

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 2**

**MAR 21 2011**

**DATE:**

**SUBJECT:** Puerto Rico Electric Power Authority, Via Verde Natural Gas Project  
Public Notice Number SAJ-2010—02881 (IP-EWG)

**FROM:** Carlos R. Ramos, Acting Chief   
Strategic Planning and Multi-Media Programs Branch, DEPP

**TO:** Teresita Rodriguez, Chief  
Multi-Media Permits & Compliance Branch, CEPD

The Environmental Review Section (ERS) has reviewed the translated chapters of the Commonwealth of Puerto Rico's Environmental Impact Statement (EIS) provided by the Electric Power Authority (AEE) for the Via Verde Natural Gas Project. We received Chapters 4 and 6, as well as a couple of summary sections. We recognize that our comments may be addressed in other portions of the EIS that we did not receive. Therefore, our review and comments are limited to the sections of the state EIS provided. Please feel free to convey the comments below in your communications with the Army Corps (Corps) of Engineers as you feel appropriate.

In a number of places throughout the EIS, such as page 16 of the summary chapter under "Pipeline right-of-way restoration," a 100-foot right-of-way is mentioned, however in other places in the document (such as page 31 of Chapter 6) and as stated in DEPP's February 28th meeting with EQB, it is listed as 150 feet. Does the size of the right-of-way vary throughout the project? If so, why? The difference is significant and the distance should be clarified.

On page 23 of the summary chapter, it is mentioned that a biologist will be available at all times during karst drilling to evaluate the area carefully. Though we see the value in having a biologist present, it would also be important to have a geologist with a karst background present who can evaluate the impacts of the drilling from a geological perspective.

Of the 33% of the alignment that will cross through wetlands (page 24 of the summary chapter), it is not clear whether the full 33% will be mitigated at a 3:1 ratio.

Page 29 of the summary chapter states that no cumulative impacts on mangroves and wetlands are expected. That is inconsistent with statements made in other sections of the EIS and should be clarified.

Page 4 of chapter 6 discusses the impacts of deforestation. It states, "It is estimated that 1,191.3 acres of land will be impacted, most of them (approximately 66%) temporarily." ERS is assuming that the 34% of permanently impacted acres are from the right-of-way. We disagree that the impacts of 66% of the deforestation are temporary since the permanent removal of trees will alter the habitat and thus impact areas of deforestation regardless of whether or not deep rooted trees and natural vegetation are permitted to regrow in those areas. Further, using the term "temporary impacts" might not be representative of the impacts, and should be explained in terms of months or years of recovery. A discussion of the age and species of the trees inhabiting the forest should be included to give a clearer picture of the recovery time of the area as well as a discussion of the ecosystem in general and the habitat provided by the trees and undergrowth in those areas. This information will all be helpful in determining how best to mitigate project impacts.

Pages 6-7 of Chapter 6 state, "Bosque Vega is the only forest that will receive a direct impact with this project. This reserve is fragmented in six portions. Via Verde will impact one of them. However, the impact will be minimal. The total area of this forest is 1.85 square miles. The portion that will be impacted is .46 square miles." The impacted area represents about 25% of this portion of the forest, which is not minimal. This section then goes on to say "of these, only .0086 square miles will be impacted." These sentences are inconsistent, but ERS interprets them to mean that .0086 square miles are being directly impacted by the project. We reiterate that the impacts of deforestation are not only limited to the trees that are cut down. The statement on page 7 that "...the total area to be impacted by the project is .0086 square miles, or 0.07%. This percentage is graphically imperceptible," might not be representative of the impact. AEE should be reminded that evaluation of direct impacts only, and not indirect impacts, does not paint a clear picture of environmental effects and that an imperceptible amount on a graph could be very significant from an ecosystem perspective. The effectiveness of the mitigation proposed by AEE through the acquisition of "land contiguous to some of the portions to connect two isolated portions" cannot be assessed without a map of the fragmented forest and proposed area of acquisition.

Page 59 of chapter 6 states that there will be no impact to most areas of the project during the operational phase. However, once the forested areas are deforested, the indirect impacts of the project will continue as long as a clearing is maintained. This section also states that the impacts from the clearance of existing vegetation in the forest mostly affect the ecosystem by allowing exotic species to invade. However, there are also essential natural behaviors (mating, feeding, nesting, etc.) of species that can be impacted, especially for species that spend time in the canopy or underbrush which will be permanently eliminated in the 50-foot right-of-way. Page 61 states that there "could be indirect impacts on biodiversity by the secondary effects of fragmentation in the short and middle terms." ERS believes these impacts will be felt in the *long* term as well, as the impacts of deforestation and fragmentation are likely to exist well beyond the life of the pipeline.

Lastly, we wanted to point out that on January 14, 2011 the Council on Environmental Quality (CEQ) provided guidance for departments and agencies of the Federal government on mitigation and monitoring of activities. As highlighted in this guidance, "Mitigation measures included in the project design are integral components of the proposed action, are implemented with the proposed action, and therefore should be clearly described as part of the proposed action." ERS feels that a more robust description of the mitigation and monitoring plans needs to be developed to ensure that this federal objective is fulfilled. The guidance further states, "Mitigation commitments needed to lower the level of impacts so that they are not significant should be clearly described in the mitigated FONSI [finding of no significant impact] document and in any other relevant decision documents related to the proposed action." Therefore, any Corps-issued Environmental Assessment coupled with a FONSI for this project should include that information.

In a related matter, pursuant to a March 16, 2011 memorandum from Office of Water Acting Assistant Administrator Nancy K. Stoner to Regional Administrators, the Regions are being asked to work in partnership with their States to limit phosphorous and nitrogen pollution to our waters to the extent possible regardless of whether or not numeric nutrient criteria exist for a particular water body. It would be environmentally beneficial if these principles could be incorporated into the permitting and stormwater management processes.

Should you have any questions regarding these comments, or the NEPA process in general, please feel free to call Stephanie Lamster at (212) 637-3465.

cc: J. Filippelli, DEPP  
J. Brennan-McKee, DEPP



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Carlos => Teresita

Via Verde Memorandum

EPA appreciates the effort put forth by AEE to translate some sections of the state EIS for the Via Verde pipeline. A partial document, however, only paints a partial picture and we did not feel that a comprehensive evaluation of the project and its impacts was possible with the few chapters that were provided. That said, those chapters were reviewed and commented on.

A field study for threatened and endangered species was mentioned in the summary chapter, Chapter 6, and a number of other places. EPA would like to have seen the study methods, which are included in Chapter 3 (which was not provided). Page 11 of Chapter 6 states that, "The construction area for the project is 100 ft wide. An area of 200 feet wide was covered for the flora and fauna studies." Was a similar method used for assessing the presence of threatened and endangered species along the project route?

In a number of places throughout the EIS, such as page 16 of the summary chapter under "Pipeline right of way restoration," a 100-foot right-of-way is mentioned, however in other places in the document (such as page 31 of Chapter 6) and as stated in EPA's meeting with EQB, it is listed as 150 feet. Does the size of the right of way vary throughout the project? If so, why? The difference is significant, the distance should be clarified.

On page 23 of the summary chapter, it is mentioned that a biologist will be available at all times during karst drilling to evaluate the area carefully. Though we see the value in having a biologist present, it would also be important to have a geologist with a karst background present who can evaluate the impacts of the drilling from a geological perspective.

Of the 33% of the alignment that will cross through wetlands (page 24 of the summary chapter), will the full 33% be mitigated at a 3:1 ratio?

Page 29 of the summary chapter states that there will be no cumulative impacts on mangroves and wetlands expected. That is inconsistent with other sections of the EIS and should be clarified.

Chapter 4 includes "Variations to minimize environmental impact" however, there are no listed instances where variations were made to avoid impacts to wetlands, threatened or endangered species, or critical habitat. This was surprising given the large amount of wetlands being impacted and the amount of possible habitat that will be affected.

Page 4 of chapter 6 discusses the impacts by deforestation. It states "It is estimated that 1,191.3 acres of land will be impacted, most of them (approximately 66%) temporarily." EPA is assuming that the 34% of permanently impacted acres are from the right-of-way. We disagree that the impacts of 66% of the deforestation are temporary since the permanent removal of trees will alter the habitat and thus impact areas of deforestation regardless of whether or not deep rooted trees and natural vegetation are permitted to

regrow in those areas. Further, using the term "temporary" impacts is misleading and should be explained in terms of months or years of recovery. A discussion of the age of the trees inhabiting the forest should be included to give a clearer picture of the recovery time of the area as well as a discussion of the ecosystem in general and the habitat provided by the trees and undergrowth in those areas.

Page 5 of Chapter 6 references a 30 meter construction right-of-way. Why is this right-of-way so much smaller than the previously stated 150 meter right-of-way?

Page 6-7 of Chapter 6 states "Bosque Vega is the only forest that will receive a direct impact with this project. This reserve is fragmented in six portions. Via Verde will impact one of them. However, the impact will be minimal. The total area of this forest is 1.85 square miles. The portion that will be impacted is .46 square miles." The impacted area represents about 25% of this portion of the forest, which is not minimal. This section then goes on to say "of these, only .0086 square miles will be impacted." These sentences are inconsistent, but EPA interprets them to mean that .0086 square miles are being directly impacted by the project. EPA would like to reiterate that the impacts of deforestation are not limited to the trees that are cut down. The statement on page 7 that "the total area to be impacted by the project is .0086 square miles, or 0.07%. This percentage is graphically imperceptible" is very misleading. EPA would like to remind AEE that evaluation only direct impacts, and not indirect impacts, does not paint a clear picture of environmental effects and that an imperceptible amount on a graph could be very significant from an ecosystem perspective. Fragmentation resulting from deforestation can devastate an ecosystem. The effectiveness of the mitigation proposed by AEE through the acquisition of "land contiguous to some of the portions to connect two isolated portions" can not be assessed without a map of the fragmented forest and proposed area of acquisition.

Page 59 of chapter 6 states that there will be no impact to most areas of the project during the operational phase, however once the forested areas are deforested, the indirect impacts of the projects should expect to continue as long as a clearing is maintained. This section also states that the impacts from the clearance of existing vegetation in the forest mostly affect the ecosystem in that exotic species may invade. There are also essential natural behaviors (mating, feeding, nesting, etc) of species that can be impacted, especially for species that spend time in the canopy or underbrush which will be permanently eliminated in the 50 foot right-of-way. Page 61 states that there "could be indirect impacts on biodiversity by the secondary effects of fragmentation in the short and middle terms." EPA believes these impacts will be felt in the short and *long* term as the impacts of deforestation and fragmentation are likely to exist well beyond the life of the pipeline.