1973) ("The application states that the increased amount of energy requested is needed to meet the additional electric requirements of Mexican Company [Compania de Servicios Publicos de Agua Prieta, S.A.] for furnishing electric service to the community of Agua Prieta and vicinity. The application further states that Mexican Company has no generating capacity to supply the increased energy required."); *Arizona Pub. Serv. Co.*, 54 F.P.C. 2730 (1975); Application for a Presidential Permit, Comisión Federal de Electricidad, 53 Fed. Reg. 35,891 (1988).

38. Issuance of Presidential Permit PP-75 to Comisión Federal de Electricidad, 47 Fed. Reg. 44,386 (Dep't Energy 1982). The initial application provides a concise explanation of the need for the line:

> The transmission line will be used to deliver a maximum of 150 kilowatts from the Rio Grande Electric Cooperative to Mr. Diego's ranch located in Piedras Negras, Coahuila, Mexico at the United States-Mexico border.
>
> According to the applicant, there is no other source from which he can purchase or acquire electric energy. . . .
>
> Although Mr. Diego is a Mexican resident, he states in his application that he will build the transmission line at his own cost and expense without the participation of the Government of Mexico.

Application for Presidential Permit Manuel Diego Ainslie-Coahuila, Mexico, 45 Fed. Reg. 61,012 (Dep't Energy 1980).

39. MILLER, *supra* note 34, at 48-59.

40. MILLER, *supra* note 34, at 48; 1991 TRADE STUDY, *supra* note 10, at 7.

41. MILLER, *supra* note 34, at 48-59.

constructed along the Mexican side of the border to serve local Mexican demand.[42] Nonetheless, due to Mexican demand growth and reliability problems, United States utilities continued to supply the neighboring Mexican utilities with power.[43] The development of Mexican generating capacity and variations in daily demand, however, resulted in some transfers from Mexico.[44] The overall pattern, however, remained the same. The net power transfer, by a considerable margin, was from the United States to Mexico.[45]

There was, however, a regional variation. Until the 1980s, power imported from Mexico was typically delivered to the Eastern Reliability Council of Texas (ERCOT) system, and power exported to Mexico was typically delivered from the Western Systems Coordinating Council (WSCC) system.[46] This was due to the fact that the principal Mexican generating sources of power transfers were along the border across the ERCOT system, that is the hydro power facilities from the Falcon Dam, mentioned above, and the later constructed Amistad Dam—also on the Rio Bravo.[47] Nevertheless, until the early 1980s the net transfer of power was from the United States to Mexico from both the WSCC and ERCOT systems.[48] The great bulk of the net power transferred, however, was from the WSCC system.[49]

In the latter half of the 1970s, in the wake of the energy crisis of 1973, there developed serious discussion of building significant generating capacity in Mexico for the purpose of exporting power to the United States.[50] This discussion took place mainly in California. In the late 1960s and early 1970s, California utilities were projecting a demand growth which would have required a considerable expansion of baseload electric generating

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42. MILLER, *supra* note 34, at 49.

43. MILLER, *supra* note 34, at 49; *cf.* Application by El Paso Electric for Amendment of Presidential Permit and Amendment of Authorization to Transmit Electric Energy to Mexico, 55 Fed. Reg. 37,523 (Dep't Energy 1990) ("EPE's request for amendment of its export authorization is occasioned by a request from CFE to increase the amount of energy that EPE exports to the City of Juarez, Mexico, in order to allow more efficient planning and operation of the Trans-border power supply system in the region."). For a catalog of situations involving exports to Mexican towns which had no other source of supply, some as recently as 1988, see *supra* note 34.

44. *See* MILLER, *supra* note 34, at 55 (explaining that the Falcon Dam has periodically created a surplus on the Mexican side available for export to the United States).

45. MILLER, *supra* note 34, at 52 tbl. 4; 1980 ELECTRICITY EXCHANGES STUDY, *supra* note 32, at 8 fig. 2.1.

46. 1980 ELECTRICITY EXCHANGES STUDY, *supra* note 32, at 10, 13 tbl. 2.1.

47. *See* 1991 TRADE STUDY, *supra* note 10, at 9.

48. *See* 1991 TRADE STUDY, *supra* note 10, at 9; 1980 ELECTRICITY EXCHANGES STUDY, *supra* note 32, at 13 tbl. 2.1.

49. 1991 TRADE STUDY, *supra* note 10, at 5 tbl. 1.1; 1980 ELECTRICITY EXCHANGES STUDY, *supra* note 32, at 13 tbl. 2.1.

50. SAN DIEGO GAS AND ELECTRIC CO., AN ELECTRIC POWER GENERATING PLANT AND ENERGY EXPORT PROJECT LOCATED IN BAJA CALIFORNIA NORTE: A PROPOSAL TO LIC. JOSE LOPEZ PORTILLO, CONSTITUTIONAL PRESIDENT OF THE UNITED MEXICAN STATES (1977) [hereinafter SDG&E PROPOSAL] (copy on file with the author). *See also infra* notes 72-86 and accompanying text.

capacity.[51] California environmentalists became concerned that the electric utilities were planning to meet that projected demand growth by building nuclear power plants. In addition to the typical concerns regarding the nuclear fuel cycle, concerns arose over the land and water resources that such nuclear power development would entail.[52] Nuclear power plants require substantial amounts of water for cooling. Visions of nuclear power plants despoiling the California coastline and disturbing the coastline ecology with elevated water temperatures were a rallying point. The alternative of siting the nuclear power plants inland raised prospects of diverting scarce California water resources from more beneficial uses in the cities, the agricultural valleys, and instream flows. The key to resolving the conflict between satisfying projected demand for electricity and protecting the environment led to a focus on the accuracy of the demand projections.[53]

The California legislature, led by the Land and Resources Committee of the Assembly, commissioned the Rand Corporation[54] to advise it on the matter, and what eventually emerged was the Warren-Alquist Act.[55] This Act established a new state agency, the Energy Resources Development Commission (popularly known as the California Energy Commission (CEC)), whose principal charge was to consider utility applications for permits to construct thermal power plants greater than fifty megawatts generating capacity.[56] The regulatory scheme envisioned was remarkably farsighted and logical. It was the forerunner of what is now termed integrated resource planning.

The CEC was directed to develop a methodology to forecast short, medium, and long-term demand for electricity[57] against which applications

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51. *See* 1977 BIENNIAL REPORT OF THE STATE ENERGY COMMISSION, CALIFORNIA ENERGY TRENDS AND CHOICES, VOL. 1, TOWARD A CALIFORNIA ENERGY STRATEGY: POLICY OVERVIEW 31-45 (1977); *See generally* DAVID ROE, DYNAMOS AND VIRGINS 8 (1984) ("[I]ndustry forecasters were giving out very high growth estimates in the trade press (a hand calculator was all it took to translate the estimates into a doubling of electricity output every ten to fifteen years)"); W.E. MOOZ & C.C. MOW, RAND CORP., CALIFORNIA'S ELECTRICITY QUANDRAY: I. ESTIMATING FUTURE DEMAND, R-1084-NSF/CSRA, at v-vi (1972); R.H. BALL ET AL., CALIFORNIA'S ELECTRICITY QUANDARY: II. PLANNING FOR POWER PLANT SITING, R-1115-RF/CSA (1972); R.D. DOCTOR ET AL., CALIFORNIA'S ELECTRICITY QUANDARY: III. SLOWING THE GROWTH RATE, R-1116-NSF/CSA (1972).

52. *See* ROE, *supra* note 51, at 8-11; R.D. DOCTOR ET AL., CALIFORNIA'S ELECTRICITY QUANDARY: III. SLOWING THE GROWTH RATE, R-1116-NSF/CSA (1972).

53. For an example of demand forecasting, see W.E. MOOZ & C.C. MOW, RAND CORP., CALIFORNIA'S ELECTRICITY QUANDRAY: I. ESTIMATING FUTURE DEMAND, R-1084-NSF/CSRA (1972). *See generally* 1977 BIENNIAL REPORT OF THE STATE ENERGY COMMISSION, CALIFORNIA ENERGY TRENDS AND CHOICES, VOL. 1, TOWARD A CALIFORNIA ENERGY STRATEGY: POLICY OVERVIEW (1977) [hereinafter 1977 BIENNIAL REVIEW].

54. Some of the results of that commission include: W.E. MOOZ & C.C. MOW, RAND CORP., CALIFORNIA'S ELECTRICITY QUANDRAY: I. ESTIMATING FUTURE DEMAND, R-1084-NSF/CSRA, at v-vi (1972); R.H. BALL ET AL., CALIFORNIA'S ELECTRICITY QUANDARY: II. PLANNING FOR POWER PLANT SITING, R-1115-RF/CSA (1972); R.D. DOCTOR ET AL., CALIFORNIA'S ELECTRICITY QUANDARY: III. SLOWING THE GROWTH RATE, R-1116-NSF/CSA (1972).

55. Warren-Alquist State Energy Resources Conservation and Development Act, 1974 Cal. Stat. 501 (codified as amended at CAL. PUB. RES. CODE §§ 25000-25986 (Deering 1987 & Supp. 1994)).

56. 1974 Cal. Stat. 517-34 (codified as amended at CAL. PUB. RES. CODE §§ 25500-25542 (Deering 1987 & Supp. 1994)).

57. 1974 Cal. Stat. 510 (codified at CAL. PUB. RES. CODE § 25301 (Deering 1987)).

for power plant construction would be measured.[58] Before authorizing construction, the CEC had to make a specific finding that the power plant was "needed" to satisfy projected demand.[59] The "demand" the legislature envisioned was, however, a managed demand. For example, the CEC was directed to include in the demand forecast any conservation reasonably expected to occur.[60] To ensure that there was such conservation to take into account, the legislature directed the CEC to undertake a number of efforts to reduce demand such as developing appliance efficiency standards,[61] residential building standards,[62] and utility load management programs.[63] Obviously, such demand dampening efforts would obviate the need, to some extent, for new power plants.

Even with the great likelihood that conservation and load management could not fully obviate the need for new capacity, a power plant applicant still faced another challenge; the legislative scheme also managed the supply options. The Warren-Alquist Act expressed a preference for needed new capacity to be satisfied by generating technologies that have been variously termed as unconventional, renewable, or alternative. "Alternative" perhaps best captures the intent because the legislative scheme preferred technologies such as geothermal, solar, wind, biomass, and cogeneration that were alternatives to large nuclear or fossil fuel plants. The legislative scheme clearly exhibited such preferences through expedited siting procedures for small power plants[64] and for power plant applications utilizing certain technologies such as geothermal[65] and cogeneration.[66] Here too, the legislature specifically required the CEC to undertake active efforts to develop these alternative technologies.[67]

It was against this backdrop that San Diego Gas & Electric proposed to build a large fossil fuel generating plant in Baja California, Mexico, with the purpose of importing the generated power to Southern California.[68]

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58. 1974 Cal. Stat. 512-13 (codified as amended at CAL. PUB. RES. CODE §§ 25305(e), 25309 (Deering 1987)).

59. 1974 Cal. Stat. 528-30 (codified as amended at CAL. PUB. RES. CODE §§ 25523(f), 25524 (Deering 1987 & Supp. 1994)).

60. 1974 Cal. Stat. 512 (codified as amended at CAL. PUB. RES. CODE § 25305(e) (Deering 1987)).

61. 1974 Cal. Stat. 516 (codified as amended at CAL. PUB. RES. CODE § 25402(c) (Deering 1987)).

62. CAL. PUB. RES. CODE § 25402(a)-(b) (Deering 1987).

63. 1976 Cal. Stat. 6259 (codified as amended at CAL. PUB. RES. CODE § 25403.5 (Deering 1987)).

64. The original Warren-Alquist Act provided expedited siting procedures for preferred plants. A later amendment excluded the preferred plants from the "notice of intention" requirement. 1974 Cal. Stat. 534 (codified as amended at CAL. PUB. RES. CODE § 25541 (Deering 1987 & Supp. 1994)); 1978 Cal. Stat. 3101 (codified as amended at CAL. PUB. RES. CODE § 25540.6 (Deering 1987 & Supp. 1994)).

65. 1974 Cal. Stat. 534 (codified as amended at CAL. PUB. RES. CODE §§ 25540-25540.2 (Deering 1987 & Supp. 1994)).

66. Cogeneration was not specifically mentioned in the original Act, but most cogeneration projects at that time would probably have qualified for expedited siting procedures under the 100 Mw plant exception of section 25541. Section 25540.6 was eventually added to exempt from notice of intention requirements *any* cogeneration plant, regardless of size. 1978 Cal. Stat. 3103 (codified as amended at CAL. PUB. RES. CODE § 25540.6(a) (Deering 1987 & Supp. 1994)).

67. 1974 Cal. Stat. 535-36 (codified as amended at CAL. PUB. RES. CODE §§ 25601-25612 (Deering 1987)) (detailing methods of encouraging development of alternative energy sources).

68. *See* SDG&E PROPOSAL, *supra* note 50.

Shortly after the establishment of the CEC, SDG&E filed a Notice of Intention to construct the Sundesert nuclear power plant.[69] The proceedings before the CEC were contentious and extended, but eventually a portion of the power plant was reluctantly approved to proceed to the next stage of the siting process.[70] The debate then shifted to the California Public Utilities Commission (CPUC), where SDG&E sought approval of a financing plan that would facilitate construction of Sundesert.[71] The CPUC denied approval on the basis that the utility's financial situation was too precarious to undertake the financial burden of constructing a nuclear power plant without extraordinary rate relief.[72] In its order disposing of the matter, the CPUC directed SDG&E to pursue other options for satisfying its expected demand, focusing primarily on the purchase of power generated in Mexico.[73]

The CPUC mentioned this option specifically because SDG&E had made it known that it was well along in developing this option.[74] However, SDG&E had pursued this option for broader reasons than the anticipation of the outcome of Sundesert. The Sundesert outcome was but one of the many signals the electric utilities of the state were receiving that the days of constructing large baseload generating plants, nuclear or fossil fuel, by California utilities were over. Since the Warren-Alquist Act, the California

69. *See generally* CALIFORNIA ENERGY COMM'N, SUMMARY OF THE NOTICE OF INTENTION FOR SUNDESERT NUCLEAR PROJECT: BEFORE THE CALIFORNIA STATE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION (1976); CALIFORNIA ENERGY COMM'N, PRELIMINARY REPORT ON THE SAN DIEGO GAS AND ELECTRIC COMPANY'S NOTICE OF INTENTION TO SEEK CERTIFICATION FOR THE SUNDESERT NUCLEAR PROJECT (1977); CALIFORNIA ENERGY COMM'N, FINAL REPORT ON THE SAN DIEGO GAS AND ELECTRIC COMPANY'S NOTICE OF INTENTION TO SEEK CERTIFICATION FOR THE SUNDESERT NUCLEAR PROJECT (1977) [hereinafter CEC FINAL REPORT]; CALIFORNIA ENERGY COMM'N, APPENDIX FOR FINAL REPORT ON THE SAN DIEGO GAS AND ELECTRIC COMPANY'S NOTICE OF INTENTION TO SEEK CERTIFICATION FOR THE SUNDESERT NUCLEAR PROJECT (1977).

70. CEC FINAL REPORT, *supra* note 69, at iv. The Report noted that the Sundesert Project posed financial and regulatory problems. It recommended that SDG&E be required to, among other things, "file for approval of alternative powerplant projects which demand less capital investment, have shorter construction lead times and which offer long-term environmental advantages prior to prusuing [sic] certification of the Sundesert Project." The Report further recommended several alternatives to the nuclear project including "geothermal, repowered existing plants, and combined cycle plants which eventually could use gasified coal as a fuel." It concluded, "The existence of these options relieves the urgency of precipitous action to approve the Sundesert Plant." CEC FINAL REPORT, *supra* note 69, at iv. *See also* J.P. Smith & Lou Cannon, *Oil Firm Cancels Eastbound Pipeline; California Blamed,* WASH. POST, Mar. 14, 1979, at A4 (mentioning the long delays of the Sundesert nuclear project); *San Diego Gas & Elec. Co. Authorized to Increase Gas and Electric Rates*, 83 C.P.U.C. 617, 661 (1978); *Interim Order Re SDG&E's Resource Plan and Financial Liability*, 83 C.P.U.C. 707, 730 (1978) [hereinafter *Interim Order*]; *Application of SDG&E for Increase in Rates Granted*, 1 C.P.U.C.2d 644, 651 (1979).

71. *See San Diego Gas & Elec. Co. Authorized to Increase Gas and Electric Rates*, 83 C.P.U.C. 617 (1978); *Interim Order Re SDG&E's Resource Plan and Financial Liability*, 83 C.P.U.C. 707 (1978).

72. *See Interim Order Re SDG&E's Resource Plan and Financial Liability*, 83 C.P.U.C. 707, 730, 733-34 (1978).

73. *Interim Order*, *supra* note 70, at 733-34.

74. *Interim Order*, *supra* note 70, at 721 ("We'll pursue the Mexico project with vigor regardless of which plan is adopted."). SDG&E's interest in Mexico dated to April 1976. The company had conducted several independent studies regarding a project there. *Interim Order*, *supra* note 70, at 721. *See also* SDG&E PROPOSAL, *supra* note 50.

legislature had passed what were referred to as the "nuclear laws" which effectively ended the consideration of nuclear power plants as an option for California utilities.[75] The CEC also made it clear that it would be equally unreceptive to large in-state fossil-fueled plants. The utilities then turned to the strategy of building out-of-state coal-fired plants with the intent of importing the generated power. However, armed with the results of the sophisticated demand forecasting models it had developed, the CEC challenged the necessity for investment by California utilities in out-of-state coal-fired generating capacity.[76] In essence, the CEC was stating that the projected demand did not justify investment by the state's utilities in baseload capacity—whether in-state or out-of-state—and the CPUC was stating that the financial circumstances of the state's utilities did not permit them to invest in such capacity construction. The subtext was that it was environmentally unacceptable to serve the electricity demand of the California citizenry with large nuclear or fossil fuel plants sited in California or its neighboring states in the United States. Mexico was, however, a different matter.[77]

SDG&E's proposed Mexican project avoided the financial concerns raised by Sundesert because it was less expensive, less risky, and depended on Mexican financing backed by the obligation of SDG&E to pay for the purchased power.[78] The proposed Mexican project also avoided any major regulatory hooks by the principal California regulatory bodies. Neither the CEC's authority to construct nor the CPUC's certificate of public convenience and necessity was required. The proposed project also took advantage of abundant Mexican natural resources rather than scarce United States resources. While the United States had been experiencing natural gas shortages and oil supply problems, Mexican oil and natural gas production had been in ascendance. Although the United States had been casting covetous glances at Mexico's fossil fuel resources, many complications had developed to frustrate any immediate and visible access by the United States.[79] The proposed power plant would avoid such diplomatic complications because Mexico's oil would remain in Mexico and possibly be utilized in a Mexican power plant. Its transformation to electricity and subsequent sale to a United States electric utility would not be unlike the production of any other export good. It was believed that the symbolism attached to the alienation of Mexico's oil through export sales would be greatly attenuated

75. CAL. PUB. RES. CODE §§ 25524.1-25524.3 (Deering 1987 & Supp. 1994).

76. *See generally* ROE, *supra* note 51, at 157-196 (1984) (recounting the fall of the Allen-Warner Valley Project, a coal plant planned for Utah by PG&E); 1977 BIENNIAL REPORT, *supra* note 53, at 39-42.

77. Commissioner Dedrick was the only one to recognize the environmental illogic of recommending generation in Mexico as an alternative. She stated that if it was unacceptable for California utilities to pollute California that it should be equally unacceptable to pollute neighboring Mexico. *Interim Order*, *supra* note 70, at 742-43.

78. SDG&E PROPOSAL, *supra* note 50.

79. *E.g.*, J.P. Smith, *2 Senators are Critical of Schlesinger Favoritism on Alaska Gas Production*, WASH. POST, Jan. 11, 1979, at A3 (stating that Energy Secretary James R. Schlesinger implemented the policy of favoring domestic gas production over imports from Mexico).

when it came to export sales of electricity generated from Mexican oil. And, finally, what facilitated the proposal was that California's environmentalists were, at the time, more concerned about the environmental effects of such power plants in their own backyard and less so with those in Mexico's backyard.[80]

The proposed Mexican power plant was never built. However, SDG&E's efforts to develop a reliable source of power in Mexico did bear fruit of equally great significance. It built instead two 230 kv transmission lines to Mexico.[81] The construction of these lines was predicated on the phased construction by Mexico's national utility, CFE, of approximately 610 megawatts of capacity from geothermal power plants located in the Cerro Prieto geothermal fields in Baja California, Mexico.[82] The power generated by these plants was to be exported to two California utilities, San Diego Gas & Electric and Southern California Edison. Not only did the exports from Cerro Prieto reverse the net transfer of power from the WSCC system to Mexico,[83] they also reversed the net transfer of electricity from the United States to Mexico,[84] notwithstanding that ERCOT continued to maintain a net transfer of power to Mexico.[85] In recent years, the level of the net power transferred from Mexico has declined as Mexican demand has increased.[86]

III. Factors Affecting Future Transfers

Since the 1950s, when power transfers truly became exchanges and began to flow both ways, there has been a cyclical variation in the net power transferred between the United States and Mexico.[87] The pattern is a gradual increase in transfers to the other country over half a decade, followed by a gradual decrease over half a decade, a reversal of the power flow, and the pattern then repeats itself on the other side of the border. (It may be coincidence, but perhaps not, that the lead time for planning, development, and construction of a baseload power plant is about ten years.) For example, in the 1970s net transfers to Mexico were increasing. At the same time, CFE was completing the nationalization of the electricity industry in Mexico.[88] As the nationalization was finalized along the northern

80. *See supra* note 77.

81. Presidential Permit for Proposed Imperial Valley-La Rosita Transmission Line, 48 Fed. Reg. 54,859 (Dep't Energy 1983) (finding no significant impact).

82. *See* Juan Eibenschutz, *Recursos Geotermicos en la Frontera Noroccidental, in* The U.S. Mexico Border Region: Anticipating Resource Needs and Issues to the Year 2000, at 263-69 (César Sepúlveda & Elbert E. Utton eds., 1982).

83. *Compare* 1980 Electricity Exchanges Study, *supra* note 32, at 13 tbl. 2.1 *with* 1991 Trade Study, *supra* note 10, at 3-8 (chronicling at, 5 tbl. 1.1, the change in the pattern of exchanges with Mexico). *See generally* Mexico's Energy Resources 77-85 (Miguel S. Wionczek & Ragaei El Mallakh eds., 1985) (explaining the role of geothermal resources in CFE's plans to increase Mexican capacity).

84. *See* sources cited *supra* note 83.

85. *See* sources cited *supra* note 83.

86. *See* sources cited *supra* note 83.

87. *See* sources cited *supra* note 83.

88. Miller, *supra* note 34, at 53-54.

frontier, CFE increased capacity and improved its transmission system along its side of the border.[89] This led to a lessened need for power from the United States, resulting in a steady decrease in the net power transferred to Mexico.[90] During the early 1980s, the direction of the net power transfers reversed, owing to imports from the Cerro Prieto geothermal fields, and the net power transferred from Mexico to the United States gradually increased to a peak in the mid 1980s.[91] As Mexican demand increased and absorbed the generated Mexican power, and as generating capacity in the United States began to increase,[92] the net power transferred from Mexico began to decrease.[93] In essence, during these decades, this symbiotic power relationship between the two countries was leading to a rationalization of generating capacity along the border. No doubt this was facilitated by a diminishing gap in systems reliability, improved interconnections, and increased coordinated operations between CFE's border systems and the WSCC and ERCOT systems.

What then does the future hold for power exchanges between the two countries? If the past is any guide, then the two countries are poised for the beginning of what will eventually be substantial transfers of power from the United States to Mexico. The "giant sucking sound" spoken of during the 1992 Presidential debates might not turn out to be jobs,[94] but it might turn out to be power transfers to Mexico. Net power transfers from Mexico are diminishing, indicating the approach of the next phase of the rationalization cycle of the past several decades, that is the reversal of the flow and subsequent increases in transfers from the United States to Mexico. Consistent with this is the fact that the rate of increase in demand for power along the United States side of the border is fairly low and constant at around 2% per year,[95] while the rate of increase in demand for power along the Mexican side of the border is estimated to be 6% to 7% per year.[96] At this rate of demand growth, Mexico would have to double its

89. 1980 ELECTRICITY EXCHANGES STUDY, *supra* note 32, at 10.

90. 1980 ELECTRICITY EXCHANGES STUDY, *supra* note 32, at 10, 8 fig. 2.1.

91. 1991 TRADE STUDY, *supra* note 10, at 5 tbl. 1.1.

92. California, the destination for Cerro Prieto power, in particular began to develop a capacity surfeit due to the rapid development of qualifying facilities from which the California utilities were obligated to purchase power. *See* CALIFORNIA ENERGY COMM'N AND CALIFORNIA PUB. UTIL. COMM'N, REPORT TO THE LEGISLATURE ON: JOINT CEC/CPUC HEARINGS ON EXCESS GENERATING CAPACITY: SB 1970 (1987).

93. *See* 1991 TRADE STUDY, *supra* note 10, at 5 tbl. 1.1.

94. George F. Will, *Free Trade, Faster Change*, WASH. POST, Oct. 11, 1992, at C7 ("Ross Perot, the timidest Texan, quakes about the menace of Mexico, saying NAFTA would apply 'a giant sucking-sound vacuum on what used to be industrial America.' ").

95. John P. Mathis & Miguel S. Escobedo, *Mexico's Open Door to Cogeneration and Independent Power*, 14 ENERGY L.J. 285, 297 (1993).

96. Pre-NAFTA Mexico's National Program of Energy Modernization predicted a domestic consumption growth rate of 6.5% to 7.2% annually between 1989 and 1994. 1991 TRADE STUDY, *supra* note 10, at 44. CFE's 1992-1993 Annual Report stated that the growth rate experienced in the preceding 10 years had been 6.4%. *See* INFORME DE LABORES, 1992-1993, COMISIÓN FEDERAL DE ELECTRICIDAD (1993). Post-NAFTA estimates predict a similar 6% to 7% annual growth rate. Marie Leone, *Washington Update*, POWER, Dec. 1993, at 9. Early post-NAFTA projections may not have taken increased growth in the maquiladora industry into account. This seems probable in light of

generating capacity every decade. Mexico does not have the financial wherewithal to finance such capital investment in the electricity sector unless it changes its infrastructure development priorities.[97] Thus, although there might be some unique situations in which the localized demand/supply circumstances might result in Mexican capacity expansion of sufficient scale such that exports to the United States are likely to occur for a while, on the whole, the net power flows will be from the United States to Mexico during the coming decade.[98]

Greatly assisting this projected future are three significant initiatives undertaken by the United States and Mexico. Two involve domestic statutory initiatives, and one is an international agreement. Their effects will converge and increase, even more than otherwise would have been experienced, the amount of power transfers from the United States to Mexico. These initiatives are the United States Energy Policy Act of 1992 (EPAct),[99] the Mexican Decree Amending The Public Electric Service Law (Decree),[100] and the North American Free Trade Agreement (NAFTA).[101] EPAct and the Decree are regulatory initiatives that dramatically reform the structure of the electric industry in their respective countries by, among other things, greatly multiplying the number of buyers and sellers of electric power and by making available, to different degrees, the transmission grid as a channel for transporting power from producers to wholesale and/or retail consumers. These regulatory initiatives will enhance the possibility of Mexico's demand finding willing suppliers from the United States. NAFTA's direct effect on electricity trade between the United States and Mexico will be minimal. Rather than breaking any new ground, NAFTA simply acknowledges the changes in the Mexican electricity sector. The increased trade resulting from NAFTA, however, is also likely to increase,

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Mexico's increases of 8% to 10% in its annual demand through the 1970s and 1980s. *See* Mathis & Escobedo, *supra* note 95, at 297; 1991 TRADE STUDY, *supra* note 10, at 44. For an estimate of the maquiladora effect on demand, see 1991 TRADE STUDY, *supra* note 10, at C-30, where it is estimated that approximately 300 maquiladora plants will produce an average electrical load growth of 216 Mw on the ERCOT system.

97. In the late 1970s Mexico faced a similar demand growth rate, and CFE was unable to finance the necessary capital investment in generating capacity. CFE was bailed out of its financial problems by PEMEX, the national oil utility, which was reaping the benefits of the spectacular rise in oil prices, but it led to a moderated capacity development program. *See* COMISIÓN FEDERAL DE ELECTRICIDAD, PLAN DE DESARROLLO DEL SECTOR ELECTRICO NACIONAL 1977-1986 (1978); Mathis & Escobedo, *supra* note 95, at 297-98.

98. The recent Mexican decree regarding their electricity laws may have a confounding effect on this overall trend. *Decreto que reforma, adiciona y deroga diversas disposiciounes de la Ley del Servicio Público de Energía Eléctrica* [*Decree Amending the Law on the Public Service of Electric Power*], DIARIO OFICIAL DE LA FEDERACION, Dec. 23, 1992, at 2-8 [hereinafter *Mexican Decree*]. *See* discussion *infra* part III.B.

99. Pub. L. No. 102-486, 106 Stat. 2776 (codified as amended in scattered sections of 11, 15, 16, 25, 26, 30, 42, 43, 48 U.S.C.).

100. *Mexican Decree*, *supra* note 98.

101. North American Free Trade Agreement between the Government of the United States of America, the Government of Canada, and the Government of the United Mexican States, Dec. 17, 1992 [hereinafter NAFTA].

even more, the already high Mexican demand for electricity, especially along the border.

A. Energy Policy Act of 1992

In October of 1992 President Bush signed into law the Energy Policy Act of 1992.[102] This legislative act was as momentous an event to the electric industry as the Public Utility Holding Company Act of 1935 (PUHCA)[103] and the Public Utilities Regulatory Policies Act of 1978 (PURPA)[104] had been. The former asserted federal power over the electric industry for the purpose of regulating in the national interest, while the latter asserted federal power over the same industry for the purpose of deregulating in the national interest. Perhaps not so coincidentally these legislative milestones were born in the midst of an economic crisis and an energy crisis, respectively. They were, however, different solutions for different times. The former was directed at taming the negative effects of unregulated markets, while the latter was directed at unleashing market forces from overregulation.

The Energy Policy Act of 1992 (EPAct) continued the deregulatory evolution of the electric industry. The great increase of non-utility generator (NUG) electricity resulting from PURPA and the Federal Energy Regulatory Commission's (FERC's) case-by-case approval of IPPs led to a recognition that a significant barrier to a continued evolution of the market was lack of access by NUGs to the utility transmission grid. Although PURPA had obligated the local utility to purchase a QF's power, the local utility was usually the only buyer.[105] And although a distant wholesale or retail customer might be interested in a particular IPP's power, there remained the significant problem of negotiating the wheeling[106] of that power through one or more intervening utility service areas.

Utilities had traditionally been reluctant to wheel electricity, and the Supreme Court had held that the FERC had no authority to order wheeling under section 202(b) of the Federal Power Act.[107] The law regarding FERC's authority to do so under other provisions of the Federal Power Act, however, remained unclear.[108] Statutory clarification, in favor of

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102. Pub. L. No. 102-486, 106 Stat. 2776 (codified as amended in scattered sections of 11, 15, 16, 25, 26, 30, 42, 43, 48 U.S.C.).

103. Pub. L. No. 74-333, 49 Stat. 803 (codified as amended in 15 U.S.C. §§ 79 to 79z-6 (1988 & Supp. V 1993)).

104. Pub. L. No. 95-617, 92 Stat. 3117 (codified as amended in scattered sections of 15, 16, 42 U.S.C.).

105. PURPA § 210, 16 U.S.C. § 824a-3 (1988 & Supp. V 1993). In many circumstances QFs sold their power to on-site affiliated industries. In some circumstances, they could sell power to nearby unaffiliated entities. CAL. PUB. UTIL. CODE § 218 (Deering 1990).

106. "Wheeling" is usually the industry term used to refer to the transportation of power from one party to another through a third party's transmission lines.

107. Otter Tail Power Co. v. United States, 410 U.S. 366, 375 (1973) ("So far as wheeling is concerned, there is no authority granted the Commission, under Part II of the Federal Power Act to order it, for the bills originally introduced contained common carrier provisions which were deleted.").

108. Floyd L. Norton, IV & Michael B. Early, *Limitations on the Obligations to Provide Access to Electric Transmission and Distribution Lines*, 5 ENERGY L.J. 47, 51 (1984) ("In summary, the

access, was widely perceived to be desirable.[109] The EPAct addressed these concerns. It provided:

> Any electric utility, Federal power marketing agency, or any other person generating electric energy for sale for resale, may apply to the Commission for an order . . . requiring a transmitting utility to provide transmission services (including any enlargement of transmission capacity necessary to provide such services) to the applicant.[110]

The EPAct further provided that the transmitting utility's "rates, charges, terms, and conditions shall promote the economically efficient transmission and generation of electricity and shall be just and reasonable, and not unduly discriminatory or preferential."[111] All this is predicated on the FERC finding that the ordering of such wheeling would be in the "public interest."[112]

In addition to deregulating transmission, the EPAct also furthered the federal policy of deregulating generation which began with PURPA's encouragement of non-utility generation through the statutory provisions which gave rise to QFs.[113] EPAct's contribution was a new class of non-utility generator, the "exempt wholesale generator."[114] An exempt wholesale generator (EWG) is defined as a person determined by the FERC that owns or operates directly or indirectly, and exclusively, a facility generating and selling electricity at wholesale.[115] Prior to the EPAct, a non-utility generator, then termed an independent power generator or IPP, that was not a QF, faced considerable regulatory impediments and was subject to FERC regulation on terms and conditions that were decided on a case-by-case basis.[116] Recognizing that the case-by-case determinations were creating a significant barrier to entry to the power generation market, the FERC had

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Commission has no authority to compel a utility to accede to a request to wheel power to *retail* customers; has limited but as yet unprecisely defined authority under Section 211 [of the Federal Power Act] to order a utility to wheel wholesale power; and may have authority (this issue is unresolved) to order wheeling pursuant to Sections 205 and 206 [of the Federal Power Act] as a remedy for uncompetitive conduct.").

109. Richard J. Pierce, Jr., *A Proposal to Deregulate the Market for Bulk Power*, 72 VA. L. REV. 1183, 1185 (1986) ("Since the 1940s, scholars have identified substantial costs and inefficiencies attributable to present methods of regulating the electricity industry."). *But see* PAUL L. JOSKOW & RICHARD SCHMALENSEE, MARKETS FOR POWER: AN ANALYSIS OF ELECTRIC UTILITY DEREGULATION 198 (1983) (concluding that deregulation should occur "slowly, if at all").

110. Energy Policy Act § 721(1), 16 U.S.C. § 824j(a) (Supp. V 1993).

111. Energy Policy Act § 722(1), 16 U.S.C. § 824k(a) (Supp. V 1993).

112. Energy Policy Act § 721(2), 16 U.S.C. § 824j(a) (Supp. V 1993). There may be a tension between regulating in the "public interest" and "promoting economically efficient transmission and generation." *See* Peter Fox-Penner, *Efficiency and the Public Interest: QF Transmission and The Energy Policy Act of 1992*, 14 ENERGY L.J. 51 (1993).

113. *See* H.R. CONF. REP. NO. 1018, 102d Cong., 2d Sess. 138 (1992), *reprinted in* 1992 U.S.C.C.A.N. 1954, 1961-63 (outlining the goal of the EPAct to free IPPs from the limits of PUHCA, taking PURPA to its next logical step).

114. Energy Policy Act § 711, 15 U.S.C. § 79z-5a (Supp. V 1993) (adding a new § 32 to the Public Utility Holding Company Act).

115. *Id.*

116. *See* Regulations Governing Independent Power Producers, 53 Fed. Reg. 9327 (1988) (to be codified at 18 C.F.R. pts 38, 382).

issued a Notice of Proposed Rulemaking that would have led to facilitating IPP development.[117] The rulemaking, however, was overtaken by EPAct's provisions creating EWGs, so the rulemaking was terminated.[118] EWGs are essentially exempt from the restrictions of the Public Utility Holding Company Act (PUHCA).[119] Thus, a facility which qualifies as an EWG may be an independent business entity, it may be owned by other unrelated business entities, it may be an affiliate of an electric utility, it may be a QF, and it might also be a power broker and marketer.[120] In summary, an EWG is a new and powerful player in the wholesale power market. As of July 7, 1994, the FERC had received 159 EWG applications and had approved 112 of them, leading FERC Commissioner Massey to conclude, "From this and other evidence, one can conclude that competition among new wholesale generation is flourishing."[121]

The implication for power transfers across the border after the EPAct is clear. Not only have the generators in the wholesale generation market been increased significantly, any generator of electricity (utility, EWG, or QF) anywhere in the United States has the right to have its power transported to a wholesale buyer at the United States-Mexico border. Moreover, if the transmission capacity is lacking to do so, the EPAct has given the FERC the authority to order enlargement of the transmission capacity so that the seller may be provided the requested transmission service. Lack of contiguity to the Mexican border is no longer a barrier to other utility or non-utility electricity generators selling their power to Mexico. Similarly, should the occasion require it, Mexican generated power can also flow much more easily beyond the service areas of the utilities enjoying contiguity with Mexico. Much imported electricity, after original purchase by a few United States utilities, is marketed again, moving to a broader spectrum of utilities and deeper into the interior of the country. It has been estimated that sixty-two percent of imported electricity was remarketed in 1989.[122] Essentially, the transmission facilities of the electric utilities subject to federal jurisdiction will be transformed by the EPAct to wholesale common carriers.

EPAct's influence extended well beyond the actual legislation, however. A significant deregulatory initiative that did not make it into the

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117. *Id.*

118. Order Terminating Proceedings, *Cogeneration; Small Power Production*, 64 F.E.R.C. ¶ 61,364 (1993).

119. *Filing Requirements and Ministerial Procedures for Persons Seeking Exempt Wholesale Generator Status*, III F.E.R.C. STATS. & REGS. ¶ 30,964 (1993), *amended by* 63 F.E.R.C. ¶ 61,055 (1993). The filing requirements are streamlined. The Commission estimates the reporting burden to be approximately eight hours, and it limits interventions or comments which might delay EWG determinations. *Id.*

120. *Id. See* 15 U.S.C. § 79z-5a (Supp. V 1993).

121. *Hearings Before the Subcomm. on Energy and Power*, FED. NEWS SERVICE, July 14, 1994 (testimony of William L. Massey, F.E.R.C. Commissioner) [hereinafter Massey Testimony].

122. ENERGY INFORMATION ADMIN., U.S. ELECTRICITY TRADE WITH CANADA AND MEXICO, DOE/EIA-0553, at 29 (1992).

EPAct, Regional Transmission Groups (RTGs),[123] but which has been avidly pursued by the FERC in its implementation of the EPAct,[124] also has significant potential to facilitate power transfers across borders. FERC Commissioner Massey recently elaborated on the potential of RTGs:

> The idea of an RTG, in its simplest form, is to allow all of the operators and users of the transmission grid in a region—public utilities, municipals, rural electric cooperatives, IPPs, EWGs, and power marketers—jointly to decide the rules for using and expanding that grid. A consensual regional organization should have the flexibility to track the expected regional evolution of competitive bulk power markets. An RTG is a *proxy for open access* that gives the transmission have-nots a real say in formulating the transmission rules of the road, facilitates regional transmission and generation planning, and provides an important bridge between federal and state regulators in the transition to a more competitive wholesale environment. The Commission intends to grant a measure of deference to RTG decision-making.[125]

FERC's interest in RTGs led it to adopt a policy statement encouraging the formation of RTGs that identified the minimum elements of a desirable RTG agreement.[126] Reflecting EPAct's nexus, the FERC wants membership in an RTG to be open to everyone eligible to obtain, or subject to, a transmission order by the FERC.[127] Geographically, an RTG must be large enough in area to allow for reliable, efficient, and competitive transmission services.[128] RTG members should provide transmission service to other members on an open access basis.[129] Finally, an RTG should include fair and nondiscriminatory governing procedures and voluntary dispute resolution procedures.[130]

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123. Massey Testimony, *supra* note 121 ("As the Subcommittee is aware, legislation on RTGs was considered during negotiations on the Energy Policy Act. In fact, many of the interested parties eventually agreed on a 'consensus' RTG proposal, but by then it was apparently too late for inclusion in the final legislation hammered out by the conferees.").

124. Massey Testimony, *supra* note 121.

125. Massey Testimony, *supra* note 121 (emphasis added).

126. Policy Statement Regarding Regional Transmission Groups, 58 Fed. Reg. 41,626 (1993) (to be codified at 18 C.F.R. pt. 2) [hereinafter RTG Policy Statement]. The FERC encouraged the formation of RTGs under its guidelines as a means of curbing resort to sections 211 and 213 as a means of attaining transmission access. The FERC acknowledged in its RTG Policy Statement that it does not have the power to "certify" RTGs. It explained:

> However, under section 205(c) of the FPA, public utilities must file with the Commission the classifications, practices, and regulations affecting rates and charges for any transmission or sale subject to the Commission's jurisdiction, together with all contracts which in any manner affect or relate to such rates, charges, classifications, and services. Thus, a governing agreement or other RTG-related agreement that in any manner affects or relates to jurisdictional transmission rates or services must be approved or accepted by this Commission as just, reasonable, and not unduly discriminatory or preferential under the FPA. Accordingly, in addition to adopting a general policy of encouraging the development of RTGs, we believe it is also important to provide guidance regarding the basic components that should be included in RTG agreements in order to satisfy FPA requirements.

Id.

127. RTG Policy Statement, *supra* note 126.

128. RTG Policy Statement, *supra* note 126.

129. RTG Policy Statement, *supra* note 126.

130. RTG Policy Statement, *supra* note 126.

The FERC is clearly aware that RTGs present an oppositional thrust at the other well established regional power groups such as power pools or regional reliability councils like WSCC or ERCOT.[131] The FERC has, however, been concerned that such power pools or reliability councils have been dominated by the larger utilities in those institutions with little or no input from other users.[132] For example, recently some members of the Northeast Power Pool (NEPOOL) attempted to limit NEPOOL's preferential transmission tariffs to new projects of 600 MW or more.[133] Small New England utilities filed a complaint before the FERC and a lawsuit in state court claiming that the proposal by larger utilities was anticompetitive and violated existing contractual obligations.[134] The end result was not only a settlement that terminated the proposal but which also initiated a review by NEPOOL of its basic structure and possible creation by some members of an RTG.[135] These established institutions are having some difficulties accommodating the expected changes and have been inconsistent in their approaches. The Western Systems Coordinating Council, for example, has accepted at least two independent power producers as members,[136] and the North American Electric Reliability Council is asking its other regional constituents to consider similar actions on their way to becoming RTGs.[137] On the other hand, the Western Systems Power Pool recently forced a class of non-utility generators, Qualifying Facilities under PURPA, to accept modifications to their entitlement of avoided costs in exchange for membership in the power pool.[138] This has raised basic issues regarding the power structure within the power pool and the implications for RTGs.[139] Nonetheless, it is clear that regional transmission organizations are the near-term bridge in the transformation of the electrical industry to a more fully competitive wholesale market.

The implications of open access of transmission for the facilitation of power transfers across borders are, however, quite clear. In recent, con-

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131. RTG Policy Statement, *supra* note 126.

132. RTG Policy Statement, supra note 126.

133. *NEPOOL 30th Amendment Supporters Stop Efforts, Eyeing Comparability Standards,* NORTHEAST POWER REP., Aug. 5, 1994, at 1.

134. *Id.*

135. The article continues:

> NEPOOL has recently started reviewing whether its 20 year old founding agreement needs to be rewritten to meet the changing structure of the power industry. The question of such benefits as preferential transmission rates is expected to be a key topic in light of the likely expansion of pool membership to include non-utility generators and the growing reluctance of large pool members to bear extra costs. New England Electric System has also floated a proposal for a regional transmission group which includes new approaches to transmission tariffs in the region.

Id.

136. *See WSSC [sic] Approves Three New Members,* ENERGY DAILY, Apr. 5, 1994; *WSCC Adds Members; Makes New Rules,* ELECTRICAL WORLD, Feb. 1994, at 14.

137. *NERC Opening Membership to IPPs,* ENERGY REP., Dec. 6, 1993.

138. *Group Petitions FERC to Force WSPP to Accept QFs on "Compromise" Terms,* ELEC. UTIL. WK., Nov. 29, 1993, at 8.

139. *Experience with WSPP Provides A Lesson for RTG Development,* INSIDE F.E.R.C., Dec. 6, 1993, at 13.

gressional testimony the President of the California Public Utilities Commission (CPUC) stated:

> I . . . assert a view of the electric industry as having assumed a physical reality which defies the jurisdictional claims of any existing institution of government in North America. Our common purpose is to harness efficiency gains in an electric grid which, as we speak, encompasses eleven western states, two Canadian provinces, and the Mexican states of Sonora and Baja California Norte. Seen in this perspective it is evident that the authority of my Commission or any other instrumentality of the State of California is inadequate, if not irrelevant, to electrons which show no respect for those who would assert authority under the Tenth Amendment.[140]

Indeed, the purpose of the testimony was to set before Congress the CPUC's own contribution to that "reality," the CPUC's proposal to restructure the California electrical industry through retail wheeling.[141] Unwittingly undermining the CPUC's stated purpose of furthering state interests, the CPUC's proposal has invited federal intrusion more deeply into the states' regulation of electricity than the FERC would have ventured on its own, at this point in time.[142] Ironically, the olive branch of "cooperative federalism" proffered by the CPUC to the sharp federal response claiming jurisdiction over retail wheeling has, in other arenas, proven to be no more than a face saving euphemism for federalization of state administrative agencies.[143]

Nonetheless, regardless of the complications added by the CPUC's restructuring proposal, the real prospect of wheeling, concomitant structural changes in the electrical industry, and marketing developments will facilitate the transport of electricity throughout the highly integrated transmission grid north of Mexico. Indeed, the first two RTGs which have filed for FERC approval are immediately north of the border, the Western Regional Transmission Association and the Southwest Regional Transmission Association.[144] Another near term structural proposal which will further the same end is a high voltage line to carry power from New Mexico to

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140. *Hearings Before the Subcommittee on Energy and Power United States House of Representatives*, FED. NEWS SERV., July 21, 1994 (testimony of Daniel W. Fessler, President of the California Public Utilities Commission).

141. Commission's Proposed Policies Governing Restructuring California's Electric Services Industry and Reforming Regulation, 1994 Cal. P.U.C. LEXIS 336 (April 20, 1994).

142. *California Wheeling Program Destined for Supreme Court Debate, Tierney Says*, ENERGY REP., June 20, 1994 ("The California Public Utilities Commission plan to allow direct access to electricity for wholesale and retail customers is a self-defeating proposal bound to be mired in lengthy legal wrangling, warned Susan Tierney, the Energy Dept.'s assistant secretary for domestic and international energy policy."); *Moler Hopes To Work With States On Utility Transition, But. . .*, ENERGY DAILY, June 23, 1994 ("[I]t is seen as inevitable that the situation will set up a conflict between FERC and the states over who ultimately has retail wheeling authority. And such a conflict appears to be brewing at the California Public Utilities Commission, which took a large step toward retail wheeling with its utility restructuring proposal."). The Energy Policy Act of 1992 prohibits the FERC from ordering retail wheeling, but the FERC asserts that such transactions, however they occur, should be done at FERC approved rates. *Id.*

143. *See Project: The Role of Preemption in Administrative Law*, 45 ADMIN. L. REV. 107, 195-224 (1993).

144. *RTGs Await FERC Okay, Pricing Scheme*, ELECTRICAL WORLD, Aug. 1994, at 14.

Mexico.[145] The Department of Energy has in fact recommended a number of other transmission enhancements to facilitate power transfers between the United States and Mexico.[146] On the generation side, EWGs are multiplying and are looking for markets to serve. EWGs and QFs are joining existing power pools and regional reliability councils in order to further marketing of their power. The prospect of a competitive wholesale power market has also induced the development of wholesale power brokers and marketers. The FERC has already approved several of them.[147] In a recent and notable development, a power marketing group applied for an authorization to export power from the United States.[148] This is the first such application from a power marketer and, perhaps, a harbinger of more to come. In addition, there is an interesting variant of power broker and marketer whose activities fall outside FERC's jurisdiction—as long as they do not take title to the power they broker and market.[149] In summary, due to the Energy Policy Act of 1992, never before have regulatory and market conditions been so propitious for the movement of substantial amounts of power from the United States to Mexico.[150]

B. Decree Amending the Public Power Service Law

Several months after President Bush signed the Energy Policy Act of 1992, President Salinas of Mexico signed the Decree Amending the Public Power Service Law.[151] Although it could be said that the Decree was no more than Mexico's equivalent of the United States's Public Utilities Regulatory Policies Act of 1978, the political distance it had to travel was much greater. The Decree reversed a nationalization of the electricity sector that had taken most of the century to complete.[152] The structural change wrought in the Mexican electric industry by the Decree was of historic dimensions.

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145. Application for a Presidential Permit, Southwestern Public Service Co., 56 Fed. Reg. 65,476 (1991).

146. *See generally* 1991 TRADE STUDY, *supra* note 10, at 121-23.

147. *Heartland Energy Servs., Inc.*, 68 F.E.R.C. ¶ 61,223 (1994) (receiving FERC approval); *LG&E Power Mktg., Inc.*, 68 F.E.R.C. ¶ 61,247 (1994) (receiving FERC approval).

148. Application for Authorization to Export Electricity, Western Systems Power Pool, 59 Fed. Reg. 24,407 (1994).

149. *Citizens Energy Corp.*, 35 F.E.R.C. ¶ 61,198 (1986); *Howell Gas Management Co.*, 40 F.E.R.C. ¶ 61,336 (1987).

150. *See* MARK W. FRANKENA & BRUCE M. OWEN, ELECTRIC UTILITY MERGERS: PRINCIPLES OF ANTITRUST ANALYSIS 48 (1994). Documenting the increase in electric power purchases, they write:

> Power purchases by investor-owned utilities from other utilities increased almost continuously from around 224,000 gigawatt-hours in 1975 to 479,000 gigawatt-hours in 1991. Annual interchanges (exchanges) among investor-owned utilities during this period ranged between 154,000 gigawatt-hours (in 1991) and 412,000 gigawatt-hours (in 1985). By comparison, investor-owned utility generation was 1,487,000 gigawatt-hours in 1975 and 2,213,000 gigawatt-hours in 1991.

Id.

151. *Mexican Decree, supra* note 98.

152. Mathis & Escobedo, *supra* note 95.

The Mexican revolution of 1910 was born out of the disaffection of the Mexican people with the long-standing regime of Porfirio Diaz whose strategy for the development of Mexico was to attract foreign investment through concessions of most of Mexico's abundant natural resources.[153] Such a strategy led to a domination of Mexico's economy by foreign companies.[154] The electricity industry was no exception. British, American, and Canadian companies invested and developed much of Mexico's hydroelectric capability.[155] Major load centers were served by these foreign-owned companies.[156] Many of these companies also served affiliated business interests.[157] Mexicans felt that these companies were not only overly lucrative but that they discriminated in their pricing in favor of their affiliated businesses and other foreign enterprises.[158] Whether or not this was the case is disputed,[159] but the electricity sector was one of the industries which became a focus of the post-revolution appropriative effort.

Nevertheless, from its inception electricity was treated differently, with less nationalistic emotion, and with little urgency for the necessity of its expropriation. For example, Article 27 of the Mexican Constitution of 1917 declared the nation to be the sole owner of all minerals, including petroleum.[160] Article 28 reserved certain "strategic sectors" for exclusive control by the Mexican government.[161] Electricity was not one of them. It was not until 1973 that Article 27 of the Mexican Constitution was amended to state that, "It is exclusively a function of the nation to generate, conduct, transform, distribute and supply electric power, which is to be used for public service."[162] It is notable that this constitutional declaration of the "Mexicanization" of the electric sector occurred thirteen years after the acquisition by the Mexican national utility, CFE, of the last two major remaining foreign utility companies.[163] It is also notable that this acquisition occurred not by the firing of a revolutionary shot or the physical taking and occupation of these facilities, but by the purchase of the stock of those companies on the New York Stock Exchange.[164] Although the consummation of the purchase was perhaps overstated as "a step comparable to the land reform of the early Revolution and to the expropriation of the oil

153. *See* Miguel S. Wionczek, *Electric Power: The Uneasy Partnership, in* PUBLIC POLICY AND PRIVATE ENTERPRISE IN MEXICO (Raymond Vernon ed., 1964); Miguel S. Wionczek, *The State and the Electric-Power Industry in Mexico, 1895-1965,* 39 BUS. HIST. REV. 527 (1965); *see generally* JOHN T. MILLER, JR., FOREIGN TRADE IN GAS AND ELECTRICITY IN NORTH AMERICA: A LEGAL AND HISTORICAL STUDY (1970).

154. *See* sources cited *supra* note 153.

155. *See* sources cited *supra* note 153.

156. *See* sources cited *supra* note 153.

157. *See* sources cited *supra* note 153.

158. *See* sources cited *supra* note 153.

159. *See* sources cited *supra* note 153.

160. Mathis & Escobedo, *supra* note 95, at 287.

161. Mathis & Escobedo, *supra* note 95, at 287.

162. Fernando Flores-Garcia, *Aspects of Mexican Energy Regulation,* 25 TEX. INT'L L.J. 359, 360 (1990).

163. *See* Mathis & Escobedo, *supra* note 95, at 289-90.

164. Mathis & Escobedo, *supra* note 95, at 289.

industry by [President] Cardenas in 1938," this still falls short of the characterization of the oil expropriation as a "transcendental act within the public life of the country."[165]

While the history of the nationalization of the oil and electricity sectors shared the pattern of balancing nationalism with pragmatism,[166] they had little else in common. The oil expropriation was an act of sovereignty, a taking by force. The consummation of the nationalization of the electric sector was a corporate transfer, a voluntary act of commerce. The former dealt with an indelible raw resource, a primal issue of nature, the "juices of the earth" claimed by King Charles III in the mineral law for the New Spain of 1783.[167] The latter dealt with an invisible intermediate product of the scientific age whose ethereal nature was to preoccupy the United States Supreme Court[168] almost two centuries subsequent to the more material Spanish royal preoccupation.

This temporal distance from the core of Mexican nationalism, this "otherness"[169] of electricity, facilitated the alienation of electricity from the national patrimony. The Decree Amending the Public Power Service Law permitted private firms, both domestic and foreign, to generate power for private use, for sale to CFE, and for export.[170] Thus, the nation was divesting itself of that which it had so recently consolidated. This was not an isolated act. It was yet another of the many triumphs of a market economy over socialist planning. Privatization, begun under the sexenio of President De La Madrid, had been accelerating in Mexico under the Presidency of

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165. Flores-Garcia, *supra* note 162, at 362.

166. DAVID RONFELDT ET AL., RAND CORP., MEXICO'S PETROLEUM AND U.S. POLICY: IMPLICATIONS FOR THE 1980s, R-2510-DOE, at 45 (1980) ("This coexistence and accommodation of conflicting interests derived in part from the success of Mexico's leaders in balancing nationalism and pragmatism in their attempts to produce practical policies."); Mathis & Escobedo, *supra* note 95, at 286 ("Mexico has demonstrated deftness and flexibility in its response to the changing needs of its citizenry for electric power, as political and economic circumstances have evolved.").

167. RONFELDT, *supra* note 166, at 42-69.

168. FPC v. Florida Power & Light Co., 404 U.S. 453 (1972).

> Recognizing that the men responsible do not now fully understand electricity, though they know how to use it, and use it on an ever-expanding basis, we do not demand more of the Commission than that its conclusions be substantially supported by expert opinion that is in accord with the facts known for certain.

Id.

169. The concept of "otherness" preoccupies Mexican perspectives, as exemplified by the following statement from one of Mexico's leading intellectuals, and recent Nobel Prize laureate: "The revolutionary movement, as a search for—and momentary finding of—our own selves transformed Mexico and made her *other*." OCTAVIO PAZ, LABYRINTH OF SOLITUDE 175 (1961). Paz began this classic work on the examination of the Mexican psyche with a quote from the Spanish poet and philosopher, Antonio Machado:

> The *other* does not exist: this is rational faith, the incurable belief of human reason. Identity=reality, as if, in the end, everything must necessarily and absolutely be *one and the same*. But the *other* refuses to disappear; it subsists, it persists; it is the hard bone on which reason breaks its teeth. Abel Martin, with a poetic faith as human as rational faith, believed in the *other*, in "the essential Heterogeneity of being," in what might be called the incurable *otherness* from which *oneness* must always suffer.

Id.

170. *Mexican Decree, supra* note 98, art. 3.

Salinas-Gortari.[171] This one, however, required an imaginative constitutional interpretation of the Article 27 provision which reserved the functions of the electricity sector to the "public service" of the nation.[172] The Decree interpreted "public service" to exclude (1) self-generation, cogeneration, or small power production; (2) independent power production for sale to CFE; (3) generation for export from cogeneration, independent power, or small power production; (4) importation for self-consumption; and, (5) emergency power production.[173]

The Decree has the potential to affect power transfers between the United States and Mexico in confounding ways. Mexico's demand growth of 6% to 8% per year[174] may, instead of drawing power transfers to Mexico, draw capital investment in self-generation, cogeneration, small power production, or independent power production. Indeed, the celebrated Carbon II power plant mentioned earlier and a similar much talked about power plant in Samalayuca[175] are examples of independent power projects intended to involve United States investment.

In addition, the Decree interacts with the United States Energy Policy Act of 1992 to facilitate United States investment in Mexican generation projects in two significant ways. First, the EPAct places no geographic restriction on EWGs[176]; this permits the creation of foreign EWGs.[177] Foreign EWGs, unlike domestic EWGs, may sell electricity at retail.[178] (The Decree, however, does not permit retail sales.)[179] The FERC has already approved several EWGs that will be operating in Mexico.[180] Second, the EPAct creates another category of generators, "foreign utility compa-

171. Mathis & Escobedo, *supra* note 95, at 290-91.

172. Mathis & Escobedo, *supra* note 95, at 291-92.

173. Mathis & Escobedo, *supra* note 95, at 292; *Mexican Decree, supra* note 98, art. 3.

174. *See* sources cited *supra* note 96.

175. Southern California Edison Corporation ended its plans to participate in the construction of Carbon II, located 20 miles south of the border from Texas in Mexico, because of environmental concerns. *Foreign Generation,* ELECTRIC LIGHT & POWER, Jan. 1994, at 39. CFE is currently seeking international funds to finance construction of the Samalayuca II plant in Mexico and has already built a four company consortium to lease the project including Bechtel and General Electric. *Samalayuca Consortium Prepares to Seek International Financing,* ENERGY DAILY, Sept. 9, 1994.

176. 15 U.S.C. § 79z-5a(a)(2) (Supp. V 1993) (defining "eligible facility" as a facility "wherever located"); 15 U.S.C. § 79z-5a(b) (Supp. V 1993) (location in a foreign country shall not prevent a facility from qualifying for EWG status so long as none of the energy produced by the facility is sold to consumers in the U.S.).

177. Energy Policy Act of 1992 § 711, 15 U.S.C. § 79z-5a (Supp. V 1993) (amending sections 32 and 33 of the Public Utility Holding Company Act of 1935). *See also* 138 CONG. REC. S1552-54 (daily ed. Feb. 18, 1992) (statements of Senators Fowler and Johnston); 138 CONG. REC. S17,614-16, 17,628-29 (daily ed. Oct. 8, 1992) (statements of Senator Riegle); H.R. CONF. REP. No. 1018, 102d Cong., 2d Sess. 138 (1992), *reprinted in* 1992 U.S.C.C.A.N. 1954, 1961-63.

178. 15 U.S.C. § 79z-5a(b) (Supp. V 1993).

179. *Mexican Decree, supra* note 98.

180. *SEI Holdings VIII, Inc.*, 67 F.E.R.C. ¶ 61,345 (1994); *Energa de Nuevo Len. S.A. de C.V.*, 67 F.E.R.C. ¶ 61,343 (1994); *SEI Beteiligungs GmbH*, 67 F.E.R.C. ¶ 61,346 (1994). The FERC has also denied several applications for EWG status in Mexico. *Desarrollo Petacalco, S. De R.L. De C.V.*, 67 F.E.R.C. ¶ 61,070 (1994); *SEI Holdings V. Inc.*, 67 F.E.R.C. ¶ 61,069 (1994).

nies"[181] that are likely to invest in Mexico. This category is entirely exempt from all provisions of the PUHCA[182] and is an opportunity for utilities in this country to invest in foreign operations. This category might be of particular interest to United States utilities who operate entirely intrastate because they need only the approval of their state regulatory body to acquire interest in such a foreign utility.[183] For each of these categories there are, however, limitations with respect to engaging in exports to the United States. Foreign EWGs engaged in retail sales may not make sales to United States customers.[184] Moreover, a "foreign utility company" must not derive any of its income from utility operations within the United States.[185]

Counteracting these possibilities is an aspect of the Decree that may have potentially significant consequences for satisfying demand immediately across the border. This is the provision for importation for self-use.[186] Under this provision, commercial and industrial operations in Mexico that need an assured power supply may shop for their power needs in the adjoining United States market and transport it across the border.[187] This provision in the Decree permitting importation for self-use might become of even greater significance if retail wheeling, such as that proposed in California[188] and New Mexico,[189] is successfully implemented. Under such circumstances the EPAct will permit power to be transported much more easily to electricity retailers along the border; retail wheeling will then permit any United States retail customer with affiliated interests in Mexico to shop among the retail electricity providers; the Decree will then permit the transfer across the border to satisfy the power needs of the United States retailer's affiliate in Mexico. Maquiladora industries might be particular beneficiaries of this developing scheme.[190]

In summary, an epigrammatic twist on Santayana's famous aphorism on history would seem to be apropos, "Those who remember the past are condemned to repeat it."[191] The Mexican revolution at the beginning of

181. Energy Policy Act of 1992 § 715, 15 U.S.C. § 79z-5b (Supp. V 1993) (amending section 33 of the Public Utility Holding Company Act).

182. 15 U.S.C. § 79z-5b(a)(1) (Supp. V 1993).

183. 15 U.S.C. §§ 79z-5b(a)(1), (2) (Supp. V 1993).

184. 15 U.S.C. § 79z-5b(a)(3)(A)(i) (Supp. V 1993).

185. 15 U.S.C. § 79z-5b(a)(3)(A)(ii) (Supp. V 1993).

186. *Mexican Decree, supra* note 98, art. 3.IV.

187. This provision would also serve the rare customer whose circumstances require direct importations such as Miguel Ainslie. Application for Presidential Permit Manuel Diego Ainslie—Coahuila, Mexico, 45 Fed. Reg. 61,012 (1980). *See also* discussion *supra* note 38.

188. Order Instituting Rulemaking on the Commission's Proposed Policies Governing Restructuring California's Electric Services Industry and Reforming Regulation, 1994 Cal. P.U.C. LEXIS 336 (1994).

189. *Electric Utilities in the Future,* FORT., May 1, 1994, at 21 (documenting the fact that the New Mexico Legislature was the first legislature in the United States to suggest that independent power producers should have access to the transmission and distribution facilities of utilities. That legislation has been referred to committee until 1995).

190. *See* sources cited *supra* note 96.

191. Santayana's famous aphorism is actually, "Those who cannot remember the past are condemned to repeat it." W.H. AUDEN AND LOUIS KRONENBERGER, APHORISMS (1966).

this century had its genesis in the Porfiriato's developmental policy of alienating the national patrimony to foreign investors. The Mexican experience at the end of the century is ending on a similar developmental note. In the United States, the Public Utility Holding Company Act of 1935 was occasioned by utility abuses and excesses in domestic and foreign investment via complex concentrated corporate structures.[192] The Energy Policy Act of 1992 has already raised similar concerns.[193] Finally, along the border, a return to the pre-1935 days when United States companies owned affiliated enterprises in Mexico and supplied them with United States power[194] appears to be in the making once again.

C. *The North American Free Trade Agreement*

The notion of a free trade arrangement in North America has its own peculiar history. The intellectually peripatetic governor of California, Edmund G. Brown, Jr., was again ahead of his time when he raised the notion of a North American Common Market to the level of national debate while seeking his party's 1980 presidential nomination.[195] Candidates of both parties took up the refrain,[196] and a politically safer and more

192. *See* JOSEPH P. TOMAIN ET AL., ENERGY LAW & POLICY 446 (1989).

193. *See Prepared Statement of Scott Hempling Attorney at Law on Behalf of Energy Project Environmental Action Foundation Before the Subcomm. on Energy and Power Comm. on Energy and Commerce United States House of Representatives on Changes in the Electric Industry Since Enactment of the Energy Policy Act of 1992,* FED. NEWS SERV., July 13, 1994; PAUL L. JOSKOW AND RICHARD SCHMALENSEE, MARKET FOR POWER: AN ANALYSIS OF ELECTRICAL UTILITY DEREGULATION 196-98 (1983); Douglas Gegax & Kenneth Nowotny, *Competition and the Electric Utility Industry: An Evaluation,* 10 YALE J. ON REG. 63, 87 (1993) ("Absent substantial controls, the deintegrated, deregulated electric utility industry will evolve into a tight oligopoly where society will be the loser, and a few lucky investors will be the winners."); Jeffrey D. Watkiss & Douglas W. Smith, *The Energy Policy Act of 1992—A Watershed for Competition in the Wholesale Power Market,* 10 YALE J. ON REG. 447, 491-92 (1993).

194. *See* sources cited *supra* note 34. *See also California Elec. Power Co.*, 6 F.P.C. 812 (1947) (authorizing California Electric Power to transmit electricity to its wholly-owned Mexican subsidiary, Industrial Electrica Mexicana, S.A.). The FPC export authorizations of the early 1940s reveal a string of consolidations among American companies transmitting electricity to subsidiaries in Mexico. *See Id.*; *California Elec. Power Co.*, 4 F.P.C. 926 (1945) (authorizing California Electric Power Co., as successor in interest to Yuma Utilities Co. and Southern Sierras Power Co., to transmit electricity to Southern Sierras Power of Mexico, S.A. Southern Sierras Power of Mexico was formerly owned by Southern Sierras Power Co., an American corporation).

195. Ironically, as a candidate for the Democratic Presidential nomination in 1992, former Governor Edmund G. Brown, Jr., opposed NAFTA quite vigorously. Lou Cannon, *Brown's Record: Even Allies are Critics,* WASH. POST, April 6, 1992, at A15. *See generally* Dan Walters, *Free-Traders Run for Cover*, SACRAMENTO BEE, Oct. 10, 1993, at A3 (describing how many Californians, long free-trade advocates, have opposed NAFTA in the wake of a poor state economy).

196. Ronald Reagan, Howard Baker, and Jimmy Carter also embraced the concept of a North American Common Market in their 1980 campaigns. Carl P. Leubsdorf, *The Value of Ex-Presidents,* DALLAS MORNING NEWS, Nov. 4, 1993, at 31A (Reagan and Carter); Fred Barbash, *Baker Urges Carter to Quit 1980 Race,* WASH. POST, Aug. 7, 1979, at A4 (Baker proposing a North American Common Market for energy and power resources).

appealing variant quickly developed, the North American Common Market in Energy.[197]

The United States had been experiencing oil shortages due to the oil embargoes of 1973 and 1979. Price and allocation controls were in effect at the time for various petroleum fuels.[198] Because of structural differences between state and federal natural gas pricing regulation, regional and spot shortages of natural gas had also developed.[199] Therefore, producers were directing natural gas to the more lucrative intrastate market.[200] In the meantime, both oil and natural gas had been rediscovered in great abundance in Mexico. Almost on a daily basis the country was bombarded with news of Mexican oil and natural gas—increased production, upward revisions of proven and probable reserves.[201] Less dramatic but nonetheless significant production of oil and gas was also developing in the provinces of western Canada.[202] Consequently, a North American Common Market in Energy, if not a North American Common Market, was quite appealing to energy-short Americans and issue-hungry presidential nomination-seeking candidates.

On the other hand Canadians and Mexicans, already suspicious that they would be leveraged against each other, since they competed for the same United States market, were considerably more cautious. The North American Energy Market was perceived to be little more than an arrangement that would make them captive and competing suppliers of United States oil and gas needs. Electricity imports did not receive noteworthy attention in this debate except as a way to displace domestic demand for oil or natural gas in electricity generation.[203] At the time, on broader trade

197. *See* Barbash, *supra* note 196; *Edgy Nationalisms of the North,* N.Y. TIMES, March 14, 1981, sec. 1, at 22. The Canadian and Mexican governments of the early 1980s were not eager to promote the idea of a common energy market. *See* Alan Riding, *Good Neighbor Policy Isn't Good Enough,* N.Y. TIMES, July 6, 1980, § 4, at 3.

198. *See* TOMAIN, *supra* note 192, at 231-34. Price Allocation controls were implemented via the Economic Stabilization Act of 1970, Pub. L. No. 92-210, 85 Stat. 743. *See also* Energy Policy Committee, *Perspectives on the Appropriate Role for the Federal and State Governments During Petroleum Supply Interruptions,* 16 NAT. RESOURCES LAWYER 613 (1984).

199. *See* TOMAIN, *supra* note 192, at 275-76.

200. Interstate pipeline companies were taking advantage of the now infamous *Attleboro Gap. See* TOMAIN, *supra* note 192, at 275-76.

201. *See Eldorado or Fool's Gold,* ENERGY DAILY, Dec. 14, 1978, at 1.

202. *See* J. Owen Saunders, *GATT, NAFTA, and North American Energy Trade: A Canadian Perspective,* 12 J. ENERGY & NAT. RESOURCES L. 4 (1994); CAL. ENERGY COMM'N 1979 BIENNIAL REP. 15-16 (1979).

203. As a policy, the United States sought to decrease reliance on imported oil and gas through conservation and development of alternative energy facilities. *See* Powerplant and Industrial Fuel Use Act of 1978, Pub. L. No. 95-620, 92 Stat. 3289 (1978) (PIFUA). PIFUA did not expressly encourage electricity imports to fulfill this aim. However, the DOE briefly considered the oil savings when granting Presidential Permits to importers of hydroelectric and geothermal power. *See* Vermont Elec. Transmission Co., 53 Fed. Reg. 37,837 (1988) (discussing the alternative of refurbishing an older unit instead of approving the permit, the ERA wrote: "[S]ince most of the generating units which are candidates for refurbishment are oil-fired units, this would exacerbate the region's oil-dependence. . . ."); Presidential Permit for Proposed Imperial Valley—La Rosita Transmission Line, 48 Fed. Reg. 54,859 (1983) (the ERA considered the oil savings due to reliance on the Mexican geothermal fields). The 1980 Electricity Exchanges Study, cited *supra* note 32, noted the fuel diversity benefits of

issues, both Mexico and Canada felt that their interests were best pursued on a bilateral basis. And at the time, the United States was more interested in advancing trade with its neighbors on a multi-lateral arrangement, GATT. It would take the success of the regional economic arrangements elsewhere in the world to lead the United States and Canada to pursue a United States-Canadian Free Trade Agreement that then was expanded to include Mexico in what came to be the North American Trade Agreement (NAFTA).

NAFTA will have little direct effect on power transfers between the United States and Mexico. The major reason is that electricity trade between the two countries is already free of trade impediments.[204] Although Annex 602.3 of the NAFTA Energy Chapter contains a number of specific references to electricity trade,[205] most are merely restatements of many of the principles already embodied in Mexico's new electricity law. The provisions of the Decree go further than NAFTA towards encouraging power transactions between the two countries.[206] In a comprehensive sector-by-sector study done by the United States International Trade Commission (ITC) at the request of the House Committee on Ways and Means and the Senate Finance Committee, the ITC stated, "NAFTA is expected to have only a minor effect on United States investment, trade, production and employment and competitiveness in terms of electricity transmission in both the short and long term."[207]

Imports of electricity into the United States are already duty free. There are, however, Mexican tariffs on electricity exports from the United States. Those tariffs are to be staged downward over a five-year period

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interconnection with Mexico: "In the event of emergency shortages of specific fuels in the United States, the availability of Electric energy from CFE could be important." 1980 ELECTRICITY EXCHANGES STUDY, *supra* note 32, at 70. *See generally* ROBERT BOURASSA, POWER FROM THE NORTH 124-32 (1985) (expounding on the benefits of interconnection with Canada with a forward by James Schlesinger). *But see* J. Owen Saunders, *GATT, NAFTA and North American Energy Trade: A Canadian Perspective,* 12 J. ENERGY & NAT. RESOURCES L. 4 (1994) (providing an example of a more common approach to cross-border energy issues—a focus on trade in oil and gas). For additional general discussion on the energy trade between Mexico and the United States with a focus on natural resources, see MEXICO AND THE UNITED STATES: NEIGHBORS IN CRISIS 277-302 (Daniel G. Aldrich, Jr. & Lorenzo Meyer eds., 1993); MEXICO AND THE UNITED STATES: ENERGY, TRADE, INVESTMENT, IMMIGRATION, TOURISM 31-48 (Robert H. McBride ed., 1981).

204. According to Kathleen Deutsch of the DOE's Office of International Affairs and Energy Emergencies, and a participant in the U.S.-Mexico Electricity Trade Study, "[T]here basically is free trade for that commodity, and a NAFTA may not have an impact on transactions." Lori M. Rodgers, *What Will A Mexican Trade Agreement Mean to the U.S. Energy Industry?,* PUB. UTIL. FORT. July 1, 1991, at 35.

205. NAFTA, *supra* note 101, at Annex 602.3(1)(c), (5). *See generally* Reinier Lock, *Mexico-United States Relations and NAFTA,* 1 U.S.-MEX. L.J. 235 (1993).

206. Mathis & Escobedo, *supra* note 95, at 292.

207. UNITED STATES INT'L TRADE COMM'N, PUB. 2596, POTENTIAL IMPACT ON THE U.S. ECONOMY AND SELECTED INDUSTRIES OF THE NORTH AMERICAN FREE-TRADE AGREEMENT, REP. TO THE COMMITTEE ON WAYS AND MEANS OF THE UNITED STATES HOUSE OF REPRESENTATIVES AND THE COMMITTEE ON FINANCE OF THE UNITED STATES SENATE ON INVESTIGATION NO. 332-337 UNDER SECTION 232 OF THE TARIFF ACT OF 1930, at 20-21 (1993).

from ten percent to free.[208] The tariff reductions, however, are not expected to increase trade because there are other factors, such as underdeveloped transmission lines and distribution systems, and other technical limitations, such as non-synchronized operations, which are greater determinants of electricity trade.[209] The ITC study did, however, identify that "investment may occur in developing compatible interconnection grids to supply CFE with United States produced power along the border."[210]

NAFTA will have, however, an indirect effect on electricity trade between the two countries. NAFTA is expected to benefit Mexico's economy substantially.[211] Although the ITC study concluded that NAFTA-induced long-term gains in real Gross Domestic Product (GDP) will be 0.5% or less for the United States, projected long-term gains in Mexican real GDP will range from 0.1% to 11.4%.[212] In addition, various economic studies suggest that the border region will benefit substantially under NAFTA.[213] These estimates of the overall and regional effects of GDP growth will in turn induce an increase in the post-NAFTA Mexican demand for power. The pre-NAFTA projections for growth in Mexican electricity demand were already at a high level of 6% to 8% per year.[214]

IV. The Authorization Process and Environmental Considerations

A review of the origins of federal authority over interconnections and their operational control reveals an accommodation between the Executive and the Congressional branches of government. As will be seen, this accommodation is not based on "strict law." The practice that developed over time, and that is presently in effect, is that the siting of a transmission line across a border of the United States will require a Presidential Permit,[215] and the actual transmission of power across that line will require an Export Authorization.[216] The Presidential Permit has its putative basis in

208. *Id.* at 20-22.

209. *Id.*

210. *Id.*

211. "Mexico is likely to benefit substantially more from NAFTA than either the United States or Canada because its gross domestic product (GDP) is only 5% of U.S. GDP, its economy historically has been closed, and trade with the United States is relatively more important to its economy." *Id.* at vii.

212. *Id.* at viii.

213. *Id.* at viii, 2-1 to 2-7.

214. *See* sources cited *supra* note 96.

215. *See* Exec. Order No. 10,485, 3 C.F.R. 970 (1949-1953), *reprinted as amended in* 15 U.S.C. § 717b (1988) (corresponding rules codified at Application for Presidential Permit Authorizing the Construction, Connection, Operation, and Maintenance of Facilities for Transmission of Electric Energy at International Boundaries, 10 C.F.R. §§ 205.320-.329 (1994)).

216. *See* 16 U.S.C. § 202(e) (1985) (corresponding rules codified at Application for Authorization to Transmit Electric Energy to a Foreign Country, 10 C.F.R. § 205.300-.309 (1994)).

the plenary power of the Executive,[217] and the Export Authorization has its basis in the Congressional authority to regulate commerce.[218]

Since recognition, acceptance, and consistent assertion of the plenary power of the Executive over international connections developed over time, compliance with the requirement of a Presidential Permit prior to 1939 was checkered.[219] Apparently there was even at least one power interconnection constructed post-1939 and operating as late as 1988 without such a permit.[220] On the other hand, the assertion of Congressional authority to regulate commerce in electrical power finds its expression in various statutory enactments.[221] Therefore, as might be expected, there are gaps in the applicability of the requirement of an Export Authorization due to a historical lack of regulatory jurisdiction over some utilities[222] and to more recent exceptions created by Congress.[223]

Issuance of Presidential Permits or Export Authorizations are, however, federal actions that affect the environment and are, therefore, subject to the provisions of the National Environmental Policy Act (NEPA).[224] Although the responsibility for the actual issuance of Permits and Authorizations has migrated through various offices, it currently resides with the Office of Coal and Electricity at the Department of Energy (DOE). DOE's implementation of NEPA, therefore, determines the environmental considerations involved in authorizing power transfers. Discretion in the

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217. The President's plenary power to require Presidential Permits is discussed *infra*. However, the opening language to Exec. Order No. 10,485 appropriately sets the tone, "WHEREAS the proper conduct of the foreign relations of the United States requires that executive permission be obtained for the construction and maintenance at the borders of the United States of facilities for the exportation or importation of electric energy and natural gas." Exec. Order No. 10,485, 3 C.F.R. 970 (1949-1953), *opening language reprinted in* OFFICE OF THE FEDERAL REGISTER, NATIONAL ARCHIVES AND RECORDS ADMINISTRATION, CODIFICATION OF PRESIDENTIAL PROCLAMATIONS AND EXECUTIVE ORDERS 1945-1989, at 181, *reprinted in* 15 U.S.C. § 717b (1988).

218. *See* H. REP. No. 978, 83d Cong., 1st Sess. (1953), *reprinted in* 1953 U.S.C.C.A.N. 2164, 2165 (discussing amendment of the Federal Power Act to add § 202(f), the House Report reads, "Part II of the Federal Power Act was enacted in 1935 to provide for Federal regulation of transmission of electric energy in *interstate commerce.*") (emphasis added). 16 U.S.C. § 824(b) (1988) defines the application of the Act to the sale of electric energy in *interstate commerce.*

219. In 1939 President Roosevelt issued an executive order delegating a portion of the Presidential Permitting authority to the Federal Power Commission. Exec. Order No. 8202, 3 C.F.R. 560 (1939).

220. The 1980 Electricity Exchanges Study describes a line between Columbus, New Mexico and Las Palomas, Mexico for which there is no record of a Presidential Permit. 1980 ELECTRICITY EXCHANGES STUDY, *supra* note 32, at 15. This line was apparently in operation as late as 1988.

221. *See generally* Federal Power Act, 16 U.S.C. §§ 791a-828c (1988 & Supp. V 1993); Public Utility Holding Company Act of 1935, 15 U.S.C. §§ 79-79z-6 (1988 & Supp. V 1993); Public Utility Regulatory Policies Act of 1978, Pub. L. No. 95-617, 92 Stat. 3117 (codified as amended in scattered sections of U.S.C.); Energy Policy Act of 1992, Pub. L. No. 102-486, 106 Stat. 2776 (codified as amended in scattered sections of 11, 15, 16, 25, 26, 30, 42, 43, 48 U.S.C.).

222. Federal power agencies, municipal utilities, and other public utilities not subject to the Federal Power Act are not required to obtain Export Authorizations. *See* 16 U.S.C. § 824(b) (1988).

223. Federal Power Act § 202(f), 16 U.S.C. § 824a(f) (1988); *see also* H. REP. No. 978, 83d Cong., 1st Sess. (1953), *reprinted in* 1953 U.S.C.C.A.N. 2164-67.

224. Pub. L. No. 91-190, 83 Stat. 852 (codified as amended at 42 U.S.C. §§ 4321, 4331-35, 4341-47 (1988 & Supp. 1993)).

environmental review of permits and authorizations has led to differential standards of environmental review.

An understanding of the development and implementation of the Executive's plenary authority over interconnections, the development of the statutory scheme governing power exports, and the development of DOE's application of NEPA to permits and authorizations is essential to identifying the strengths and weaknesses in the current regulatory scheme governing power transfers. It may be the case that, if unchanged, the current regulatory scheme, defined by accumulated ancillary provisions of major executive or legislative efforts principally directed at policy objectives other than regulating power transfers, will lead to overlooking significant environmental consequences that are certain to result from the expected increases in power transfers.

A. Plenary Authority Over Interconnections

The United States first regulated power transfers in 1906 when it enacted the Burton Act and delegated to the President the authority to control power imports from Canada.[225] By the terms of the act, however, that delegated authority expired three years later. Nevertheless, in 1913 the President requested an opinion of the United States Attorney General as to his authority to control power imports. The Attorney General stated that, "*In my opinion . . . . you [are] free to control the matter under your plenary power to prevent any physical connection (not authorized by Congress) between any foreign country and the United States.*"[226] Despite the apparent certitude of the opinion in finding the source of Presidential authority to be the "plenary power to prevent any physical connection," such authority was not on firm ground. In 1921, a searching judicial inquiry as to whether the President indeed possessed such plenary power was undertaken by Judge Augustus Hand in the case of the *United States v. Western Union Telegraph Co.*[227]

The events that led to the case read like a Gilbert and Sullivan comic opera (the Pirates of Penzance comes to mind). Western Union Telegraph Company, a corporation of the State of New York, attempted to land a telegraph cable at Miami Beach, Florida, whose point of origin was Barbados in the West Indies. At Barbados the cable was connected with a cable owned by Western Telegraph Limited, a British corporation, that continued to Brazil. The British corporation had an interport monopoly on ocean cable communication granted to it by the government of Brazil. The President took exception to the landing of the cable at Miami Beach, owing to the monopoly aspects of the Barbados-Brazil cable, and sent a Navy flotilla to intercept the cable ship and prevent the landing of the cable. The response by Western Union was inventive (as befits an information superhighway provider of the time). Since Western Union already had three

225. Act of June 29, 1906, 34 Stat. 626 (lapsed 1909).

226. 30 Op. Att'y Gen. 217, 221 (1913).

227. 272 F. 311 (S.D.N.Y. 1921), *aff'd*, 272 F. 893 (2d Cir. 1921), *rev'd per stipulation*, 260 U.S. 754 (1922).

cables running from Key West, Florida, to Cojimar, Cuba, it declared its intention to splice the end of the cable that would have landed at Miami Beach to one of those existing cables that terminated at Key West. One of the three cables terminating at Key West had an existing permit from the Secretary of War since a portion of it had been laid upon the Fort Taylor military reservation. The other two cables had been laid without permits of any type from the United States government. The President then revoked the one permit granted to Western Union and transmitted a permit to Western Union for all three cables, which Western Union refused to accept. The United States then sought a preliminary injunction to prevent the landing of the cable at Miami Beach, and also to prevent the sending of messages originating in or addressed to Brazil over the Key West-Cojimar cable. The motion was denied and the case came to Judge Augustus Hand on appeal.[228]

Judge Hand succinctly framed the issues:

> Two questions of law arise: (1) Whether in the absence of congressional legislation the President has the power to prevent unauthorized cable landings on the shores of the United States or the operation of cable lines connecting with foreign countries in a way contrary to executive policy. (2) Whether there is any congressional legislation under which the defendant may validly operate. If there is, all parties concede that no executive permission is necessary.[229]

Judge Hand ruled that the preliminary injunction requested by the United States would not issue because, in the absence of congressional legislation, whether or not the President could prevent the landing of the cable on Miami Beach was non-justiciable,[230] and because the Key West cable lines operated under congressional authority of the Post Roads Act.[231]

His opinion was, however, quite searching and comprehensive in its review of the applicable decisional law, legislation, international precedents, and practices of the parties involved in these matters. With respect to corporations he noted that:

> From the time of the administration of President Grant there has been frequent and growing insistence by the Executive upon the right to regulate the landing of cables connecting with foreign countries, and this alleged prerogative has been recently extended to grant permits to *light* lines, oil lines, telephone lines, aerial railways, and pipes for the disposal of waste from the manufacture of soda ash. The exercise of this executive power has been acquiesced in by various corporations, who perhaps found it easier to accept a permit than to attempt to resist the Executive.[232]

With respect to Congress and the President he noted that:

> I have thought it most questionable whether the power of the President to regulate cable connection is expressed or implied in the Constitution, but if Congress, which has control over foreign commerce, has chosen to allow the

228. 272 F. 311 (S.D.N.Y. 1921). These facts do not appear in Judge Hand's opinion but are set forth in the appeal to the circuit court. *See* United States v. Western Union Tel. Co., 272 F. 893 (2d Cir. 1921).

229. 272 F. at 313.

230. 272 F. at 314.

231. 272 F. at 323.

232. 272 F. at 315-16 (emphasis added).

> President to prevent physical connection between the shores of this country and of foreign nations by cables, telephones, radio devices or pipe lines, the occasion and mode of such executive action would seem as Judge Lacombe intimated, to be a political question. I should doubt whether the extent of the President's authority if based not upon an original prerogative but upon congressional acquiescence was a justiciable matter, and whether a court should interfere to define or support it; for the basis of the right would then depend on the interrelations and mutual accommodations of the Executive and Legislative Departments of the government, and not upon strict law.[233]

The United States appealed Judge Hand's decision but received an even less favorable decision from the court of appeals.[234] The court there held that "the right to permit or to prohibit the landing of cables" resides in Congress under its power to regulate commerce.[235] The court noted that cables had been laid with congressional permission, executive permission, and no permission at all but that:

> We think no practice has been established sufficient to sustain the contention that the President has such power as Chief Executive, and our inclination also is to think that the Western Union Telegraph Company has the right to land its cable on the beach near Miami, Fla., under the Post Road Act (19 Stat. 319).[236]

Needless to say, the United States appealed this decision to the Supreme Court.

Although briefs were filed, the case became moot by Congressional passage of an amendment to the Submarine Cable Act that granted the President the authority he was asserting against Western Union.[237] In an unusual procedural disposition, at the request of the parties, the court of appeals' decision was "reversed per stipulation" by decision memorandum, and the case was remanded to the district court with directions to dismiss.[238] The citation to the *Commercial Cable Co. v. Burleson* case[239] in the stipulation reveals the parties' intent, acceded to by the Supreme Court, to disapprove of the court of appeals' restrictive reading of Presidential plenary authority. What the President would gain from such a "reversal" is clear. It is less clear that Western Union stood to gain anything—except perhaps assurance of quick and favorable exercise of the President's congressionally reinforced discretion.

Despite the dramatic factual circumstances that gave rise to the case and the weighty legal issues involved, the various analyses and rulings made in the odyssey of *United States v. Western Union Telegraph Co.* have been consigned to legal obscurity, quite literally to a footnote in history on the federal level. Judge Hand's opinion was cited once—in a footnote—in

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233. 272 F. at 318.

234. United States v. Western Union Tel. Co., 272 F. 893 (2d Cir. 1921).

235. 272 F. at 894.

236. *Id.*

237. Act of May 27, 1921, ch. 12, § 2, 42 Stat. 8 (codified as amended at 47 U.S.C. § 35 (1988)).

238. United States v. Western Union Tel. Co., 260 U.S. 754 (1922).

239. Commercial Cable Co. v. Burleson, 250 U.S. 360 (1919) (cited in Joint Suggestion and Stipulation, United States v. Western Union Tel. Co., 260 U.S. 754 (1922) (No. 47)).

support of a narrow construction of Presidential plenary authority.[240] Nonetheless, the Executive Department's expansive view of plenary authority, congressional acquiescence of the exercise of putative plenary authority, congressional reinforcement of Executive assertions of plenary authority through statutory enactments coincident with such authority, and voluntary acquiescence by applicants seeking Presidential Permits have led to the present system of requiring Presidential Permits for construction of electric transmission lines across the United States border. It is well worth keeping in mind, however, that the issue of whether the President has authority to prevent construction by a domestic corporation of an international electric power interconnection, in the absence of congressional legislation, has yet to be definitively judicially determined.

B. The Dance of Permits and Authorizations[241]

Before 1935 there was little federal involvement in the regulation of electric power. The Reclamation Act of 1902[242] regulated surplus power sales from irrigation dams. The Burton Act of 1906[243] regulated hydro development along the Niagara river and, as was mentioned previously, power imports from generating facilities on the Canadian side. The Federal Water Power Act of 1920[244] created the Federal Power Commission (FPC)[245] in order to license hydroelectric projects along the navigable waters of the United States. However, for the most part electric power regulation was the province of the states. It was, in fact, a state regulatory action[246] that led to the extensive federal regulation of electricity[247] that the Public Utilities Regulatory Policies Act of 1978[248] and the Energy Policy Act of 1992[249] began to reverse.[250]

In 1924, the Rhode Island Public Utilities Commission ordered an increase in the rates of electricity sold by a utility in Rhode Island, Narra-

240. Youngstown Sheet & Tube Co. v. Sawyer, 343 U.S. 579, 636 (1952). The case has been cited one other time, at the state level, in Mexican Tel. Co. v. State Tax Comm'n., 219 A.D. 401 (N.Y. 1927), standing for the holding that "prior to the passage of the Kellogg Act in 1921 the President had no power to grant or withhold such licenses. . . ." *Id.* at 406. In 1907 President Roosevelt had granted a permit to land cables to the Mexican Telegraph Co.

241. "Once begin the dance of legislation, and you must struggle through its mazes as best you can to the breathless end—if any end there be." ERIC REDMAN, THE DANCE OF LEGISLATION 9 (1973) (citing President Woodrow Wilson).

242. Reclamation Act of 1902, ch. 1093, 32 Stat. 388 (codified in scattered sections of 43 U.S.C.).

243. Burton Act, 34 Stat. 626 (1906) (lapsed 1909).

244. Federal Water Power Act of 1920, ch. 285, 41 Stat. 1063 (codified as amended at 16 U.S.C. §§ 791a-828c (1988 & Supp. V 1993)) (also known as the Federal Power Act).

245. 16 U.S.C. § 792 (1988).

246. *See* Public Util. Comm'n v. Attleboro Steam & Elec. Co., 273 U.S. 83 (1927).

247. Public Utility Holding Company Act 1935, Pub. L. No. 74-333, 49 Stat. 803 (codified as amended in 15 U.S.C. §§ 79-79z-6 (1988 & Supp. V 1993).

248. 16 U.S.C. § 824a-3 (1988 & Supp. V 1993).

249. Pub. L. No. 102-486, 106 Stat. 2776 (codified as amended in scattered sections of 11, 15, 16, 25, 26, 30, 42, 43, 48 U.S.C.).

250. *See generally* TOMAIN, *supra* note 192, at 452-56 (discussing the "Attleboro Gap" and legislative efforts to fill it).

gansett Electric Lighting Company, to a utility in Massachusetts, Attleboro Steam & Electric Company.[251] Attleboro Steam appealed the order to the Rhode Island Supreme Court.[252] The court held that, notwithstanding that the electricity was delivered to Attleboro Steam in Rhode Island or at the state line, the order imposed a direct burden on interstate commerce in violation of the Commerce Clause of the United States Constitution.[253] On appeal to the United States Supreme Court, the Court affirmed the decision stating, "The rate is therefore not subject to regulation by either of the two states . . . but, if such regulation is required it can only be attained by the exercise of the power vested in Congress. . . ."[254] This Supreme Court decision created a regulatory gap in that interstate sales of electric power were not subject to any regulation. This came to be known as the "Attleboro Gap."[255]

Franklin Roosevelt, then Governor of New York, was quite critical of the electric utilities.[256] Part of his regulatory agenda when he was elected President in 1932 was to close the Attleboro Gap. His legislative agenda in this regard led to amendments to the Federal Power Act (FPA)[257] establishing federal regulation over interstate commerce in electric power. Not only did it close the Attleboro Gap, it anticipated another type of gap and therefore established regulation over power exports.[258]

Section 202(e) of part II of the FPA provided that, "no person shall transmit any electric energy from the United States to a foreign country without first having secured an order of the Commission authorizing it to do so."[259] The Commission was to issue such an order *unless* it found that the proposed transmission would "impair the sufficiency" of electric supply in the United states *or* that the proposed transmission would "impede or tend to impede the coordination in the public interest" of facilities subject to the jurisdiction of the Commission.[260] This provision of the FPA took effect six months after part II of the FPA was to go into effect, and the FPC decision record indicates that many exporters of electricity complied in a timely fashion, even those without Presidential Permits for the transmission lines they had constructed to deliver such power.[261]

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251. *See* Attleboro Steam & Elec. Co. v. Public Util. Comm'n, 129 A. 495 (R.I. 1925), *aff'd*, 273 U.S. 83 (1927).

252. *Id.*

253. *Id.*

254. Public Util. Comm'n v. Attleboro Steam & Elec. Co., 273 U.S. 83, 90 (1927).

255. *See* TOMAIN, *supra* note 192.

256. Interestingly, Miguel Wionczek informs us that Franklin Roosevelt's criticism of the electric utilities played an influential role in the Mexican government's effort to establish control over the foreign electric companies operating in Mexico. *See* Wionczek, *supra* note 34, at 539.

257. Parts II and III of the Federal Power Act; *see also* S. REP. NO. 621, 74th Cong., 1st Sess. 3 (1935). The discussion regarding part 2 of title 2 of PUHCA evidences the legislative intent to fill the Attleboro Gap.

258. Federal Power Act § 202(e), 16 U.S.C. § 824a(e) (1988).

259. *Id.*

260. *Id.*

261. A review of the Export Authorizations issued for power transfers across lines with Presidential Permits indicates that many Export Authorizations preceded the issuance of the Presidential Permit. *El*

Notwithstanding presidential assertion of plenary authority over interconnections, it was becoming evident that presidential oversight of the permitting process for transmission lines had been spotty.[262] Therefore, in 1939 President Roosevelt transferred, through Executive Order 8202, a portion of the transmission line presidential permitting functions to the Federal Power Commission (FPC) "as an aid in effectuating the provisions of the Federal Power Act."[263] The executive order authorized the FPC to receive interconnection applications and, after obtaining the recommendations of the Secretaries of State and War, to submit the applications to the President with the appropriate recommendations regarding approval.[264] The executive order did not contain any references to authority, other than "authority vested in me as President," which might indicate a more specific legal basis for its issuance.[265] However, the requirement of solicitation of the recommendations of the Secretaries of State and War may have been an implicit appeal to the President's authority over foreign affairs or as Commander-in-Chief of the Armed Forces. However, it also could simply reflect continuance of what had been an inconsistent practice of consulting with one or the other, or both, of these Presidential appointees with respect to issuance of these and other types of Presidential Permits.[266] It might also be reflective of the fact that in many instances these appointees had been the ones to issue similar types of permits.[267] Ironically, the FPC's administration of matters involving the international transmission of power from the United States was to encounter difficulties, not over the Presidential Permits whose authoritative basis was questionable, but instead, over the Export Authorizations whose authoritative basis was rather clearly set forth in section 202(e).

Among the rules the FPC promulgated in implementing section 202(e) was one which stated "The ownership or operation of facilities for the transmission of electric energy from a point within a State to a foreign country makes one a 'public utility' under the Federal Power Act, even

Paso Elec. Co., 2 F.P.C. 1084 (1941) (Export Authorization initially issued in 1936. Presidential Permit issued in 1941); *San Diego Gas & Elec. Co.*, 2 F.P.C. 1083 (1941) (Export Authorization initially issued in 1938. Presidential Permit issued in 1941); *B & P Bridge Co.*, 3 F.P.C. 637 (1942) (Export Authorization initially issued in 1936. Presidential Permit issued in 1941); *O. Losoya*, 3 F.P.C. 773 (Export Authorization initially issued in 1936. Presidential Permit applied for in 1940). This time lag makes sense considering the fact that there was an agency with the job of overseeing Export Authorizations, but until Executive Order of 1939, Presidential oversight of permits was spotty. The rush to acquire Presidential Permits to accompany Export Authorizations after 1939 is evident from the above review of the Federal Power Commission Reports which catalog a great deal of permitting activity in 1940 and 1941.

262. *See* discussion *supra* note 261.

263. Exec. Order No. 8202, 3 C.F.R. 560 (1939).

264. *Id.*

265. *Id.*

266. For examples of the inconsistent authority over permits, see generally 22 Op. Att'y Gen. 514 (1899); 22 Op. Att'y Gen. 408 (1899); United States v. Western Union Tel. Co., 272 F. 311, 317 (S.D.N.Y. 1921); Brief for Appellants at 24, United States v. Western Union Tel. Co., 260 U.S. 754 (No. 47) (contained in 916 U.S. Supreme Court Records).

267. For example, with respect to the Burton Act the legislation specified that the Secretary of War would issue the permit. Burton Act, 34 Stat. 626 (1906) (lapsed 1909).

though the portion of such facilities in this country is located wholly within such state."[268] Detroit Edison, an electric utility regulated exclusively by the state of Michigan because it was wholly within the state and did not engage in interstate commerce of electricity, was concerned that this rule would subject it to federal rate regulation because it was planning to interconnect with a Canadian utility.[269] Detroit Edison did not dispute that the FPC had jurisdiction under 202(e) to authorize power exports over the interconnection but disputed the FPC's view that 202(e) gave it authority to define it as a "public utility" subject to the rate regulation provisions of the FPA.[270] Detroit Edison argued that the FPC's authority was limited to utilities engaged in interstate commerce and that power exports directly to a foreign country was not "interstate" commerce but was instead "foreign" commerce.[271] To support its view, Detroit Edison pointed to a recent court of appeals decision which in highly similar circumstances made this distinction, *Border Pipeline Co. v. Federal Power Commission* (*Border Pipeline*).[272]

The Border Pipeline Company owned a gas pipeline located wholly within the state of Texas and sold its gas at its terminus near the Rio Grande to an industrial consumer who transported the gas to Mexico and used it there.[273] The FPC which regulated natural gas under the Natural Gas Act of 1938[274] issued an order in which it asserted that the company was engaged in interstate commerce and was therefore a "natural-gas company" within the meaning of the NGA. The consequence would be that the Border Pipeline Company would then be subject to all the federal regulatory provisions applicable under the NGA. The court ruled that inter-

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268. Rule 2.3, *reprinted in* 1953 U.S.C.C.A.N. 2165.

269. *Hearing on S. 1442 Before the Subcomm. of the Comm. on Interstate and Foreign Commerce, U.S. Senate*, 83d Cong., 1st Sess. 3 (1953) [hereinafter *S. 1442 Subcommittee Hearing*].

270. *S. 1442 Subcommittee Hearing, supra* note 269, at 3.

271. *S. 1442 Subcommittee Hearing, supra* note 269, at 3.

272. Border Pipe Line Co. v. FPC, 171 F. 2d 149 (D.C. Cir. 1948) (cited in *S. 1442 Subcommittee Hearing, supra* note 269).

273. Border Pipe Line Co. v. FPC, 171 F. 2d 149 (D.C. Cir. 1948). Apparently the practice of delivering energy to the border where title passes to the purchaser who then transports it across the border to Mexico is a practice common to Texas. With respect to electric power, Texas utilities sell power to CFE, or in the past to a Mexican utility, and deliver it to a point near the border where the Mexican utility then took title and the responsibility for transporting the power to Mexico. Consequently along the Texas-Mexico border many older Presidential Permits were held by Mexican private utilities. *See* PP-02, PP-03, PP-14, PP-15, PP-50, PP-51, PP-57, and PP-59 (currently held by CFE) (records of permits from DOE database on file with the author). This practice may have developed for the purpose of avoiding federal regulation. Since most of the Texas utilities are in ERCOT, which is wholly in Texas, and since ERCOT is not interconnected with other regions of the country, such a practice would minimize the probability of becoming subject to federal regulation. There is a question whether after the Energy Policy Act of 1992 ERCOT can remain free of federal regulation. Under EPAct, the FERC has authority to order wholesale wheeling and enlargement of a utility's transmission capacity in order to deliver it to a wholesale customer. If a wholesaler outside ERCOT requests such an order to deliver power to a purchaser within ERCOT, for example CFE, the issue would be joined as to whether ERCOT would have to interconnect with the interstate transmission grid in order to have the power delivered.

274. 52 Stat. 822 (codified as amended at 15 U.S.C. §§ 717-717w (1988 & Supp. V 1993)).

state commerce and foreign commerce are distinct in the Constitution, have been treated distinctly by Congress, and refused to "write into an act of Congress a provision which Congress affirmatively omitted."[275]

Detroit Edison urged Congress to essentially codify the holding of *Border Pipeline* by amending section 202(e) of the Federal Power Act in a way that would "compel the Federal Power Commission to respect the original intent of Congress, and would affirm the incidental intention to preserve the power of a State to regulate electric sales and service within its borders and to safeguard its own resources."[276] Interestingly, it was not until Detroit Edison raised this issue in 1953, almost twenty years after section 202(e) was adopted, that section 202(e) received legislative scrutiny. As a subsection within title II of the PUHCA, section 202(e) received little legislative attention. The Committee hearing focused on the contentious holding company laws in title I of the bill. The electric industry's legislative focus at the time is evidenced by the fact that they would come to challenge the constitutionality of PUHCA several times.[277]

Detroit Edison now reminded Congress that while it vested the FPC with jurisdiction over wholesale interstate transactions in title II of PUHCA, the preservation of state power, wherever possible, was the stated congressional intent. As the Senate Report accompanying the revised bill to the floor stated:

> The revision has . . . removed every encroachment upon the authority of the States. The revised bill would impose Federal regulation only over those matters which cannot effectively be controlled by the States. The limitation on the Federal Power Commission's jurisdiction in this regard has been inserted in each section in an effort to prevent the expansion of Federal authority over State matters.[278]

Moreover, the section-by-section analysis of the revised bill clearly stated, "[T]he rate-making powers of the Commission are confined to those wholesale transactions which the Supreme Court held in *Public Utilities Commission v. Attleboro Steam & Electric Co.* (273 U.S. 83), to be beyond the reach of the States."[279]

The FPC, however, very strongly asserted that Congress intended it to have regulatory authority over foreign transmissions.[280] It argued that the intent of Congress was to close regulatory gaps arising from state limitations, like the Attleboro Gap, and that the construction urged by Detroit Edison would create the regulatory gap which the FPC's Rule 2.3 had presciently foreclosed.[281] The bill that eventually became section 202(f) of the FPA is remarkably similar to language proposed by a reluctant FPC

275. Border Pipe Line Co. v. FPC, 171 F.2d 149, 152 (D.C. Cir. 1948).

276. *S. 1442 Subcommittee Hearing, supra* note 269, at 2.

277. *See* Electric Bond & Share Co. v. SEC, 303 U.S. 419 (1938); North Am. Co. v. SEC, 327 U.S. 686 (1946); American Power & Light Co. v. SEC, 329 U.S. 90 (1946).

278. S. REP. NO. 621, 74th Cong., 1st Sess. 18 (1935).

279. *Id.* at 48.

280. *S. 1442 Subcommittee Hearing, supra* note 269.

281. Rule 2.3, *reprinted in* 1953 U.S.C.C.A.N. 2165.

attempting damage control.[282] It clearly stated that the states could regulate foreign transmissions to the extent such regulation did not interfere with FPC jurisdiction.[283] Thus, Congress could be assured that no regulatory gap had been reopened. Border states were granted authority to regulate foreign transmissions, both imports and exports, to the extent their utilities did not participate in interstate commerce. Section 202(f) provided:

> The ownership or operation of facilities for the transmission or sale at wholesale of electric energy which is (a) generated within a State and transmitted from that State across an international boundary and not thereafter transmitted into any other State, or (b) generated in a foreign country and transmitted across an international boundary into a State and not thereafter transmitted into any other State shall not make a person a public utility subject to regulation as such under other provisions of this subchapter. The State within which any such facilities are located may regulate any such transaction insofar as such State regulation does not conflict with the exercise of the commission's powers under or relating to subsection (e) of this section.[284]

Although the FPC was not faring well with Congress, it was faring better with the Executive. Almost to the month of the passage of section 202(f) of the FPA, President Eisenhower issued an executive order[285] completely delegating his power to issue Presidential Permits to the FPC. This consolidated the power to authorize electricity exports and issue Presidential Permits in the FPC. In contrast to Executive Order 8082, the legal basis of this order was "by virtue of the authority vested" in the "President of the United States and Commander in Chief of the armed forces of the United States."[286] The order specifically stated that "the proper conduct of the foreign relations of the United States requires that executive permission be obtained for the construction and maintenance at the Borders of the United States of facilities for the exportation or importation of electric energy. . . ."[287] The only criterion for the permit's issuance was a finding that it be "consistent with the public interest."[288] The Commission was also given power to "attach to the issuance of the permit and to the exercise of the rights granted thereunder such conditions as the public interest may in its judgment require."[289] A stated purpose of the delegation of power was to "provide a systematic method in connection with the issuance and signing of permits. . . ."[290]

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282. *See S. 1442 Subcommittee Hearing, supra* note 269.

283. *S. 1442 Subcommittee Hearing, supra* note 269.

284. Federal Power Act § 202(f), ch. 343, 67 Stat. 461 (1953) (current version codified as amended at 16 U.S.C.S. 824a(f) (Law. Co-op. 1994)).

285. Exec. Order No. 10,485, 3 C.F.R. 970 (1949-1953), *introductory language reprinted in* OFFICE OF THE FEDERAL REGISTER, NATIONAL ARCHIVES AND RECORDS ADMINISTRATION, CODIFICATION OF PRESIDENTIAL PROCLAMATIONS AND EXECUTIVE ORDERS 1945-1989, at 181, *reprinted as amended* in 15 U.S.C. § 717b (1988) (accompanying rules codified at 10 C.F.R. §§ 205.320-.329 (1994)).

286. Exec. Order No. 10,485, 3 C.F.R. 970 (1949-1953).

287. *Id.*

288. *Id.*

289. *Id.*

290. *Id.* It is interesting to note that several functions similar to Presidential Permitting of electric transmission lines were not transferred until ten years later by President Johnson to the Secretary of

Executive Order 10485 was amended by Executive Order 12038 in 1978[291] to make conforming changes necessitated by the change to "Department of Energy Organization Act of 1977."[292] Executive Order 12038 transferred the presidential permitting authority to the Secretary of Energy. Meanwhile, the Reorganization Act transferred section 202(e) authority over Export Authorizations to the Secretary of Energy as well, thus preserving the consolidation of power begun by the Executive Order 8082 and which was finally effectuated in Executive Order 10485. The Secretary of Energy delegated in turn this consolidated authority to the Administrator of the Economic Regulatory Administration.[293] This authority was redelegated by the Secretary to the Assistant Secretary for Fossil Energy on February 7, 1989,[294] who delegated the authority to the Deputy Assistant Secretary for Fuels Programs on July 14, 1989,[295] who in turn delegated it to the Director of the Office of Coal and Electricity on September 24, 1993,[296] where it resides today—for the moment.

C. NEPA—As Applied to Interconnections and Power Transfers

One of the foremost environmental law scholars has called the National Environmental Policy Act of 1969 (NEPA)[297] both the "Sherman Act of environmental law" and a "paper tiger" stating that, "It is the fate of significant legislation simultaneously to exceed all expectations yet fall short of its supporters' fondest aims."[298] NEPA's best known requirement is the preparation of an impact statement by each agency of the federal government that undertakes a major federal action with significant environmental effects.[299] The purpose is to force federal agencies to consider the environmental consequences of their proposed actions, and the alternatives to them, and thereby incorporate environmental concerns in their decisionmaking.[300]

Title II of NEPA created the Council on Environmental Quality (CEQ).[301] Among other things, section 204 gives the CEQ limited power to review programs and activities of the federal government to ascertain

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State under Executive Order No. 11423. Exec. Order No. 11,423, 33 Fed. Reg. 11,741 (1968), *reprinted in* 3 U.S.C. § 301 (1988) (as amended by 58 Fed. Reg. 29,511 (1993)). The order contains the same foreign relations language of Executive Order 10,485 and transfers permitting authority over water supply and oil pipelines, aerial tramways, cable cars, and submarine cables.

291. Exec. Order No. 12,038, 3 C.F.R. 136 (1978).

292. Department of Energy Organization Act of 1977, Pub. L. No. 95-91, 91 Stat. 565 (codified as amended at 42 U.S.C. § 7101 (1988)).

293. DOE Delegation Order No. 0204-4, *reprinted in* 42 Fed. Reg. 60,726 (1977).

294. DOE Delegation Order No. 0204-127, *reprinted in* 54 Fed. Reg. 11,436 (1989).

295. Copy of order on file with author.

296. Copy of order on file with author.

297. Pub. L. No. 91-190, 83 Stat. 852 (codified as amended at 42 U.S.C. §§ 4321, 4331-35, 4341-47 (1988 & Supp. 1993).

298. WILLIAM H. RODGERS, JR., ENVIRONMENTAL LAW 801 (2d ed. 1994).

299. NEPA § 102(2)(C), 42 U.S.C. § 4332(2)(C) (1988).

300. NEPA § 102, 42 U.S.C. § 4332(2)(B) (1988).

301. NEPA § 202, 42 U.S.C. §§ 4341-47 (1988) (corresponding rules codified at 40 C.F.R. §§ 1500-1517.7 (1994)).

whether they are contributing to fulfillment of the goals of NEPA.[302] The Environmental Quality Improvement Act of 1970,[303] Executive Order 11514,[304] and Executive Order 11911[305] increased CEQ's authority in various ways, in particular the authority to issue guidelines for compliance with NEPA.

With such guidance from the CEQ, the Department of Energy implemented NEPA by developing its own "guidelines." The following summary from a republication of the DOE Guidelines explains their history at DOE:

> On March 28, 1980, the Department of Energy (DOE) published in the Federal Register (45 FR 20694) final guidelines for compliance with the National Environmental Policy Act (NEPA), as required by the Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508). Section D of the Department's guidelines identifies typical classes of DOE actions; (1) which normally do not require either an environmental assessment (EA) or an environmental impact statement (EIS), i.e. categorical exclusion, (2) which normally require an EA but not necessarily an EIS, and (3) which normally require an EIS. These classes were identified pursuant to CEQ regulations (40 CFR 1507.5(b)(2)).[306]

An environmental assessment (EA) will lead either to a finding that there is a significant impact which then triggers the requirement for an EIS, or a finding of no significant impact (FONSI) and no further environmental impact analysis need be pursued. Section D of the Guidelines was modified several times over the years mainly to amend the classifications of some actions to increase the number of categorical exclusions as, according to DOE, experience showed that EAs or EISs were unnecessary for the reclassified actions.[307]

Eventually DOE incorporated the Guidelines into its rules implementing NEPA and then revoked the Guidelines.[308] The new rules revised and expanded the typical classes of actions, including more categorical exclusions.[309] There were a number of criticisms expressed to DOE about the categorical exclusions. It was felt that they were vaguely drafted, overly broad, and entirely without reference to size, volume, or significance in a way that would encompass major Federal actions that were likely to have significant environmental impacts.[310] The DOE responded:

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302. NEPA § 204, 42 U.S.C. § 4344 (1988).

303. The Environmental Quality Improvement Act of 1970, Pub. L. No. 91-224, 84 Stat. 114 (1970) (codified as amended at 42 U.S.C. §§ 4371-75 (1988 & Supp V)).

304. Exec. Order No. 11,514, 3 C.F.R. 104 (1970), *reprinted in* 42 U.S.C. § 4321 n. (1988).

305. Exec. Order No. 11,911, 3 C.F.R. 112 (1976 Comp.), *revoked by* Exec. Order No. 12,608, 52 Fed. Reg. 34,617 (1987).

306. Notice of Amendments to and Republication of the Department of Energy's NEPA Guidelines, 52 Fed. Reg. 47,662 (1987).

307. *See, e.g.,* Amendments to Guidelines for Compliance with the National Environmental Policy Act, 48 Fed. Reg. 685 (1983); Notice of Amendments to the Department of Energy's NEPA Guidelines, 52 Fed. Reg. 659 (1987); Notice of Amendments to the Department of Energy's NEPA Guidelines, 54 Fed. Reg. 12,474 (1989).

308. Final Rule, National Environmental Policy Act Implementing Procedures, 57 Fed. Reg. 15,122 (1992) (codified as amended at 10 C.F.R. pt. 1021 (1994)) [hereinafter Final NEPA Rule].

309. *See* 10 C.F.R. pt. 1021, subpt. D, apps. A, B (1994) (listing of categorical exclusions).

310. Final NEPA Rule, *supra* note 308.

> DOE believes the extensive list of categorically excluded actions in the final rule is consistent with NEPA and the CEQ regulations. The CEQ regulations require agencies to reduce excessive paper work and avoid delays by using categorical exclusions (40 CFR 1500.4(p) and 1500.5(k)). DOE will prepare EAs when necessary—that is, when the class of actions has not been excluded and/or when DOE is uncertain whether the proposed action would have significant environmental impacts. DOE believes it will serve environmental concerns best if it focuses its efforts on analyzing those actions that may or do have potential for significant impact.[311]

Subpart D of the final rules contained an express categorical exclusion for Export Authorizations.[312] Appendix B to subpart D, paragraphs B4.2 under *Categorical Exclusions Applicable to Power Marketing Administrations and to all of DOE with Regard to Power Resources* allows an exclusion for, "Export of electricity over existing transmission lines as provided by section 202(e) of the Federal Power Act."[313] In 1993, a Texas utility obtained an amended electricity Export Authorization to transmit electric energy to Mexico over *five* interconnections.[314] The notice of intention to grant the authorization simply stated:

> In considering this application the DOE reviewed the environmental impacts associated with the proposed export and determined that this action was eligible for categorical exclusion under Appendix B to Subpart D, paragraph B4.2 of the revised DOE Guidelines implementing the National Environmental Policy Act of 1969 (NEPA).[315]

The fact that the DOE did not make any comment regarding the cumulative effect of the proposed action was surprising since among the commentators criticizing the categorical exclusions of the final rule issued in 1992, was one which stated, "that if the individual actions encompassed by a categorical exclusion have the potential for significant impact on a cumulative basis, then the categorical exclusion is invalid."[316] At the time, DOE agreed by responding that in such circumstances, "[DOE] must find that classes of actions categorically excluded do not individually or cumulatively have a significant effect on the human environment."[317] It may be that the proposed action, notwithstanding that it involved five interconnections, did not cumulatively have a significant effect on the environment, but the point is that the cumulative impact aspect was not addressed nor was such a finding made.

A Presidential Permit does not expressly qualify as a "typical class of action" to which any set rule can be applied. However, there are several rules that might be applicable to Presidential Permits that vary from a categorical exclusion to a requirement for an EIS. For example, although subpart D does not contain an express categorical exclusion for Presidential Permit applications, there are two categorical exclusions that might be

311. Final NEPA Rule, *supra* note 308.
312. 10 C.F.R. pt. 1021, subpt. D., app. B, ¶ 4.2 (1994).
313. *Id.*
314. Issuance of Amended Electricity Export Authorization, 58 Fed. Reg. 17,880 (1993).
315. *Id.*
316. Final NEPA Rule, *supra* note 308.
317. Final NEPA Rule, *supra* note 308.

applicable in some circumstances, such as construction of tap lines[318] and minor relocations of existing transmission lines.[319] Similarly, upgrading or reconstructing an existing transmission line normally requires an EA but not necessarily an EIS.[320] However, to the extent that a new line is a "main transmission system addition," an EIS would probably be required since this action has been classified under Appendix D as a class normally requiring an EIS.[321]

V. Policy Reform—Your Paradigm or Mine?

The power industry, consisting of generating, transmitting, and distributing electrical power, is in dynamic change. Therefore, the corresponding regulation, made up of the definition, allocation, and administration of governmental power over the power industry, must change as well. The process of reregulation has begun. The term reregulation may not be as politically obliging as the *au courant* "deregulation," but it may be more accurate—and realistic. If we then think of it this way, then possibilities for reform will present themselves that might otherwise be overlooked when redefining and reallocating governmental power.

The regulation of international power transfers, in contrast to the reregulation of domestic power transfers, has remained static in the face of tremendous market changes. The present international power regulatory scheme was designed in a different time for a very different industry. It is a regulatory relic. It is encrusted with implementing policies whose historical origins are concerns of dubious contemporary relevance but which divert recognition and consideration from what ought to be the major concern of our time. This concern is the development of an economically efficient international power transfer market that internalizes, as much as possible, the environmental externalities that unavoidably accompany such development. To achieve this, market reform of the regulatory scheme governing international power transfers is necessary.

There are two approaches to such reform. One would consider the current system as a baseline for proposing needed changes. The other would consider, instead, a *de novo* regulatory design. The former leads to reform of rules governing Export Authorizations and Presidential Permits, rules implementing NEPA, Executive direction, and legislation. The latter leads to replacement of the current parochially segmented regulatory scheme, dominated by a technical concern for reliability of a subsystem of an increasingly integrated transmission grid spanning three countries, with a regulatory system whose concern is rationalizing power generation and transmission in North America while minimizing environmental harm.[322]

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318. 10 C.F.R. pt. 1021, subpt. D, app. B, ¶ 4.12 (1994).

319. *Id.* ¶ 4.13.

320. 10 C.F.R. pt. 1021, subpt. D, app. C, ¶ 4 (1994).

321. 10 C.F.R. pt. 1021, subpt. D., app. D., ¶ 5 (1994).

322. This article has concerned itself almost wholly with U.S-Mexico power transfers. The United States, of course, also shares a border with Canada. Electric power transfer relationships between the United States and Canadian utilities are mature and stable. It is the U.S.-Mexico power transfer

A. Baseline Reform

1. The Need for Rules

The FPC regulations implementing section 202(e) of the FPA appeared in the first year of the publication of the Code of Federal Regulations in 1938.[323] In 1939, after President Roosevelt delegated some presidential permitting authority to the FPC, it published additional rules to implement its new authority.[324] Since that time the regulations have remained essentially the same, with minor variations, despite the transfer of permitting authority to different offices. When the authority over Export Authorizations and Presidential Permits was transferred to the ERA in 1980, it issued new regulations almost identical to those initially issued by the FPC.[325] The previous FPC promulgated rules were eventually deleted from the Code of Federal Regulations by the FERC in 1990.[326] The current regulations in force are the 1980 ERA promulgated rules, although the ERA was disestablished in 1989. DOE has published its intent to issue new regulations governing Export Authorizations and Presidential Permits in its Regulatory Agenda every six months since April 1990.[327] Starting in April of 1992, the Regulatory Agenda notice changed.[328] It began to state that the forthcoming regulations would "streamline" existing procedures for authorizations and permits by eliminating the use of FERC "trial-type" procedures and establishing a "less adversarial" process of decisionmaking.[329] The Regulatory Agenda notice further stated that the regulations will establish the fact that DOE's decisional criteria is "only electric reliability."[330] While it is surely premature, and perhaps unwise, to rely too much or dwell too long on Regulatory Agenda information, nonetheless, some concerns are raised by the brief notice.

Section 202(e), the authority governing Export Authorizations, states:

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relationship that will be subject to greatest change and whose regulatory management will pose the greatest challenge.

323. Application for Authorization to Transmit Electric Energy to a Foreign Country, 18 C.F.R. §§ 32.30 to .38 (1938).

324. Application for Construction, Operation, Maintenance, or Connection at International Boundary of United States and a Foreign Country of Facilities for Transmission of Electric Energy Between United States and Foreign Countries Under Executive Order 8202, Dated July 13, 1939, 18 C.F.R. §§ 32.50 to .52 (1939).

325. Electric Power System Permits and Reports; Applications; Administrative Procedures and Sanctions, 45 Fed. Reg. 71,558 (1980) (codified as amended at 10 C.F.R. §§ 205.300-.329 (1994)).

326. Deletion of Procedural Regulations for Transmission of Electricity to a Foreign Country and for Emergency Connection of Facilities, 55 Fed. Reg. 3943 (1990) ("By virtue of the DOE Act, the Commission lacks jurisdiction to act on any of these applications. Accordingly, the final rule deletes sections 32.20 through 32.62 from the regulations").

327. 55 Fed. Reg. 16,100 (1990); 55 Fed. Reg. 44,400 (1990); 56 Fed. Reg. 17,222 (1991); 56 Fed. Reg. 53,234 (1991); 57 Fed. Reg. 16,676 (1992); 57 Fed. Reg. 51,252 (1992); 58 Fed. Reg. 24,246 (1993); 58 Fed. Reg. 56,268 (1993); 59 Fed. Reg. 20,284 (1994).

328. 57 Fed. Reg. 16,676 (1992).

329. *Id.*

330. *Id.*

> The Commission shall issue such order upon application unless, after opportunity for hearing, it finds that the proposed transmission would impair the sufficiency of electric supply within the United States *or* would impede or tend to impede the coordination in the public interest of facilities subject to the jurisdiction of the Commission.[331]

"Technical reliability" as a criterion does not appear in the authorizing legislation. It is instead DOE's construction of the phrase "impair the sufficiency of electric supply within the United States or would impede or tend to impede the coordination in the public interest. . . ." "Technical reliability" as a criterion also does not appear in Executive Order 10485, the authority governing Presidential Permits.[332] Instead, it states that the Commission is empowered to issue a Presidential Permit "upon finding the issuance of the permit to be consistent with the public interest. . . ."[333] In this instance, the DOE is construing "consistent with the public interest" to mean "technical reliability."

The DOE is also construing two very different phrases to mean the same thing as applied to two different approvals in two very different presumptive circumstances. An Export Authorization should issue unless "coordination in the public interest"[334] is impeded, but no Presidential Permit should issue unless it is "consistent with the public interest."[335] Given the history of the Presidential Permits and the Executive rooting its authority on its foreign relations power, it would appear that the "public interest" spoken of in Executive Order 14085 encompasses broader concerns than "technical reliability."[336] Even with section 202(e), "coordination in the public interest" can encompass a broader concern than "technical reliability." For example, consideration of environmental dispatch[337] of electricity generation could be "coordination in the public interest" just as much or more so than "technical reliability." It is the case, however, that all the agencies that have had authority at one time or another for Export Authorizations and Presidential Permits have used "technical reliability" for their decisional criterion. The question is whether new regulations should con-

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331. 16 U.S.C. § 824a(e) (1988).

332. Exec. Order No. 10,485, 3 C.F.R. 970 (1949-1953), *reprinted as amended in* 15 U.S.C. § 717b (1988).

333. *Id.*

334. 16 U.S.C. § 824a(e) (1988).

335. Exec. Order No. 10,485, 3 C.F.R. 970 (1949-1953), *reprinted as amended in* 15 U.S.C. § 717b (1988) [hereinafter Executive Order].

336. *See also* Robert L. Pacnolski, Note, *The FCC and Reciprocity: An Examination of the "Public Interest" Standard,* 62 TEX. L. REV. 319, 341-44 (1983) (discussing the Presidential power to permit the landing of communications cables which embodied concerns of foreign policy and international negotiations, thus a broader notion of public interest than mere oversight of technical concerns).

337. All utilities will experience varying demands for electricity throughout the day. It therefore has a choice of what generating units to use to service that demand. Usually a utility will decide what combination of units to use on a basis of what is called an economic dispatch. This means that the utility will use as a decision criteria the cost of operating that unit. It will use the lowest cost units first and the highest cost units last in order to minimize operating costs. Sometimes a utility will use as a decision criteria not the minimization of costs but the minimization of polluting emissions from its power plants. The basis for this is usually compliance with environmental rules and regulations. In this case it will use the lowest polluting plants first and the highest polluting plants last.

tinue to do so, or whether new regulations present an opportunity to enunciate decisional criteria that take into account more contemporary concerns such as minimization of environmental harms.[338]

Finally, with respect to eliminating the use of "trial-type" procedures, it should be noted that DOE's discretion to do so varies. Executive Order 10485 grants the DOE the authority to "issue such rules and regulations, and to prescribe such procedures, as it may from time to time deem necessary or desirable" in the exercise of the delegated authority to issue the Presidential Permits.[339] However, section 202(e) regarding Export Authorizations states that the DOE must provide an "opportunity for hearing."[340] This has been held in the past to provide a right to an adjudicatory hearing with "trial-type" procedures.[341] But the law in this area is complex and fact-specific.[342] While it is true that current practice has inherited FERC "trial-type" procedures, that in itself might be the best argument that Congress intended such procedures because they originally lodged this authority in FERC's predecessor, the FPC. "Trial-type" adjudications are no longer in vogue, except with those concerned about due process, but non-adversarial processes also have their critics.[343] Consider for a moment the due process claim of a present holder of an Export Authorization who applies for authorization to increase its power transfers and is denied the request in a "less adversarial process of decisionmaking." Without an actual proposed regulation perhaps no more can be said now than to express concern about the anticipated direction of the regulations.

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338. During the attempted merger between San Diego Gas & Electric and Southern California Edison in the early 1990s, the City of San Diego intervened in the presidential permitting/export authorization proceedings. San Diego argued that the public interest referred to in the Federal Power Act's § 203 regarding mergers was synonymous with the public interest obligation in § 202(e), and that both included environmental obligations under NEPA. In a footnote the City pointed out:

> FPA § 203 governs the FERC's public interest inquiry relative to mergers. FPA § 202(e), 16 U.S.C. § 824a(e), governs the DOE's review of the electricity export authorizations, requiring a finding "[t]hat the proposed transmission would . . . [not] impede or tend to impede the coordination *in the public interest* of facilities subject to the jurisdiction of [the DOE]" (*id.*) (emphasis added). With regard to SDG&E's Presidential Permits, the DOE similarly is governed by the requirement that such Permits "be *consistent with the public interest*" (Exec. Order No. 10,485, as amended, *reprinted in* 15 U.S.C.A. § 717b note (emphasis added)).

Protest and Petition to Intervene of the City of San Diego, California, Southern California Edison Company and San Diego Gas & Electric Company: Applications to Assume Presidential Permits and Electricity Export Authorizations, Docket Nos. PP-49, PP-68, PP-68EA, PP-79, PP-79SC, E-7545 (Dep't of Energy 1991).

339. Executive Order, *supra* note 335, § 3.

340. 16 U.S.C. § 824a(e) (1988).

341. Seacoast Anti-Pollution League v. Costle, 572 F.2d 872 (1st Cir. 1978), *cert. denied*, 439 U.S. 824 (1978). *See also* Cooley R. Howarth, Jr., *Federal Licensing and the APA: When Must Formal Adjudicative Procedures Be Used?*, 37 ADMIN. L. REV. 317 (1985).

342. City of West Chicago v. United States Nuclear Regulatory Comm'n, 701 F.2d 632 (7th Cir. 1983).

343. *See generally* William Funk, *When Smoke Gets in Your Eyes: Regulatory Negotiation and the Public Interest—EPA's Woodstove Standards*, 18 ENVTL. L. 55 (1987); Susan Rose-Ackerman, *Consensus Versus Incentives: A Skeptical Look at Regulatory Negotiation*, 43 DUKE L.J. 1206 (1994); Owen M. Fiss, *Against Settlement*, 93 YALE. L.J. 1073 (1984).

2. NEPA at DOE

DOE's implementation of NEPA as applied to Presidential Permits and Export Authorizations needs reform. With respect to Presidential Permits, of minor concern is the possibility that the categorical exclusions for construction of tap lines[344] and minor relocations of existing transmission lines[345] might result in interconnection construction and modifications that would result in significant long-term environmental consequences, but which would not be considered in the permitting process. This concern would be alleviated if, at a minimum, all activities related to Presidential Permits received at least an environmental assessment (EA). A "major transmission line" should, however, continue to receive an environmental impact statement (EIS). On the whole, however, DOE's NEPA Implementing Procedures with respect to Presidential Permits did place some much needed order and consistency on the environmental review.[346]

With respect to Export Authorizations, their categorical exclusion classification[347] should be of major concern. The criticism directed generally at DOE's basis, or non-basis, for many of the categorical exclusions is quite apt when it comes to Export Authorizations.[348] Some involve minor amounts of power. Others involve major amounts. If the future described in Part III of this article materializes, then Export Authorizations will involve even larger amounts of power exports. Power exports are generated in the United States, and their generation generally results in some environmental degradation. The current categorical exclusion is inappropriate because such environmental considerations will never be considered in the decision to issue an Export Authorization.

The major problem with NEPA at DOE as applied to Presidential Permits and Export Authorizations is, however, that what is needed is not necessarily an environmental assessment of each Presidential Permit or of each Export Authorization. Rather, what is needed is a cumulative impact assessment of all the permitted and expected interconnections and of all the extant and expected power export authorizations. CEQ regulations provide that cumulative actions can be discussed in a single EIS.[349] This

344. 10 C.F.R. pt. 1021, subpt. D, app. B, ¶ 4.12 (1994).

345. *Id.* at ¶ 4.13.

346. An example of the inconsistent treatment of similar actions which existed prior to application of the current NEPA Implementing Procedures is provided by a brief examination of the environmental reviews involving the major interconnections between the United States and Mexico. A 230 kv transmission line between San Diego and Tijuana required an EIS. 46 Fed. Reg. 5051 (1981). A year later modification of that line which had "the potential to change to a double circuit," received no environmental review. 47 Fed. Reg. 51,910 (1982). Two years later the same utility proposed to construct two 230kv lines (the La Rosita-Imperial Valley lines) and the DOE adopted an environmental assessment (EA) prepared by the Bureau of Land Management. Based on that EA, the DOE determined that "issuance of the permit would not constitute a major Federal action significantly affecting the quality of the human environment." 48 Fed. Reg. 54,859 (1983).

347. 10 C.F.R. pt. 1021, subpt D, app. B, ¶ 4.2 (1994).

348. *See* 57 Fed. Reg. 15,122 (1992) (containing examples of criticisms of the categorical exclusions).

349. 40 C.F.R. § 1508.25(a)(2) (1994). For a definition of cumulative impact, see 40 C.F.R. § 1508.7 (1994).

type of EIS has been called a programmatic EIS. It has been held that "a programmatic EIS *should* be prepared if actions are 'connected,' 'cumulative,' or sufficiently 'similar' that a programmatic EIS is 'the best way' to identify the environmental effects."[350] And in a case involving a challenge to the issuance of a Presidential Permit wherein standing of the petitioners was challenged, the court expressed sympathy for the predicament of the petitioners:

> In an area where long-range planning is essential, see Cook, *The Flow of Energy in an Industrial Society*, Scientific American (Sept. 1971) 135, 144, it would be absurd to assert that a statutorily constituted county planning agency, in a county which has a real probability of being affected by transmission corridors in the future, would lack standing to raise the claim that is here made. The original petition to intervene argues that additional transmission corridors and lines in the county will be inconsistent with the historic, social and economic and cultural qualities of Greene County, and will cause environmental damage therein. It also objects that a piecemeal approach is employed by PASNY and the Commission which will deprive concerned parties of the opportunity for an overall evaluation.[351]

Finally, it should be noted that CEQ regulations also state that EISs "may be prepared, and are sometimes required, for broad Federal actions such as the adoption of new agency programs or *regulations*."[352] A question might arise as to whether DOE has a "program" that might be an appropriate subject of an EIS.[353] It does.[354] Although the genesis of United States-Mexico power transfers may have been serendipitous, the

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350. Foundation on Economic Trends v. Heckler, 756 F.2d 143, 159 (D.C. Cir. 1985) (quoting 40 C.F.R. § 1508.25 (1984)).

351. Greene County Planning Bd. v. FPC, 528 F.2d 38 (2d Cir. 1975).

352. 40 C.F.R. § 1502.4(b) (1994) (emphasis added). *See also* Patrick E. Barney, *The Programmatic Environmental Impact Statement and the National Environmental Policy Act Regulations*, 16 LAND & WATER L. REV. 1 (1981); Bausch, *Achieving NEPA's Purposes in the 1990s*, 13 ENVTL. PROF. 95 (1991); A. Myslicki, *Use of Programmatic EISs in Support of Cumulative Impact Assessment, in* ENVIRONMENTAL ANALYSIS: THE NEPA EXPERIENCE 373 (Stephen G. Hildebrand & Johnnie B. Cannon eds., 1993).

353. For a discussion of programmatic EISs, see WILLIAM H. RODGERS, JR., ENVIRONMENTAL LAW 936-41 (1994). *See also* Jon C. Cooper, *Broad Programmatic, Policy and Planning Assessments Under the National Environmental Policy Act and Similar Devices: A Quiet Revolution in an Approach to Environmental Considerations*, 11 PACE ENVTL. L. REV. 89 (1993). The Supreme Court has tended to limit the geographic reach of a programmatic EIS. *See* Kleppe v. Sierra Club, 427 U.S. 390, 414 (1976) ("Even if environmental interrelationships could be shown conclusively to extend across basins and drainage areas, practical considerations of feasibility might well necessitate restricting the scope of comprehensive [environmental impact] statements."). However, a programmatic EIS regarding electricity trade with Mexico would meet the goals of NEPA by contributing to a decisionmaker's basis of understanding. It could provide consistency to a program which has so far been treated in a haphazard fashion with no appreciation for the future implications of incremental decisions. A programmatic EIS "should be prepared if it can be forward-looking and if its absence will obstruct environmental review." RODGERS, *supra*, at 940 (*citing* Foundation on Economic Trends v. Heckler, 756 F.2d 143, 159 (D.C. Cir. 1985)). *See also* Andrus v. Sierra Club, 442 U.S. 347, 355-65 (1979) (discussing the definition of "program"). NEPA requires:

> EIS's [sic] to be included in recommendations or reports on both "proposals for legislation . . . significantly affecting the quality of the human environment" and "proposals for . . . major Federal actions significantly affecting the quality of the human environment."

Andrus, 442 U.S. at 35 (quoting 42 U.S.C. § 4332(2)(C) (1978)).

current activity and future prospects are not. Contemporary and future United States-Mexico power transfers are a consequence of an active federal program to encourage them over the past twenty-five years. In the late 1970s, they were first encouraged by the federal government in order to displace United States dependence on foreign oil.[355] In the 1980s, as some of that concern waned, they were encouraged by the federal government for environmental reasons.[356] The 1980 DOE study, *Electricity Exchanges: United States/Mexico*, had programmatic goals and recommendations.[357] One in particular appears to be consistent with DOE's Regulatory Agenda notice regarding Export Authorizations and Presidential Permits[358] stating, "The Federal regulatory agencies in the United States should investigate appropriate steps to accelerate the present approval procedures in order to decrease the lead times for installation of electrical facilities while still assuring that appropriate statutory requirements are fulfilled."[359]

The 1991 DOE Trade Study acknowledged the programmatic aspect of the Electricity Exchange Study when it stated, "The 1980 study contained several recommendations and suggestions for increasing the amount of electricity trade and cooperation between CFE and U.S. utilities."[360] The

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354. One commentator seemed to raise the issue of a program "slipping by" the DOE when DOE was in the process of expanding the categorical exclusions in its regulations implementing NEPA. As the Federal Register records:

> One commenter noted that if the individual actions encompassed by a categorical exclusion have the potential for significant impact on a cumulative basis, then the categorical exclusion is invalid. DOE agrees that it must find that classes of actions categorically excluded do not individually or cumulatively have a significant effect on the human environment. The commenter further noted that if a proposal encompasses actions within multiple categorical exclusions and cumulatively the actions have the potential for significant impacts, then the categorical exclusions encompassed are invalid. DOE agrees that such a proposal could not be categorically excluded but believes that the individual categorical exclusions would still be valid. DOE has added section 1021.410(b)(3) to address this concern and to preclude the segmentation of a proposal into component parts, which as discrete proposals are categorically excluded, to avoid preparation of an EA or EIS.

57 Fed. Reg. 15,122 (1992). 10 C.F.R. § 1021.410(b)(3) (1994), which DOE believed solved the problem, provides:

> To find that a proposal is categorically excluded, DOE shall determine the following . . . (3) The proposal is not "connected" (40 CFR 1508.25(a)(1)) to other actions with potentially significant impacts, is not related to other proposed actions with cumulatively significant impacts (40 CFR 1508.25(a)(2)) and is not precluded by 40 CFR 1506.1 or section 1021.211 of this part.

Id.

355. Part of the rationale for approving the SDG&E line to Tijuana was to decrease dependence on oil through ties to geothermal fields. *See DOE Plans to Expedite San Diego G&E Electricity Swap with Mexico,* INSIDE D.O.E., Sept. 25, 1978, at 9; U.S. DEPT. OF ENERGY AND CAL. PUB. UTIL. COMM'N, DOE/EIS-0067, DRAFT ENVIRONMENTAL IMPACT STATEMENT: 230 kV INTERNATIONAL TRANSMISSION LINE, SAN DIEGO COUNT, CALIFORNIA TO TIJUANA, MEXICO, SAN DIEGO GAS AND ELECTRIC COMPANY i-iii (1980) [hereinafter TIJUANA EIS].

356. *See* TIJUANA EIS, *supra* note 355; Presidential Permit for Proposed Imperial Valley—La Rosita Transmission Line, 48 Fed. Reg. 54,859 (Dep't Energy 1983) (discussing the environmental assessment for the proposed line and the finding of no significant impact).

357. 1980 ELECTRICITY EXCHANGES STUDY, *supra* note 32, at Executive Summary, ch. 6.

358. *See* source cited *supra* note 328 and accompanying text.

359. 1980 ELECTRICITY EXCHANGES STUDY, *supra* note 32.

360. 1991 TRADE STUDY, *supra* note 10, at 1.

1991 DOE study also contained a number of specific recommendations for all parties including the United States federal government. The Executive Summary states:

> While the study indicates that increased electricity trade between the United States and Mexico is possible, there are significant technical and economic issues to consider. Resolution of these issues must be planned and coordinated jointly by the involved electric utilities, their regional reliability councils, and the appropriate Federal and State regulatory agencies.[361]

By any other name this is a program. In fact, it has been one of DOE's most enduring programs. It could even be said that the NAFTA provisions on electricity trade are part of the program. The long-planned issuance of new regulations for its implementation is one of the program's products. Both elements, the program and the planned regulations, bring it squarely under the CEQ provision set forth in the lead sentence of this paragraph.[362] The program and the regulations should, therefore, occasion a programmatic EIS.

3. Executive Action

The Presidential power to issue permits for transmission lines, contested so dramatically by the Navy on the high seas near Miami Beach and by lawyers on the shores of Key West in 1921, was delegated by Executive Order 10485 in 1953 to the Federal Power Commission. This delegated authority was to be exercised in the public interest. Since that time, it has been delegated to the Secretary of Energy who delegated it to the Assistant Secretary for Fossil Energy who delegated it to the Deputy Assistant Secretary for Fuels Programs who delegated it to the Director of the Office of Coal and Electricity, where the public interest is exercised as a technical reliability criterion.

The authority residing in the Director of the Office of Coal and Electricity was first exercised by President Grant in 1875 when he opposed the landing of a French cable on American soil unless the monopoly aspect of its concession was given up and unless there was reciprocity by the French government who would then consent to the landing of American cables on

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361. 1991 TRADE STUDY, *supra* note 10, at v.

362. What constitutes a "program" was also discussed in Lujan v. National Wildlife Fed'n, 497 U.S. 871 (1990), where an issue developed of whether the policies of the Bureau of Land Management constituted a program. Of significance is the majority's response to the dissent in footnote 2:

> Contrary to the apparent misunderstanding of the dissent, we do not contend that no "land withdrawal program" exists, any more than we would contend that no weapons procurement program exists. We merely assert that it is not an identifiable "final agency action" for purposes of the APA. If there is in fact some specific order or regulation, applying some particular measure across the board to all individual classification terminations and withdrawal revocations, and if that order or regulation is final, and has become ripe for review in the manner we discuss subsequently in the text, it can of course be challenged under the APA by a person adversely affected—and the entire "land withdrawal review program," insofar as the content of that particular action is concerned would thereby be affected. But that is quite different from permitting a generic challenge to all aspects of the "land withdrawal review program," as thought that itself constituted a final agency action.

Id. at 890-91.

French soil.[363] Concerns over the interport monopoly aspect of the Western Telegraph Company's franchise from the Brazilian government led the President to oppose the landing of the cable by Western Union, a domestic corporation, on the shores of Miami Beach.[364] The "public interest" asserted by the Executive in those instances was far weightier and broader than the current technical reliability or its equivalent. Executive power was asserted to ensure the quality of the environment—a competitive economic environment.

Executive action is needed today to ensure that the Presidential authority is asserted once again to ensure the quality of the environment—this time the physical environment. An administration that professes great concern for the domestic and global environment has at its immediate hand a mechanism by which it can have a real effect on one of the most intractable environmental problems, transboundary air pollution. Control of interstate air pollution has been most difficult. It has been termed by some as a failure.[365] At the international level the impediments are clearly greater than those between states.[366] One thing that can be done is to develop and sign agreements. Among these agreements are the Convention on Long-Range Transboundary Air Pollution,[367] the Sulphur Emissions Protocol,[368] the Nitrogen Oxides Emissions Protocol,[369] the Vienna Convention for the Protection of the Ozone Layer,[370] and the Montreal Protocol.[371]

Power transfers to Mexico will, if they occur in the magnitude expected, generate a substantial amount of air pollution. It is likely that the electricity will be generated by coal-fired or natural gas-fired power plants. It is also likely that the power plants will be sited near the border in order to minimize transmission line losses. The border is already experiencing serious transboundary air pollution problems of its own.[372] The

363. *See* United States v. Western Union Tel. Co., 272 F. 311 (1921), *aff'd*, 272 F. 893 (1921), *rev'd per stipulation of the parties*, 260 U.S. 754 (1922).

364. *Id.*

365. Kay M. Crider, *Interstate Air Pollution: Over a Decade of Ineffective Regulation*, 64 CHI.-KENT L. REV. 619 (1988).

366. Jeffrey L. Roelofs, Note, *United States-Canada Air Quality Agreement: A Framework for Addressing Transboundary Air Pollution Problems*, 26 CORNELL INT'L L.J. 421 (1993).

367. Convention on Long-Range Transboundary Air Pollution, Nov. 13, 1979, 18 I.L.M. 1442 (1979).

368. Sulfur Emissions Protocol of 1985, Protocol of the 1979 Convention on Long-Range Transboundary Air Pollution on the Reduction of Sulfur Emission or Their Transboundary Fluxes by at Least 30 Percent, July 9, 1985, *reprinted in Report of the Third Session of the Executive Body of the Convention on Long-Range Transboundary Air Pollution*, U.N. Doc. ECE/EB.AIR/7/Annex 1 (1985).

369. Nitrogen Oxides Emissions Protocol of 1988, United Nations: Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution Concerning the Control of Emissions of Nitrogen Oxides or Their Transboundary Fluxes, Oct. 31, 1988, 28 I.L.M. 212 (1989).

370. Vienna Convention for the Protection of the Ozone Layer, *opened for signature* Mar. 22, 1985, 26 I.L.M. 1529 (1987).

371. Montreal Protocol on Substances that Deplete the Ozone Layer, *opened for signature* Sept. 16, 1987, 26 I.L.M. 1541 (1987).

372. *See* THE U.S.-MEXICO BORDER REGION: ANTICIPATING RESOURCE NEEDS AND ISSUES TO THE YEAR 2000, at 405-46 (César Sepúlveda & Albert E. Utton eds., 1984); Howard G. Applegate, *Transnational Air Pollution*, *in* ECOLOGY AND DEVELOPMENT OF THE BORDER REGION 127-37 (Stanley

Executive would not have to rely on the many international agreements to control air pollution attributable to such power exports. It could simply use its authority to control interconnection construction or to place terms and conditions on the Presidential Permit that will insure that power flowing over that interconnection was generated with a concern toward minimizing environmental burdens. Executive Order 10485 states, "The Commission shall have the power to attach to the issuance of the permit and to the exercise of the rights granted thereunder such conditions as the public interest may in its judgment require."[373] Of course, this means that the Executive needs to provide direction to its delegatee to pursue the "public interest" in a manner that would allow it to achieve this goal. An amendment to Executive Order 10485 would be appropriate.

A concern might arise as to whether such an assertion of Presidential authority would conflict with the Congressional authority to regulate foreign commerce and specifically with section 202(e) which governs Export Authorizations. This need not be the case because section 202(e) also delegates authority to refuse to issue an Export Authorization if a finding is made that the proposed export would impede or tend to impede the coordination in the "public interest" of facilities subject to the Commission's jurisdiction.[374] Apparently, there would be even less of an impediment to construing the "public interest" to mean the same thing in both delegations than has been the case with the technical reliability criterion.

Executive pursuit of a public interest that incorporates a goal of minimizing environmental burdens through the assertion of authority over interconnections could also reach environmental burdens caused by *imported power.* Recall that federal regulation of power transfers originated in the Burton Act which granted the President the authority to regulate power imports.[375] Also, recall that the Attorney General opined that even in the absence of such legislation, the President had the authority to regulate power imports.[376] Executive Order 10485 could be construed to grant the delegatee the authority to regulate imports through the authority to "attach to the issuance of the permit and to the exercise of the rights granted thereunder such conditions as the public interest may in its judgment require."[377]

There is yet another avenue for assertion of Presidential authority in pursuit of environmental goals. Favorable concurrences must be obtained from the Secretary of State and the Secretary of Defense before issuing a

R. Ross ed., 1983); Thomas O. McGarity, *Commentary, in* ECOLOGY AND DEVELOPMENT OF THE BORDER REGION 277-83 (Stanley R. Ross ed., 1983). For additional information on general border issues, see TOM BARRY & BETH SIMS, THE CHALLENGE OF CROSS-BORDER ENVIRONMENTALISM: THE U.S.-MEXICO CASE (1994); Stephen P. Mumme, *New Directions in United States-Mexican Transboundary Environmental Management: A Critique of Current Proposals,* 32 NAT. RESOURCES J. 539 (1992).

373. Executive Order, *supra* note 335, § 3.

374. 16 U.S.C. § 824a(e) (1988).

375. Burton Act, 34 Stat. 626 (1906) (lapsed 1909).

376. 30 Op. Att'y Gen. 217, 221 (1913).

377. Executive Order, *supra* note 335, § 3.

Presidential Permit.[378] If there is a lack of unanimity of agreement, one way or the other, then the President will decide the matter.[379] There are no criteria set forth for the review by the Secretary of State and the Secretary of Defense. So regardless of the criterion utilized by the delegatee, and its fulfillment, the President can direct a nonconcurrence by one or the other or both and issue the permit directly with his own terms and conditions.

Finally, the President could at any time revoke his delegation of authority and issue Presidential Permits at his sole discretion, assuming Congress has not legislated on the matter.[380]

4. Congressional Action

Surprisingly, Congress has acted relatively few times in the area of power transfers. When it has, two major purposes are discernible. The first is to make sure that there are no regulatory gaps in the regulation of electricity, and the second has been to provide particular and specific regulatory relief to a party from the closing of the gap. An example of the former is the Federal Power Act of 1935, including section 202(e), which was motivated by, among other things, a desire to close the *Attleboro* Gap and similar gaps. An example of the latter is section 202(f) which, although it does not mention Detroit Edison by name, was enacted to give it relief from the FPC's implementation of section 202(e).[381] The problem is that by not being specific enough, section 202(f) cut a wide swath. It may be the case that with the integration of the grid that has developed since then, there may not be any electric utilities left along the Mexican or Canadian border, except those in ERCOT, that meet the criteria. However, section 202(f) did not contemplate the potential complications that would ensue from the later creation of EWGs and open access by the Energy Policy Act of 1992. Section 202(f) invites a conflict between the states and the FERC over the regulation of EWGs that would be engaged in intrastate wholesale transactions destined for export. Congress should repeal section 202(f).

Congress should also amend section 202(e) to require authorization for power imports. Again, recall that Congress once regulated power imports when it enacted the Burton Act. It is an anomaly that power imports are not regulated. The closest analog would be natural gas, and the Natural Gas Act of 1938 requires both import and export authorizations.[382] But the reason to require power import authorizations should not be a misplaced sense of regulatory symmetry. The reason is to be able to effectuate some consistent national notion of the public interest with respect to power consumed in this country. There should be no concern that congressional action in this regard would conflict with the asserted authority of the Executive over power imports and interconnections. The little decisional law

378. Executive Order, *supra* note 335, § 3(a).

379. Executive Order, *supra* note 335, § 3(b).

380. *See* United States v. Western Union Tel. Co., 272 F. 311 (1921), *aff'd,* 272 F. 893 (1921), *rev'd per stipulation of the parties,* 260 U.S. 754 (1922).

381. *See* H. REP. NO. 978, 83d Cong., 1st Sess. (1953), *reprinted in* 1953 U.S.C.C.A.N. 2164-67.

382. 15 U.S.C. § 717b(a) (Supp. V 1993).

and commentary in this area indicates that Congress has primacy in regulating foreign commerce. The questions that have arisen have not questioned congressional primacy; in fact, they affirm it.[383] It has been the absence of congressional action that has raised questions about whether the Executive has authority to act. Policy in this area should not be left by default to the discretion of an Executive that might not act.

Finally, requiring authorizations for power imports will channel decisionmaking regarding issues related to the generation of that power to a level that will assist their final resolution. International trade and all the attendant concerns that affect particular items of trade should be a matter for the nation. If there is no national forum for debate, then debate will occur wherever a forum can be found, and international trade policy will be made piecemeal.

Concerns have been raised about power generators escaping to Mexico to take advantage of the difference in environmental standards and enforcement to lower their production cost, and then undercut their competitors in the United States by exporting their "lower-cost" power.[384] Canadian power producers have been exporting "lower-cost" hydroelectric power for years.[385] The "lower-cost" power in both instances generates environmental burdens.[386] With respect to Mexico, visions of plumes drift-

383. *See* 30 Op. Att'y Gen. 217 (1913); Commercial Cable v. Burleson, 255 F. 99 (S.D.N.Y. 1919); United States v. Western Union Tel. Co., 272 F. 311 (S.D.N.Y. 1921).

384. *Hearing of the House Energy & Commerce Comm. Subcomm. on Energy and Power,* FED. NEWS SERV., Sept. 22, 1993. William White, Deputy Secretary of Energy was a witness. Representative Sharp, who was chairing the hearing asked him: "[I]s the new opening to Mexico supported by our energy industries because it really helps them to escape environmental regulation here at home?" Later in his testimony White responded:

> Under Executive Order 10485, the secretary—the president could deny somebody the permission of building a new power transmission line across the border with Mexico. That's a discretionary decision made on the basis of recommendations from the Department of Energy, and I can tell you this—this Department of Energy is not going to recommend that the president allow the construction of a transmission line across the U.S. Mexican Border if that line is constructed for the purpose of somebody trying to evade United States environmental rules and regulations.

Id. In response to a question on Carbon II, he responded:

> [I]f Carbon-2 were to export into this country then the public utility commissions of the various states I know would have the ability to consider the bad environmental practices in determining whether Carbon-2 could export into this country. As you know, for example there's public utility commissions [sic] in my state of Texas and in California and other states that would take that responsibility very seriously.

Id. There is no basis for this assertion since there is no regulation over imports of energy into this country except through the presidential permitting process which is regulated by the DOE.

385. *See generally* U.S. GENERAL ACCOUNTING OFFICE, GAO/RCED-86-119, REPORT TO THE CHAIRMAN, SUBCOMMITTEE ON OVERSIGHT AND INVESTIGATIONS, COMMITTEE ON ENERGY AND COMMERCE, HOUSE OF REPRESENTATIVES, CANADIAN POWER IMPORTS: A GROWING SOURCE OF U.S. SUPPLY (1986); U.S. GENERAL ACCOUNTING OFFICE, GAO/RCED-89-51, UPDATE OF CANADIAN POWER IMPORTS: A GROWING SOURCE OF U.S. SUPPLY (1989); ENERGY INFORMATION ADMINISTRATION, DOE/EIA-0553, U.S. ELECTRICITY TRADE WITH CANADA AND MEXICO (1992).

386. *See generally* TENSIONS AT THE BORDER: ENERGY AND ENVIRONMENTAL CONCERNS IN CANADA AND THE UNITED STATES (Jonathan Lemco ed., 1992); ECOLOGY AND DEVELOPMENT OF THE BORDER REGION (Stanley R. Ross ed., 1983).

ing north raise our concern. The consequences of our consumption visibly threaten to visit us. With respect to Canadian hydroelectric development it remains out of sight and out of our collective concern. The public utility commissions of the Northeastern United States have become the forum for this debate with some successes for those asserting environmental concerns.[387] There will always be non-intersecting issues, but to the extent that issues of national concern need to be resolved, a national forum for their resolution is appropriate. The requirement for an import authorization would provide that forum.

Finally, the absence of an import authorization sets a troubling national policy. It is a welcome mat for undocumented alien electrons—but only insofar as they leave the environmental burdens they generate at home. This hypocritical stance of enjoying the benefits of electricity generation while others bear the environmental cost places a strain not only on the rationalization of electricity generation and distribution in North America, but on the moral underpinnings of the environmental ethic.[388] It raises serious questions of environmental justice when the costs of hydroelectric development in Canada are imposed on the Cree Indians[389] and the costs of thermal electric development are imposed on the United States-Mexico border region, a chronically economically disadvantaged region.[390]

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387. *See* Natural Resources Council v. Public Util. Comm'n, 567 A.2d 71 (Me. 1989):

> In January 1989, the Commission denied CMP's [Central Maine Power's] proposed purchase from Hydro-Quebec. In its order, the Commission found that "the two principal alternatives to Hydro-Quebec have not been adequately explored: energy conservation and cogeneration and small power production." The Commission ordered CMP to research these alternatives before making further requests to purchase power from Hydro-Quebec.

Id. at 73.

388. "Indeed, environmental ethics has become an 'important field' in its own right with a burgeoning literature (that reaches across the animal rights, Deep Ecology, and ecofeminist movements) and that addresses questions such as risk-impositions on unwilling citizens, the uneven distribution of risks across racial and ethnic lines, and participatory democracy as a decisionmaking ideal." WILLIAM H. RODGERS, JR., ENVIRONMENTAL LAW 45 (2d ed. 1994).

389. Hydro-Quebec dammed and diverted five of Quebec's major rivers in the first phase of its James Bay development. The electricity from the project serves cities as far away as New York. The Crees, native residents of the affected area, have intervened repeatedly in northeastern utility hearings and lawsuits to question the need for additional power plants. *See* Proceeding on Motion of the Comm. to Establish Long-Run Avoided Cost Estimates Recognizing Bidding Auction Results, 1992 N.Y. P.U.C. LEXIS 19 (1992); 1993 N.Y. P.U.C. LEXIS 8 (1993); *Arizona Pub. Serv. Co.*, 91 P.U.R.4th 337; External Costs and Benefits Associated with Energy Consumption, No. 92-09-029 (Conn. Dep't of Pub. Util. Control, Dec. 30, 1993); Least-Cost Investments, Energy Efficiency, Conservation and Management of Demand for Energy; Authority to Order Utilities to Implement Demand Side Management Programs, 122 P.U.R.4th 153 (1991); Twenty-Four Vt. Utils., 618 A.2d 1309 (Vt. 1992). *See also* Ann Stewart, *Hydro-Electric Power and Flooding of Indian Lands,* RACE, POVERTY & ENV'T, Summer 1991, at 1, 14. *See generally* Energy Information Administration, U.S Electricity Trade with Canada and Mexico, DOE/EIA-0553 49 (1992).

390. *See generally* OSCAR J. MARTINEZ, BORDER BOOM-TOWN: CIUDAD JUAREZ SINCE 1848 (1978); ECOLOGY AND DEVELOPMENT OF THE BORDER REGION (Stanley R. Ross ed., 1983); THE U.S.-MEXICO BORDER REGION: ANTICIPATING RESOURCE NEEDS AND ISSUES TO THE YEAR 2000 (César Sepúlveda & Albert E. Utton eds., 1984).

It will lead to what Gunner Myrdal has called "moral overstrain," that disparity between high ideals and low achievement.[391]

B. It's the Environment, Stupid![392]

There is, however, another approach. Perhaps it is time for a fundamental reconsideration of the entire scheme of power transfer regulation. The two regulatory tools are the Export Authorization and the Presidential Permit. The Congressional policy basis for the former was to close a regulatory gap, and the Executive policy basis for the latter was to ensure access to the cable's benefits. With respect to power transfers, these are no longer relevant policy bases—if indeed they ever really were.

The Federal Power Act provisions, enacted in 1935, had as one of their policy bases the closing of regulatory gaps. Specifically at issue was the *Attleboro* Gap, but the Congress anticipated other gaps as well, such as the one covered by section 202(e)—power exports. But from the FPA's inception there were significant gaps that were not affected. The FPA granted jurisdiction to the FPC only over certain utilities.[393] Therefore, power exports by public power generators, such as federal power agencies, municipally, and other publicly owned utilities, did not require export authorization. Power *imports* were also not addressed by section 202(e), nor by any other provision of the Federal Power Act.

On the eve of the next centennial, when power transfers are likely to be substantial, how concerned should we be about this porous regulatory scheme? Should our response be to close these gaps? Should the entire scheme be rethought? I would suggest that unless the recommendation to infuse the phrase "coordination in the public interest" with an environmental protection ethic is implemented, the time has come to eliminate the requirement of an export authorization. The only two criteria that have ever been utilized in the administration of section 202(e) have been (1) assurance that the sufficiency of power for the United States is not threatened; and, (2) assurance that the technical reliability of the exporting utility is not diminished. If sufficiency of power and reliability are all section 202(e) is safeguarding, then section 202(e) is not worth keeping because neither is threatened by its absence.

Inherent in rate regulation is a bias toward capital investment that has led to assurance of supply.[394] The problem for state and federal regulators has been to control the utilities' tendency to overinvest in generating capacity. Moreover, the Public Utilities Regulatory Policies Act of 1978 and the Energy Policy Act of 1992, in particular, are biased toward increasing generating capacity through the creation of QFs and EWGs. The

391. GUNNER MYRDAL, AN AMERICAN DILEMMA 21 (1944).

392. Andrew Grice, *It's my party and I'll do what I want to . . .*, SUNDAY TIMES, Oct. 2, 1994, at Features ("The Clinton campaign coined the maxim 'It's the economy, stupid' to focus on the issue that mattered most to voters.").

393. 16 U.S.C. § 824(b) (1988).

394. Leland Johnson et al., *Behavior of the Firm Under Regulatory Constraint*, 52 AM. ECON. REV. 1053-69 (1962).

wholesale wheeling provisions of the EPAct ensure open access and also enhance the supply options for any exporting utility, thus additionally removing concern about sufficiency of supply.

Technical reliability should also no longer be a matter of concern. One of the success stories of the electric power industry in the United States (and portions of Mexico and Canada) is its reliability.[395] The frontier days of the isolated stand-alone utility that has to depend totally on its own system and operations have long been over. The integration of the transmission grid has led to regional reliability councils and coordinated systems design and operation.[396] These reliability councils already include the Canadian utilities in the provinces adjoining the United States border and the Mexican CFE system in Northern Baja California. All this has occurred principally because of voluntary utility coordination and planning, not government oversight of technical reliability through the authority granted in section 202(e).

After the passage of PURPA, there was concern that connecting QFs to the transmission grid would threaten reliability. After the passage of the EPAct, similar concern was expressed about connecting EWGs. The concern of connecting with a foreign utility is the same. However, the experience of connecting QFs is instructive. The utilities imposed demanding reliability criteria in their interconnections with the QFs.[397] In part, they were not greatly excited about connecting competitors to their system. The threat of competition found its expression in exacting standards for interconnection.[398] Such competitive safeguards will likely make reliability a non-issue with respect to EWGs as well. Such competitive safeguards are what will insure technical reliability of an international interconnection, especially now that the EPAct can result in a demand for the interconnecting utility to wheel power to a foreign wholesale purchaser.

An examination of the policy basis for requiring Presidential Permits leads to the same conclusion. Unless the "public interest" criterion in the delegated authority is infused with an ethic of protecting the environment,

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395. *See* John P. Williamson, *Does Electric Reliability Have a Future,* 119 PUB. UTIL. FORT., Apr. 30, 1987, at 19, 20, fig. 1. Williamson also states:

> Twenty-one years ago, the electric systems in the eastern United States and Canada were "challenged"—and they blacked out. Since then, many changes have been made to improve the reliability of the electric networks, not the least of which was formation of the North American Reliability Council in 1968. North America's unparalleled record of reliability is testimony to the results of those efforts.

Id. at 22. William Hogan's proposal for a deregulated electricity industry presumes that such reliability will be maintained. William Hogan, *Contract Networks for Electric Power Transmission: Technical Reference, Energy and Environmental Policy Center, Discussion Paper E-90-17* (Harvard University) (rev. ed. 1992). *See generally How Will Open Access Affect System Reliability?*, ELECTRICAL WORLD, Jan. 1995, at 37 (reliability of the electrical interconnections will provide the foundation that will prevent change); CHARLES F. PHILLIPS, JR., THE REGULATION OF PUBLIC UTILITIES 585-92 (1988) (explaining how regional reliability councils, power pools, and interconnections among electric utility systems contribute to reliability).

396. *See* sources cited *supra* note 395.

397. *See* Gándara, *supra* note 19, at 327-29 nn.55-62.

398. See Gándara, *supra* note 19, at 327-29 nn.55-62.

then it, too, no longer serves a relevant public policy purpose. The original assertion of Executive authority over *foreign* cable landings was to assure reciprocity with that foreign government and to insist on terms and conditions that would prevent a monopolization of message traffic over the cable. When Western Union Telegraph, a *domestic* telegraph company, attempted to land its cable, the former aspect was absent, but the latter aspect was still present and was considered sufficiently important to lead to assertion of the Executive's authority to prevent physical connections with foreign countries. Neither is relevant to an electrical interconnection across the border today. The NAFTA assures reciprocity, and the Energy Policy Act of 1992 assures open access to the facility for any wholesaler's power. Sufficiency of supply and technical reliability, the present criteria used by the DOE, are also an insufficient basis for continuation of the practice of requiring a Presidential Permit for the same reasons discussed above with respect to the Export Authorizations.

This analysis points to the termination of the requirement of Export Authorizations for power exports and the termination of the requirement of Presidential Permits for the construction of interconnections, unless there is some "public interest," other than sufficiency of supply and technical reliability, that is advanced by them. There is much to be said simply for ending unnecessary practices that only impose costs and delay.[399] Some would, however, say that is not enough. Moreover, in this instance, they would add that the only present opportunities for the furtherance of the "public interest," defined as the minimization of environmental burdens, would be lost. Perhaps not.

It has been suggested that free trade might be a Coasian solution to curtailing transboundary pollution.[400] If you place your faith in that possi-

399. There is some indication that adhering to the limitations of an export authorization might, in fact, entail other costs and present reliability problems of its own. Loop flows, unscheduled power flows, have been occurring across a U.S.-Canadian interconnection in an amount greatly in excess of scheduled transactions. The utility applied for a modification of the Export Authorization to take this into account. *See* Notice of Application to Amend Electricity Export Authorization, 57 Fed. Reg. 8655 (1992). Adherence to the original amount of power transfer authorized would have required opening the connection, thereby, affecting reliability of that portion of the system negatively. For the past two years, the utilities have been granted waivers of the authorized limits. Order Authorizing Temporary Waiver of Annual Energy Limitation to Increase Electricity Exports to Canada, FE Docket EA-58-E (1993) (on file with author); Order Authorizing Temporary Waiver of Annual Energy Limitation to Increase Electricity Exports to Canada, FE Docket EA-58-D (1992) (on file with author).

400. Barbara K. Bucholz, *Coase and the Control of Transboundary Pollution: The Sale of Hydroelectricity Under the United States-Canada Free Trade Agreement of 1988*, 18 B.C. ENVTL. AFF. L. REV. 279, 280 (1991). A free trade agreement is a step towards allocative efficiency since it reduces transaction costs between parties. However, the case of hydroelectric transfers from Canada to the United States is not an example of an efficient Coasian solution. The bargaining parties, private utilities on both sides of the border, do not have the requisite information, the internalization of environmental costs, leading to accurate pricing of their respective cost of generating electricity. The selling utility in Canada does not fully bear the cost burden of the air pollution suffered by Canada. In addition although hydro generation avoids air pollution in Canada, it also entails considerable environmental costs on natural and cultural resources not reflected in the pricing of the electricity sold. The transaction cost of getting all the affected parties together on both sides of the border to reach a Coasian bargain is obviously still a serious impediment. There are also quite obviously, problems of

bility, then the freer the trade the cleaner the environment. North American free traders have instead placed their faith in a North American Commission for Environmental Cooperation (NACEC) created by the NAFTA Supplemental Agreement on the Environment.[401] At the first meeting of the NACEC, they were urged to address the matter of the emissions from the Carbon I & II coal-fired complex in Mexico.[402] Also at that meeting, the Natural Resources Defense Council (NRDC) made a request that the Commission focus on North American energy policy.[403] It is evident that there is an expectation by those who pressed for the protection of the environment in the NAFTA debate that the type of environmental consequences caused by power transfers should be addressed by the NACEC.

It is perhaps too early to know how assertive the NACEC will be in protecting the environment and how it will go about it.[404] The role the NACEC will play in protecting the North American environment is open to some definition, and it does have available to it other relevant models and experiences to guide its definition.[405] For the moment, however, it presents a novel mechanism and a *de novo* opportunity to assert the public's interest in protecting the environment. The goals stated in the Supplemental Agreement on the Environment that created NACEC include "protection and improvement of the environment,"[406] "cooperation on the development and improvement of environmental laws regulations, procedures, policies, and practices,"[407] enhancement of "compliance with, and enforcement of, environmental laws and regulations,"[408] promotion of "pollution prevention policies and practices,"[409] and promotion of "transparency and public participation in the development of environmental laws, regulations and policies."[410] The NACEC is empowered to consider and develop recommendations regarding "pollution prevention techniques

collective action and opportunistic bargaining. *See also* Alan R. Jenkins, *NAFTA: Is the Environmental Cost of Free Trade Too High?*, 10 N.C. J. INT'L & COM. REG. 143 (1993).

401. NAFTA Supplemental Agreement, North American Agreement on Environmental Cooperation Between The Government of the United States of America, the Government of Canada, and the Government of the United Mexican States, Sept. 13, 1993 [hereinafter Environmental Side Agreement].

402. *Air Quality Problems Addressed at First Environmental Commission Meeting*, BNA ENV'T DAILY, July 28, 1994.

403. *Id.*

404. *See* Michael D. Madnick, *NAFTA: A Catalyst for Environmental Change*, 11 PACE ENVTL. L. REV. 365 (1993).

405. *See* Stephen P. Mumme, *New Directions in United States-Mexican Transboundary Environmental Management: A Critique of Current Proposals*, 32 NAT. RESOURCES J. 539 (1992); Lloyd J. Spivak, *Structural and Functional Models for the Proposed North American Commission on the Environment*, 8 AM. U. J. INT'L L. & POL'Y 901 (1993).

406. Environmental Side Agreement, *supra* note 401, art. 1(a).

407. Environmental Side Agreement, *supra* note 401, art. 1(f).

408. Environmental Side Agreement, *supra* note 401, art. 1(g).

409. Environmental Side Agreement, *supra* note 401, art. 1(j).

410. Environmental Side Agreement, *supra* note 401, art. 1(h).

and strategies,"[411] "transboundary and border environmental issues,"[412] and "approaches to environmental compliance and enforcement."[413]

On May 13, 1994, President Clinton issued Executive Order 12915 regarding federal implementation of the North American Agreement on Environmental Cooperation.[414] The Executive Order stated, "[I]t is the policy of the United States to promote consideration of, with a view towards developing recommendations and reaching agreement on, the following priorities within the Council of the Commission for Environmental Cooperation . . . ."[415] Among the priorities listed were "pollution prevention techniques and strategies, transboundary and border environmental issues,"[416] "the development, continuing improvement, and effective enforcement of, and compliance with, environmental laws, policies, incentives, regulations, and other applicable standards,"[417] and "the transparency and openness of, and opportunities for the public to participate."[418]

Finally, if elimination of section 202(e) Export Authorizations and Executive Order 10485 Presidential Permits in exchange for reliance on the North American Commission on Environmental Cooperation is too large a step for some, then a last thought should be considered. President Clinton's executive order surprisingly contains more guidance and criteria for federal administration than the Executive Order 10485 that guides the issuance of the Presidential Permits or section 202(e) of the FPA that guides the issuance of Export Authorizations. It could be argued that President Clinton's executive order has infused the "public interest" criterion of Executive Order 10485 and the "coordination in the public interest" of section 202(e) with the criterion of protection of the North American environment, and that the regulatory scheme for authorizing export transfers and presidential permitting of interconnections, if continued, now has a clear and strong basis for protecting the environment from the consequences of power generation in North America.

VI. CONCLUSION

The regulation of power imports and exports in the United States reflects a history of benign neglect with moments of specific legislative or executive focus occasioned by some real or imagined crisis. There has never been systematic congressional or executive consideration of what the nation's international power transfer policies ought to be. Consideration of

411. Environmental Side Agreement, *supra* note 401, art. 10(2)(b).

412. Environmental Side Agreement, *supra* note 401, art. 10(2)(g).

413. Environmental Side Agreement, *supra* note 401, art. 10(2)((p).

414. Exec. Order No. 12,915, *reprinted in Exec. Order No. 12915— Federal Implementation of the North American Agreement on Environmental Cooperation,* 30 WEEKLY COMP. PRES. DOC. 1082 (1994).

415. *Id.* § 2.

416. *Id.* § 2(2).

417. *Id.* § 2.3.

418. *Id.* § 2.6(d).

the environmental consequences of such power transfers reflects similar neglect. There has been an inappropriately narrow construction of the National Environmental Policy Act, and the implementing regulations, as applied to the necessary federal approvals to effectuate power transfers. Taken together, the power transfer and related environmental regulatory scheme reflects a patchwork of policies with gaps and unevenness in both the regulation of power transfers and in the regulation of the associated environmental impacts. This needs to change. Delegated Executive and Congressional authority to act in the "public interest" should include infusing the "public interest" criteria with a concern for protection of the environment. This would be consistent with the expressed national and agreed upon tri-national policy to protect the environment. Absent this change, the federal regulatory scheme governing power transfers has outlived its usefulness. It is an impediment to its professed policy purpose, the assurance of an adequate and reliable supply of electricity. The adequacy of a reliable supply of power for the populace of North America would be best achieved by accelerating the integration of the North American transmission grid, that is, an open and unimpeded border for power transfers in North America. The exchange should be that the North American Commission on Environmental Cooperation should assume a significant role in protecting the environment from the ensuing rationalization of power generation in North America.