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SEP 23 2005

Electricity, Delivery and Energy Reliability

September 16, 2005

**VIA FEDEX**

Mr. Tony Como  
U.S. Department of Energy  
Office of Electricity Delivery & Energy Reliability  
Office of Permitting, Siting and Analysis, OE-20  
1000 Independence Avenue, SW, Room 6H-034  
Washington, DC 20585

Re: Presidential Permit Application

Dear Tony:

Pursuant to 10 C.F.R. section 205.320 *et seq.*, enclosed are an original and two copies of the Application of Generadora del Desierto S.A. de C.V. for a Presidential Permit. Also enclosed is a check in the amount of \$150.00 for the filing fee.

Please call me if you have any questions.

Very truly yours,

COUCH WHITE, LLP

  
Leonard H. Singer

LHS/dp

Enclosures

cc: Magalie Roman Salas, Secretary  
Federal Energy Regulatory Commission  
888 First Street, N.E.  
Washington, DC 20426

Arizona Corporations Commission  
1300 W. Washington Street  
Phoenix, AZ 85007

Ellen Russell, Senior Project Manager  
U.S. Department of Energy  
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Mr. Ron Moulton  
Mr. John Delgado  
Mr. Chuck McEndree  
Mr. John Holt  
Western Area Power Administration  
Desert Southwest Region  
615 S. 43<sup>rd</sup> Avenue  
P.O. Box 6457  
Phoenix, Arizona 85005-6457

Mr. Dave Swanson  
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Western Area Power Administration  
P.O. Box 281213  
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UNITED STATES OF AMERICA  
BEFORE THE  
DEPARTMENT OF ENERGY  
OFFICE OF ELECTRICITY DELIVERY & ENERGY RELIABILITY

GENERADORA DEL DESIERTO SA DE CV

DOCKET NO. <sup>PP-</sup>304

APPLICATION OF  
GENERADORA DEL DESIERTO S.A. DE C.V.  
FOR A PRESIDENTIAL PERMIT

SUBMITTED BY:

GENERADORA DEL DESIERTO S.A. DE C.V.  
SAN LUIS RIO COLORADO , SONORA MEXICO

September 16, 2005

## I. INTRODUCTION

Pursuant to Executive Order (EO) No. 10485 as amended by EO 12038, and 10 CFR § 205.320 *et seq.* (2000). Generadora del Desierto SA de CV (“GDD”), a Mexican Corporation, hereby applies for a Presidential Permit authorizing GDD to construct, operate, and maintain an electric power transmission facility crossing the international border between the United States and Mexico. The section of the transmission facility that crosses the border will be interconnected to a new electric transmission facility to be built, owned, operated and maintained by the Western Area Power Administration (“WAPA” or “Western”) (hereinafter collectively called the “Transmission Facility”). The Transmission Facility will electrically interconnect the power generation facility to be constructed by GDD in San Luis Rio Colorado, Sonora Mexico with the WAPA substation in Gila, Arizona and the Arizona Public Service (“APS”) substation in North Gila, Arizona.

GDD is authorized by Comision Reguladora de Energia (“CRE”) of Mexico to export electrical power to the United States.

The Transmission Facility will consist of a single or double circuit 500 kV Transmission Facility starting at GDD’s electric generating plant site located approximately 1 mile south of the international border, and running north from the border approximately twenty miles to WAPA’s Gila Substation and another four miles north to the APS substation at North Gila. The Transmission Facility is expected to cross the US/Mexico international boundary at approximately the coordinates longitude ~~114° 48’ 00”~~ W and latitude ~~32° 26’ 00”~~ N. The proposed Transmission Facility will have a total length of approximately 24 miles, which is 48 circuit miles for the two transmission lines.

The section of the Transmission Facility located from the first pole within the U.S. north to the North Gila substation will be constructed, operated and maintained by WAPA. The section of the Transmission Facility located from the first pole within the U.S. south to the GDD generating facility will be constructed, operated and maintained by GDD. Exhibit A contains a location map of the proposed Transmission Facility, showing the transmission line initiating from the GDD generation facility site, crossing the international border into the U.S., and terminating at the Gila and North Gila substations.

The section of the Transmission Facility located within the U.S. will be constructed in accordance with all applicable U.S. provisions, standards, rules, and regulations. These include those of the Federal Energy Regulatory Commission (FERC), Department of Energy (DOE), Bureau of Land Management (BLM), International Boundary and Water Commission (IBWC), U.S. Army Corps of Engineers (USACE), and U.S. Fish & Wildlife Service (USFWS). The section of the Transmission Facility located in Mexico will be constructed in accordance with provisions, standards, rules, and regulations of Mexico. These include those of the Mexican Comisión Federal de Electricidad (CFE), the Comisión Reguladora de Energía (CRE), and the Instituto Nacional de Ecología (NE).

The route for the proposed Transmission Facility is expected to generally follow the existing Sonora line that runs east of Yuma, Arizona and into Mexico. WAPA is now conducting a corridor study to determine the best route for this Transmission Facility .

Generadora del Desierto SA de CV, is a wholly owned subsidiary of North Branch Holding LLC, a Delaware limited liability company. GDD is building a nominal 520 MW electric generating facility in San Luis Rio Colorado, Sonora, Mexico (the "SLRC Facility"). The SLRC Facility will utilize gas turbine technology in a combined cycle configuration, utilizing natural gas as fuel. The SLRC Facility will be equipped with air emissions control technology, including low-NOx combustion technology and a selective catalytic reduction (SCR) system for oxides of nitrogen emissions control, and catalytic oxidizers for carbon monoxide emissions control. GDD has received permits from federal and local permitting authorities in Mexico for the SLRC Facility, as well as for the linear transmission line facilities located in Mexico.

The Transmission facility will be used to export the SLRC Facility's net generating capacity to the U.S. Power will be imported from the U.S. for purposes of initial start-up (such as water treatment and cooling towers), "black start" capability to the power plant, and for providing ancillary equipment power when the SLRC Facility's electrical generating equipment is not in operation (such as during plant shutdowns). Power exports from the U.S. to GDD for "black start" and ancillary equipment operation during plant shutdown will occur routinely.

Once operable, the proposed Transmission Facility will provide the southwestern U.S. region with a new source of natural gas fired electric generation and improve the region's ability to meet future electrical capacity and energy requirements. Some improvements to the Gila and North Gila Substations will be necessary to accommodate the interconnections. These improvements are expected to include such items as new transformers, bus works, switch gear, circuit breakers, and loop-in transmission structures.

## **II. PRESIDENTIAL PERMIT APPLICATION**

Pursuant to 10 CFR section 205.322 the following is provided:

### **(a) Information Regarding the Applicant**

- (1) Applicant's Legal Name. The legal name of the applicant is Generadora del Desierto S.A. de C.V.
- (2) Affiliated Companies. GDD is wholly owned by North Branch Holding, LLC ("NBH"). North Branch Holding LLC also owns North Branch Resources, LLC ("NBR").

- (3) Correspondence. Leonard H. Singer, Esq.  
Couch White, LLP  
Attorneys for the Applicant  
540 Broadway  
P.O. Box 22222  
Albany New York 12201  
Phone: 518 320-3406

And

Joseph Bojnowski  
North Branch Resources, LLC  
6 North Branch Road  
Newtown, Connecticut 06470  
Phone: 203 426 4097

- (4) Neither GDD, its parent or its affiliate are owned in whole or in part by a foreign government nor have such entities been directly or indirectly assisted by a foreign government or instrumentality thereof. Neither GDD its parent or its affiliate have any agreements pertaining to such ownership from any foreign government or instrumentality thereof.
- (5) Neither the Applicant, its parent or affiliate, have any contracts with any foreign government or any foreign private concerns, relating to any purchase, sale or delivery of electric energy.
- (6) As shown in the attached opinion of counsel (Exhibit B), the construction, connection, operation and maintenance of the proposed Transmission Facility is within the corporate powers of GDD. GDD has complied and will comply with all pertinent federal and state laws.

**(b) Information Regarding The Transmission Line To Be Covered By The Presidential Permit**

(1)(i) General Technical Description

**(A) Number of Circuits and Placement.** NBH and its affiliates, NBR and GDD, propose to fund and Western to construct overhead transmission lines using either lattice steel towers or steel monopoles extending approximately twenty four miles north from the SLRC Facility to the existing Gila and North Gila Substations, crossing the border at approximately the coordinates longitude ~~114°48'00"~~ W and latitude ~~32°26'00"~~ N. The Transmission Facility is expected to be a single or double circuit as determined in the design phase of the project.

**(B) Operation Voltage and Frequency.** The nominal operating voltage will be 500 kV, three-phase at a frequency of 60 Hz. The maximum operating voltage will be 550 kV.

**(C) Conductors.** The type of conductor (wire) proposed is aluminum conductor steel reinforced (ACSR). An alternative, with the choice to be determined during detailed design, is to use aluminum conductor steel supported (ACSS), which is a new conductor type that is capable of carrying more current. The actual conductor size will also be determined during the design phase of the Transmission Facility; however, it is expected that it will not exceed three (3) bundled 1780 kcmil conductors per phase. The conductors will be approximately 1.5 inches in diameter.

(ii) Additional Information Regarding Overhead Lines

**(A) Wind/Ice Loading Design Parameters.** The Transmission Facility will be designed for an anticipated wind loading of 200 kilometers per hour (125 miles per hour). No ice loading parameters are necessary.

**(B) Description of Typical Supporting Structures.** Typical steel lattice towers and steel monopoles would be approximately 170 to 200 feet in height and built according to WAPA standard designs. The lowest bridge of the towers or poles would be approximately 80 feet from the ground, and would support insulators that in turn support the 500 kV conductors. Conductors on the towers or poles would be supported from single or double insulators depending upon final tower or pole design. The minimum ground clearance of the conductor is 35 feet at maximum operating temperature. The lattice towers would be anchored to a concrete foundation approximately 3 to 6 feet in diameter at each of the four corners at the base of the tower. The towers would be approximately 50 by 50 square feet at the base, tapering to approximately 14 by 14 square feet at the waist. Steel monopoles would be approximately 6 to 8 feet in diameter at the base, tapering to approximately 1 to 2 feet in diameter at the top. Steel monopoles would be anchored to a concrete foundation approximately 7 to 11 feet in diameter. It is anticipated that the future build-out of the Transmission Facility would have the potential for an ultimate nominal capability of 1000 MW (1400 MW maximum) of power, using bundled conductors on the same single circuit transmission structures. The Transmission Facility is expected to include static wires at the top. The two optical ground static wires will include the initial installation of communications fiber for system protection and monitoring, with additional black fiber for future communications use.

**(C) Structure Spacing.** The supporting structures would be constructed along the center of a new 200-350-foot-wide right-of-way approximately 1000 to 1500 feet apart depending on the number of circuits and structure design. Spacing of the structures could vary within the nominal limits in order to avoid or minimize impacts to sensitive biological or cultural resources.

**(D) Conductor Spacing.** Vertical spacing between phases would be 16 to 22

feet depending on the type of structure.

**(E) Line to Ground and Conductor Side Clearances.** The horizontal average distance between circuits for phase conductor spacing would be 35 feet conductor to conductor. Minimum clearance for phase conductor to ground spacing would be 35 feet, with a design margin of 3 to 5 feet.

(iii) Additional Information Regarding Underground and Underwater Lines

No underground or underwater lines are proposed.

(2) General Area and Detailed Border Area Maps

A detailed map of the Transmission Facility on the international border showing the physical location, longitude and latitude of the Transmission Facility, and identifying the ownership of the facilities at or on each side of the border, is attached as Exhibit A.

(3) Bulk Power System Information

**(i) Expected Power Transfer Capability.** The maximum power transfer capability will be determined during detailed design but, in general, is limited by the maximum electric thermal capability for the single or double circuit 500 kV line. It is estimated that the normal thermal capability for the Transmission Facility will be approximately 700 MVA at a 0.90 power factor, with an eventual maximum of 1400 MVA with the same power factor. The estimated short-time emergency thermal capability of the Transmission Facility will be approximately 750 MVA at a 0.90 power factor, with an eventual maximum of 1500 MVA at a 0.90 power factor.

**(ii) System Power flow Plots.** System power flow plots are being studied by Western and will be provided upon completion of the study.

**(iii) Interference Reduction Data.** A 500 kV line normally does not present radio or television interference problems. The Transmission Facility design will mitigate possible interference by providing corona rings on the insulators and corona free hardware.

**(iv) Relay Protection.** The Transmission Facility will be connected from the SLRC Facility to the existing Gila Substation and at the existing North Gila Substation and, therefore, will comply with WAPA/APS Utility Practices for relay protection. The Transmission Facility will not be interconnected with the Mexican grid.

**(v) System Stability Analysis.** If requested, this information will be provided by the Applicant after receipt of the system power flow plots.



## (c) POTENTIAL ENVIRONMENTAL IMPACTS

(1) **Assessment of Environmental Impacts.** The Applicant has begun an assessment of potential environmental impacts of the proposed facilities, including biological and cultural resource field surveys. Therefore, the environmental and cultural resource information included herein may be updated once all of the surveys are complete and an Environmental Impact Statement is prepared. There are no wetlands or navigable waters in the proposed route, but there are existing desert washes regulated by the U.S. Army Corps of Engineers as non-wetland jurisdictional waters. The Yuma Basin ACEC is designated by the BLM as crucial habitat for the fiat-tailed homed lizard (*Phrynosoma mcalli*), which is listed as a sensitive species by the BLM. A number of prehistoric and possibly historic sites are believed to be present in the area of the proposed Transmission Facility route.

(2) **Known Historic Places.** Areas of Transmission Facility impact that could affect historic places include permanent footings for towers or monopoles permanent access roads for maintenance, temporary construction work areas at each tower or pole site, and an estimated maximum of three wire stringing sites. Locations of these impact areas have not yet been determined, and since there is some flexibility in where individual tower or monopole structures are located, it is anticipated that any potential impacts can be minimized. Cultural resource field surveys will establish the location of all historic sites in the potential areas of impact, and to the extent feasible WAPA will attempt to locate work areas and areas of permanent impact so as to reduce or avoid resource impacts.

(3) **Proposed Minimum Right-of-Way Width.** The proposed right-of-way width of approximately 200-350 feet is wide enough so that, under extreme wind conditions, the Transmission Facility conductor does not swing (blow out) past the edge of the right-of-way. The centerline of the right-of-way line will conform to standard industry practice. However, the separation of the lines could vary slightly from the minimum distance if necessary, for instance, to avoid sensitive resources.

The towers or monopoles would be approximately 170 to 200 feet in height. The height of the lowest arm of the poles or lattice steel bridge would be approximately 80 feet from the ground. The lattice towers will be anchored to a concrete foundation approximately 3 to 6 feet in diameter at each of the four corners at the base of the tower. The towers would be approximately 50 by 50 square feet at the base, tapering to approximately 14 by 14 square feet at the top. Steel monopoles would be approximately 6 to 8 feet in diameter at the base, tapering to approximately 1 to 2 feet in diameter at the top. Steel poles will be anchored to a concrete foundation approximately 7 to 11 feet in diameter.

Grading will be done around the tower and pole locations as necessary to accommodate construction and access, but due to the flat nature of the area, limited grading is expected. The amount of temporary land disturbance anticipated during construction is 150 by 150 feet (0.5 acre) at each tower or monopole site. There would typically be 4 to 5 structures per mile. Permanent disturbance beneath the base of each tower site would be approximately 30

feet by 30 feet, or approximately 900 square feet. Permanent disturbance at the base of each steel monopole site would vary from approximately 22 square feet to 35 square feet, based on footing diameters of 7 feet and 11 feet, respectively.

Wire stringing sites will be needed for construction. It is anticipated that most areas of temporary or permanent construction disturbance will be adjacent to the access roads with the exception of permanent access roads required for ongoing operation and maintenance.

All temporarily disturbed areas will be restored and/or revegetated as required following completion of construction.

A storage and staging area will be needed during construction. The location of this storage and staging area is yet to be determined. The storage and staging area will be sited in an area where sensitive biological and cultural resources will be least impacted, pending the results of biological and cultural resource surveys.

**(4) Threatened or Endangered Wildlife or Plant Life.** Existence of and potential impacts to threatened or endangered wildlife or plant life, as well as mitigation of such impacts, if any, will be determined through the EIS process.

#### **(d) ALTERNATIVES TO THE PROPOSED FACILITY**

##### **(1) Upgrading the Existing System.**

The existing delivery system in the project area is a 69 kV overhead transmission line, the "Sonora" line. This transmission line does not have sufficient capacity to carry the electric generation output of the SLRC Facility. Also, upon information and belief, the right of way for this line is not wide enough to support the new Transmission Facility described herein.

##### **(2) Alternative Transmission Route.**

At least three (3) alternative routes are being considered for the Transmission Facility from the border to Gila substation. These corridor routes are described below:

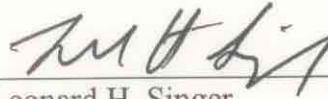
1. **Westside Route.** This route would proceed west after crossing the border, then up the Colorado River to Yuma Axis (West of Summerton), then continue in an easterly direction across some agricultural land to the Sonora line area and continue to Gila.
2. **Sonora Route.** This route would approximate the current Sonora route, but would be located east of the current line.
3. **Sonora, East of the Gunnery Range Route.** This route would follow the Sonora line but would go east of the WW II airstrip (now a Harrier landing site) and then to Gila Substation.

**(3) Underground Transmission Line.**

Underground transmission lines are normally reserved for dense urban areas where no reasonable overhead route is possible. This alternative would require increased labor and significant costs in both construction and maintenance. Underground construction requires trenching throughout the entire length of the line. This would result in a much larger area of environmental impacts during construction than an overhead transmission line and would afford less opportunity to avoid sensitive resources

**(e) VERIFICATION**

This application has been verified under oath by an officer of the Applicant having knowledge of the matters set forth above. This verification is attached as Exhibit C.



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Attorneys for Applicant  
540 Broadway – 7<sup>th</sup> Floor  
Albany, New York 12207  
(518) 320-3406

APPENDIX B

Opinion of Counsel

The undersigned, counsel to GDD, states and gives his opinion pursuant to 10 C.F.R. section 205.322 (a) (6) that:

- (a) the construction, connection, operation and maintenance of the Transmission Facility proposed in this Application for Presidential Permit is within the corporate powers of GDD; and
- (b) with respect to this Application for Presidential Permit, GDD has complied with, and will comply with, all pertinent Federal and State laws.



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Leonard H. Singer  
Couch White, LLP

Dated: Albany, New York  
September 16, 2005


STATE OF NEVADA )  
 ) ss.:  
COUNTY OF Clark )

JORGE BARONA, being duly sworn, deposes and says that deponent is President of GENERADORA del DESIERTO, S.A. de C.V., the applicant named in the within Application; that deponent has read the foregoing Application for a Presidential Permit and knows the contents thereof; that the same is true to deponent's own knowledge, except as to the matters therein stated to be alleged on information and belief, and that as to those matters deponent believes it to be true.



\_\_\_\_\_  
(name and title)

Sworn to me this 14<sup>th</sup>  
day of September, 2005

  
\_\_\_\_\_  
Notary Public

