

**AMIGOS DEL RÍO GUAYNABO, INC.
CIUDADANOS EN DEFENSA DEL AMBIENTE
COMITÉ BASURA CERO ARECIBO
MADRES DE NEGRO DE ARECIBO
SIERRA CLUB DE PUERTO RICO**

March 6, 2017

Via Email

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U.S. Department of Agriculture
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**RE: Comments on “Arecibo Waste-to-Energy and Resource Recovery Project
Final Environmental Impact Statement”**

Dear Mr. Polacek,

Amigos del Río Guaynabo, Inc., Ciudadanos en Defensa del Ambiente, Comité Basura Cero Arecibo, Madres de Negro de Arecibo, and Sierra Club de Puerto Rico (collectively, “Citizen Groups”) submit these comments on the Final Environmental Impact Statement prepared by the United States Department of Agriculture (“USDA”) Rural Utility Service (“RUS”) for RUS’s proposal to provide financial support to Energy Answers to construct a municipal waste incinerator in Arecibo, Puerto Rico (“the incinerator” or “the Project”). *See* Dep’t of Agric., Rural Utilities Serv., Arecibo Waste-to-Energy and Resource Recovery Project Final Environmental Impact Statement (Jan. 2017) (“Final EIS”).¹

As set forth in our comments on the July 2015 Draft Environmental Impact Statement (“Draft EIS”), RUS failed to comply with the National Environmental Policy Act (“NEPA”) requirement to take a hard look at environmental impacts from the Project. As explained in detail below, the Final EIS fails to cure any of the Draft EIS’s infirmities. The Final EIS does, however, introduce new errors that again demonstrate that RUS failed to take the requisite hard look. Energy Answers’ proposed incinerator is less economical and causes more harm to public health and the environment than reasonable alternatives that RUS has not considered, despite urging from citizen groups, members of the public, and even the U.S. Environmental Protection Agency (“EPA”). Taxpayer dollars available through the USDA’s Rural Development program are limited. They should not be spent here unless RUS is authorized to expend these federal dollars on a non-rural Project and until RUS takes a hard look at reasonable alternatives and the Project’s impact.

¹ The comments presented in this letter supplement and incorporate, but do not replace, the Citizen Groups’ November 12, 2015 comments (“Comments”) on the Draft Environmental Impact Statement for the Project. The Citizen Groups reiterate many, but not all, of their earlier points in the following comments. Points that were raised in their comments on the Draft EIS, but not highlighted again in these comments, are not waived.

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DISCUSSION

I. RUS IS NOT AUTHORIZED TO PROVIDE FINANCIAL ASSISTANCE TO THE PROPOSED INCINERATOR

The Final EIS fails to address the critical point raised by the Citizen Groups that RUS has no statutory authority to provide financial assistance to this incinerator. The Rural Electrification Act of 1936 (“REA”) limits RUS’s assistance to “financing the construction and operation of generating plants . . . for the furnishing and improving of electric service to persons in *rural areas*.” 7 U.S.C. § 904(a) (emphasis added). Rural areas, in turn, are defined as “any area other than a city, town, or unincorporated area that has a population of greater than 20,000 inhabitants.” *Id.* §§ 913(3), 1991(a)(13)(C).

Electricity from the proposed incinerator would flow into the electric grid for the main island of Puerto Rico. Puerto Rico is overwhelmingly urban, with a population density higher than that of any other U.S. state or territory except the District of Columbia and New Jersey.² According to the 2010 U.S. Census, only 13 of the 76 municipalities on the main island have populations less than 20,000.³ In other words, less than *six percent* of the people that would receive electricity from the incinerator live in areas that meet REA’s definition of a “rural area.”⁴

Accordingly, numerous commenters questioned RUS’s authority to fund a project that will serve a primarily non-rural area. But RUS dodges the issue. Its only response to these comments is that “[i]nformation on the electric program loan and loan guarantee requirements, including rural eligibility requirements, can be found at 7 Code of Federal Regulations (CFR) §1710.” Final EIS at C-3, C-23, C-31, C-34, C-36. This is not a sufficient response. These referenced regulations provide no basis on which RUS could justify funding this Project. Like REA, these regulations provide that “eligible borrowers” of RUS loans are those “that provide or

² U.S. Dep’t of Commerce, Census Bureau, American FactFinder, Population, Housing Units, Area, and Density: 2010 - United States -- States; and Puerto Rico, 2010 Census Summary File 1 (last visited Mar. 3, 2017), http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=DEC_10_SF1_GCTPH1.US01PR&prodType=table.

³ U.S. Dep’t of Commerce, Census Bureau, Puerto Rico: 2010 at 6-7, Table 4 (July 2012), <https://www.census.gov/prod/cen2010/cph-2-53.pdf> (The municipalities of Culebra and Vieques are not on the main island of Puerto Rico).

⁴ *Id.*

propose to provide . . . [t]he retail electric service needs of rural areas” only.⁵ 7 C.F.R. § 1710.101. And like REA, the regulations define “rural area” as “[a]ny area of the United States, its territories and insular possessions . . . other than a city, town, or unincorporated area that has a population of greater than 20,000 inhabitants.” *Id.* § 1710.2.

In addition, the regulations provide that, “[t]o the greatest extent practical, loans are limited to providing and improving electric facilities to serve consumers that are RE Act beneficiaries,” who are defined as “a person, business, or other entity that is located in a rural area.” 7 C.F.R. §§ 1710.2(a), 1710.104(a). Moreover, “[l]oan funds may be approved for facilities to serve non-RE Act beneficiaries only if: (1) The primary purpose of the loan is to furnish or improve service for RE Act beneficiaries; and (2) The use of loan funds to serve non-RE Act beneficiaries is necessary and incidental to the primary purpose of the loan.” *Id.* § 1710.104(b); *see also* §§ 1710.151(a), (e) (requiring findings to this effect for all loans). The Final EIS provides no indication that the electric service provided by the proposed incinerator to non-rural Puerto Ricans is merely incidental to the “primary purpose” of providing electricity to rural Puerto Rico. Nor could it, since over 94% of the people that would receive electricity from the proposed incinerator do not live in rural areas, as defined by REA.

RUS’s failure to “satisfactorily implement[] statutory requirements for serving rural instead of suburban areas” has previously come under the scrutiny of the USDA Office of Inspector General and the U.S. Congress.⁶ Indeed, courts recognize causes of action that allege that “RUS did not comply with its own guidelines in approving a loan” under REA. *Iowa Cable & Telecomm. Ass’n v. U.S. Dep’t of Agric.*, 469 F. Supp. 2d 711, 716 (S.D. Iowa 2006). Approval of the loan here would not only violate RUS’s internal guidelines, it would also violate the very statute that delegates to RUS the power to provide financial assistance to energy projects that serve rural areas.⁷

⁵ While the regulations also state that RUS may provide loans to entities that provide “[t]he power supply needs of distribution borrowers under the terms of power supply arrangements satisfactory to RUS,” 7 C.F.R. § 1710.101(a)(2), the regulations define “distribution borrower” as “a borrower that sells or intends to sell electric power and energy at retail in rural areas,” *id.* § 1710.2(a).

⁶ USDA, Office of Inspector Gen., Southwest Region, Audit Rep. 09601-4-Te, Rural Utilities Service Broadband Grant and Loan Programs, at i (Sept. 2005), <http://www.usda.gov/oig/webdocs/09601-04-TE.pdf>; *see also* USDA, Office of Inspector Gen., Southwest Region, Audit Rep. 09601-8-Te, Rural Utilities Service Broadband Loan and Loan Guarantee Program (Mar. 2009), <http://www.usda.gov/oig/webdocs/09601-8-TE.pdf>; *ARRA Broadband Spending: Hearing Before the Subcomm. on Commc’ns & Tech. of the H. Comm. on Energy & Commerce*, 112th Cong. 75-81 (2011) (statement of Phyllis K. Fong, Inspector Gen., USDA), <https://www.gpo.gov/fdsys/pkg/CHRG-112hhrg65760/pdf/CHRG-112hhrg65760.pdf>.

⁷ REA requires RUS’s assistance to “give preference to States, Territories, and subdivisions and agencies thereof, municipalities, peoples’ utility districts, and cooperative, nonprofit, or limited-dividend associations.” 7 U.S.C.A. § 904(a). Congress has mandated that RUS is not to give preference to for-profit corporations like Energy Answers.

II. THE PROJECT DOES NOT SATISFY THE PURPOSE AND NEED IDENTIFIED IN THE FINAL EIS

A. The Record Does Not Reflect that this Project's Supply of Electricity is Needed in Puerto Rico

Like the Draft EIS, the Final EIS provides no support for the notion that Puerto Rico needs any electricity from the Project. RUS admits for the first time in its response to comments that “it appears that Puerto Rico has enough electricity generation to meet its current needs.” Final EIS at C-2. Instead, the Final EIS proposes a new purpose and need: providing additional reserve capacity for PREPA’s generating infrastructure. But the facts clearly show that PREPA does not need additional reserve capacity.

The Final EIS claims that the Project “would add to PREPA’s reserve capacity levels” and explains the requirement that PREPA “maintain generation reserve levels above 40 percent to 50 percent of the utility’s maximum peak loads.” Final EIS at 1-4. At the same time, the Final EIS acknowledges that PREPA’s generating capacity is already nearly double that of its peak demand. *Id.* at 3-130 (“Puerto Rico electric system generating capacity is 6,023 MW with a peak demand reached in September 2005 of 3,685 MW.”). In other words, as the Puerto Rico Energy Commission (“Commission”) recently found: “*PREPA’s current reserve margin is 90%*; meaning its existing fleet, if fully available, can serve nearly twice its peak load.”⁸ PREPA Executive Director Javier Quintana similarly has confirmed that 54% of PREPA’s installed capacity is “enough” to meet even peak energy demands.”⁹

These figures mean that even if the FEIS is correct in stating that PREPA must maintain a reserve margin of 40 to 50 percent, that target is already far surpassed by its current reserve margin of *90 percent*. As the Commission recognizes, moreover, “[c]onstruction and/or maintenance of each surplus megawatt imposes a cost on customers.”¹⁰ In other words, there is no need for the incinerator’s additional 67 MW of capacity into the grid. The record demonstrates no reason why this Project is necessary to provide additional reserve capacity and in fact shows that this Project, which would add to an already excessive reserve margin, would

⁸ Final Resolution and Order, *In Re: Integrated Resource Plan for the Puerto Rico Electric Power Authority*, Case No. CEPR-AP-2015-0002 ¶ 71 (Sept. 23, 2016) (“IRP Order”).

⁹ Gerardo E. Alvarado León, *46% of PREPA’s Capacity Is Out of Service*, El Nuevo Día, Feb. 2, 2017, <http://www.elnuevodia.com/english/english/nota/46ofprepascapacityisoutofservice-2287049/>.

¹⁰ IRP Order ¶ 68. The lack of need for this Project’s electricity is further corroborated by the fact that PREPA, when submitting its Integrated Resource Plan to the Commission in 2015, did not include this Project in its modeling and simply assumed that the project would not become operational during the planning period. *Id.* ¶ 53. Furthermore, it is worth noting that the Commission’s September 2016 Order required PREPA to “pursue renegotiation of, or exit from, [renewable energy] contracts that are not cost-effective and those which are not likely to reach completion.” *Id.* ¶ 299. PREPA must submit to the Commission by June 30, 2017 its assessment of each of these contracts, its plans to renegotiate or exit the contract, and provide thereafter biannual progress reports on these efforts. *Id.*

impose an unnecessary burden on Puerto Rico's residents.

B. The Record Shows No Viable Water Supply for the Project

The Final EIS states, in contradiction of the record before the agency, that “[t]here is no information to support the claims that there is not a water source for the Project.” Final EIS at C-3. In fact, the record plainly demonstrates that the Project lacks a viable water supply.

As shown in the Citizen Groups' Comments, the favored water source, a water franchise from Caño Tiburones, is not available. Puerto Rico's Department of Natural and Environmental Resources (“DNER”) denied Energy Answer's request for a water franchise because the daily extraction of water from the wetlands could degrade the natural ecosystem.¹¹ Moreover, each of the remaining potential water sources identified in the Draft and Final EIS are unavailable. RUS rejected groundwater as an alternative because it is “uncertain whether this source would produce the required 2.0 mgd of water needed for cooling and process water.” Final EIS at 2-7. Reclaimed waste water also was not considered because “the construction costs . . . resulted in higher costs than the proposed alternative.” Final EIS at 2-8. RUS also rejected the surface water alternative because most of the available surface water is dedicated to the Vazquez Water Treatment Plant. “Consequently, the ability to permit the withdrawal of water for the Project purposes would be difficult given the ecological needs in the river system.” Final EIS at 2-7. RUS rejected the final potential source of water, the Puerto Rico Aqueduct and Sewer Authority's water main, because it could not “satisfy an additional 2.0 mgd of cooling and process water demand[ed]” by the Project. Final EIS at 2-7; Draft EIS at 2-6. As it currently stands, then, the FEIS does not identify a single water source that is available to the incinerator for its operations. The incinerator cannot function without a viable water source and therefore cannot meet the Project's stated purpose and need.¹²

C. There is Not Enough Waste to Power the Project Throughout Its Projected Life

The Citizen Groups explained in their Comments on the Draft EIS why there will not be a sufficient stream of municipal solid waste available to fuel the Project for its projected life.¹³ In response to these comments, RUS merely states in the Final EIS that there is an agreement with the Solid Waste Management Authority (“SWMA”) “to secure solid waste”—a statement that provides no insight as to whether the solid waste secured will actually be enough to fuel the Project over its projected life. Final EIS at C-2–3. RUS also claims that the Final EIS is “not required to show proof that the Project would actually receive the solid waste material.” Final EIS at C-18.

These responses are inadequate. Solid waste incineration is central to the stated purpose

¹¹ Comments at 7–8.

¹² To the extent “well water, waste water or river withdrawals, or some combination” thereof could serve the Project, FEIS at C-3, RUS must revise the Final EIS to consider the environmental impacts from these alternative water sources. See Section III(C) below.

¹³ Comments at 3–7.

and need. *See* Final EIS at 1-13. If RUS cannot show, based on evidence in the record, that the Project will receive a sufficient amount of solid waste material to fuel the Project as planned, then RUS cannot support its contention that the Project will meet its stated purpose and need.¹⁴ In fact, RUS rejected a reasonable alternative to the Project, a renewable biomass plant, because “it [sic] doubtful that enough wood or organic waste would be available to fuel the facility on a continuous long-term basis and at the scale of the proposed Project.” Final EIS at 2-9. RUS’s application of inconsistent standards to the Project and to a reasonable alternative is inherently arbitrary and capricious.

If the Project has a lifespan of 50 years or more, Final EIS at 3-29 tbl. 3-15, then RUS must assess the costs to the environment against the supposed benefits of the Project within this entire timeframe. By ignoring the evidence presented in the Citizen Groups’ Comments that the Project will run out of sufficient fuel to power the Project as early as 2022 (five years from now), the Final EIS grossly overestimates the magnitude of benefits relative to both short- and long-term environmental costs. In doing so, the Final EIS fails to take a hard look at the Project’s environmental impacts.

To the extent the Final EIS insists that there is a sufficient solid waste supply to fuel the Project, it does not adequately explain how Puerto Ricans will generate enough waste in the planned service area to meet the Project’s fuel requirements over its 50-year lifespan. While Table 2-1 in the Final EIS (copied below) indicates there will be well over the necessary 2,300 tons per day of waste available for the Project through 2025, the numbers do not add up.

Arecibo Waste-to-Energy Project Final EIS					
					January 2017
Table 2-1. Projected Sources of Raw Materials for the Processed Refuse Fuel from the Planned Area of Raw Material Collection					
Year	Population Projections ^a	Solid Waste Generation Projection (tons/year) ^b	Solid Waste Generation Projection (tons/day)	% Recycling	Amount of Waste after Recycling (tons/day) ^c
2012	3,667,084	1,602,449	3,480 ^d	14.7 ^e	2,985
2020	3,500,000	1,627,799	4,460 ^b	35 ^b	2,899
2025	3,500,000	1,644,732	4,506 ^b	35 ^b	2,929

^a U.S. Department of Commerce (2012), Pew Research Center (2015)
^b SWMA (2008)
^c Energy Answers (2010)
^d Energy Answers (2015)
^e SWMA (2015)

¹⁴ RUS is responsible for “[e]nsur[ing] that fuel supply, water supply, and waste stream issues have been adequately addressed to meet proposed Project needs” Final EIS at 1-11.

For one thing, the projected populations in Table 2-1 of the Final EIS are inexplicably and significantly higher than the population projections in the same table of the Draft EIS (copied below). The projected population in the Draft EIS for 2020 is 1,604,217, for instance, whereas the projected population in the same year as indicated in the Final EIS is 3,500,000. Notably, though, in defiance of the laws of arithmetic, the drastically different population projections do not alter the rest of the values in Table 2-1 of the Final EIS.

Arecibo Waste-to-Energy Project Draft EIS		July 2015			
Table 2-1. Projected Sources of Raw Materials for the Project					
Year	Population Projections ^a	Solid Waste Generation Projection (tons/year) ^b	Solid Waste Generation Projection (tons/day)	% Recycling	Amount of Waste after Recycling (tons/day) ^c
2012	1,579,234	1,602,449	3,480 ^c	14.7 ^c	2,985
2020	1,604,217	1,627,799	4,460 ^b	35 ^b	2,899
2025	1,620,905	1,644,732	4,506 ^b	35 ^b	2,929

^a Puerto Rico Planning Board's population projections as of August 22, 2006
^b SWMA (2008)
^c SWMA (2015)

The fact that the remaining values in Table 2-1 of the Final EIS are identical to those in the Draft EIS demonstrates not only that the math is wrong, it also shows that the Final EIS fails to account for both a declining population in the service area and a declining per capita rate of solid waste production.¹⁵ While the Final EIS elsewhere recognizes that “[t]he population of Puerto Rico is projected to continue to decline through 2030,” Final EIS at 3-124, the calculations of waste generation set forth in the Final EIS Table 2-1 do not reflect this and in fact rely on a stable projected population.

Similarly, with respect to the per capita rate of waste production, the Final EIS elsewhere recognizes that more recent data shows “a daily generation rate of 5.0 pounds per person,” Final EIS at 1-8, yet RUS continues to apply the historical 5.6 pounds per person rate to calculate the amount of waste available for the Project.¹⁶ By relying on an increasing population and an inflated per capita rate of waste production, the Final EIS arbitrarily and capriciously contradicts both itself and the facts in the record and consequently overestimates the amount of projected waste available to fuel the incinerator over its 50-year lifespan.

¹⁵ See Comments at 4–7.

¹⁶ See *id.* at 5.

III. THE FINAL EIS DOES NOT EVALUATE REASONABLE ALTERNATIVES AS REQUIRED BY NEPA

Like the Draft EIS, the Final EIS evaluates only two alternatives: the Project as proposed and the no action alternative. By limiting the alternatives analysis to these two options, RUS ignores, in violation of NEPA, a host of other reasonable alternatives that are available to meet the stated needs, which are both more economical and have fewer and less harmful environmental impacts.¹⁷

A. RUS Cannot Artificially Narrow the Range of Reasonable Alternatives to those that are Available for Financing Under the Rural Electrification Act

In the Draft EIS, RUS explained that its agency actions include “[r]eview[ing] and study[ing] the alternatives to mitigate and improve solid waste and electrical generation issues.” Draft EIS at 1-10. However, RUS strikes this language from the Final EIS and adds new language indicating that it “will only consider alternatives that are available for financing under the Rural Electrification Act.” Final EIS at C-6; *see also id.* at 2-1 (noting that some of the needs met by the Project are “outside of the authority of the electric programs of RUS”).

This refusal to consider alternatives that are not available for financing under the Rural Electrification Act (“REA”) violates NEPA, which requires agencies to “[i]nclude reasonable alternatives not within the jurisdiction of the lead agency.” 40 C.F.R. § 1502.14(c). Whether RUS can finance a reasonable alternative or not is irrelevant to the consideration of that alternative. Indeed, if RUS decides against funding the Project, it could free those funds to meet the same purpose and needs through alternative projects. The incinerator is not the only project “developed as a response to PREPA’s request for power generating proposals and the island’s [Renewable Energy Portfolio Standard] requirements, which call for increasing amounts of renewable energy sources on the island.” *See* Final EIS at C-15. RUS cannot use its supposed limited authority to arbitrarily narrow the Project’s purpose and need or limit the scope of reasonable alternatives.

B. The Final EIS Fails to Use an Accurate Baseline for the No-Action Alternative

Like the Draft EIS, the Final EIS relies on an inaccurate baseline for the “no-action” alternative.¹⁸ Put simply, the Final EIS assumes that the island’s energy mix and waste management will remain essentially static for the fifty-year life of the Project even though there is every reason to believe that renewable energy capacity is on the rise while oil-fired power and

¹⁷ *See* Comments at 11–20.

¹⁸ *See id.* at 19–20.

demand for electricity is on the decline.¹⁹ This matters because, for instance, energy from the Project that might displace oil-fired power in the immediate future is more likely to displace cleaner or renewable energy many years from now, thereby turning a supposed benefit into a significant cost. RUS fails to respond to these issues in the Final EIS and in its response to comments.

C. The Final EIS Fails to Consider Various Water Sources as Alternatives

RUS's response to DNER's denial of Energy Answers' water franchise is that "[s]hould Caño Tiburones water not be available, well water, waste water or river water withdrawals, or some combination could be proposed and evaluated." Final EIS at C-3. If true, then RUS must consider these alternatives and their environmental impacts. The Final EIS cannot both rely on these alternative water sources to support the Project's feasibility while refusing to take a hard look at their environmental impacts.

D. The Final EIS Improperly Rejected Biomass as a Reasonable Alternative to the Project

RUS states that the Project "responds to the need to develop an alternative generation source to oil-derived fuels and reduces the fossil fuel emissions associated with petroleum fuel sources" Final EIS at 1-12. Yet RUS arbitrarily and capriciously rejected renewable biomass energy even though such a plant "could provide a reasonable alternative to the proposed Project because it would contribute to PREPA's renewable energy needs and add to the utility's reserve capacity levels." Final EIS at 2-9. RUS rejected renewable biomass from the range of alternatives considered in the Final EIS because "it [is] doubtful that enough wood or organic waste would be available to fuel the facility on a continuous long-term basis and at the scale of the proposed Project." *Id.* However, this conclusion is devoid of any analysis and ignores readily available information on the potential to meet Puerto Rico's energy needs through renewable biomass. For example, the National Renewable Energy Laboratory ("NREL") indicates that Puerto Rico has the potential capacity to generate 290 MW to 6,800 MW from renewable biomass.²⁰ Further, NREL indicates that there are seven biomass projects totaling only 120.5 MW planned or under construction in Puerto Rico, meaning up to 98% percent of the island's biomass capacity has yet to be used.²¹

¹⁹ See U.S. Energy Information Admin., "U.S. net electricity generation from select fuels," Annual Energy Outlook 2017, at 69 (Jan. 2017), [http://www.eia.gov/outlooks/aeo/pdf/0383\(2017\).pdf](http://www.eia.gov/outlooks/aeo/pdf/0383(2017).pdf) (projecting renewable generation to more than double by 2040, with petroleum generation nearing zero); IRP Order ¶¶ 80–81 (Commission's approval of oil-fired steam unit retirement).

²⁰ U.S. Dep't of Energy, Office of Energy Efficiency and Renewable Energy, Nat'l Renewable Energy Lab., Energy Transition Initiative, Islands 3 (Mar. 2015), <http://www.nrel.gov/docs/fy15osti/62708.pdf>.

²¹ *Id.*

IV. THE FEIS FAILS TO TAKE A HARD LOOK AT THE PROJECT'S ENVIRONMENTAL IMPACTS

A. The Final EIS Continues to Rely Impermissibly on a Deeply Flawed Human Health Risk Assessment

Like the Draft EIS, the Final EIS relies nearly exclusively on the 2010 Human Health Risk Assessment (“HHRA”) prepared by Energy Answers’ consultant to conclude that the proposed incinerator will have no “significant environmental or human health impacts that may directly or indirectly affect people or their activities.” Final EIS at 3-133. Despite the Citizen Groups’ comment that RUS must “independently evaluate the information submitted and shall be responsible for its accuracy,”²² the Final EIS contains no additional evaluation of the HHRA and, like the Draft EIS, impermissibly rubber stamps the assessment without any hard look at its accuracy and credibility.

The Final EIS’s discussion of the HHRA in the analysis of impacts on public health and safety appears to be identical to that in the Draft EIS. *Compare* Draft EIS at 3-117 to 3-119 with Final EIS at 3-119 to 3-121. This discussion fails to address a host of comments raised by the Citizen Groups and by Dr. Juleen Lam, whose expert statement was submitted by the Citizen Groups.²³ First, the FEIS fails to acknowledge, much less address, the Citizen Groups’ comment that the agency cannot lawfully rely on the HHRA, which was prepared using proprietary software.²⁴ The Citizen Groups therefore reiterate that unless RUS conducts its own assessment or reveals the methodologies and assumptions underlying the HHRA’s calculations, the agency cannot rely on the HHRA to draw any conclusions in the Final EIS.²⁵

Even assuming that RUS could lawfully rely on the HHRA pursuant to NEPA and its implementing regulations, the Final EIS fails to acknowledge a number of significant flaws in that assessment. For instance, the Final EIS does not address several serious limitations in the HHRA’s calculation and interpretation of risk estimates raised by Dr. Lam, including:

- The Supplemental HHRA’s segregation of the non-cancer Hazard Index calculated for the child fisher receptor by target organ/critical effect, which may lead to an underestimate of the true hazard presented;
- The HHRA’s failure to incorporate existing background levels of exposure to its risk assessment calculations and interpretations;

²² Comments at 21 (citing 40 C.F.R. § 1502.17).

²³ See Ex. 7 of Comments.

²⁴ See Comments at 22–23 (citing 40 C.F.R. §§ 1502.21, 1502.24).

²⁵ One example of the Final EIS’s wholesale reliance on the HHRA arises in its response to comments that criticize the Draft EIS for failing to consider potential negative impacts on agriculture and the milk industry. RUS notes in its single-sentence response that “[t]he EIS *relies on the HHRA*, which includes an analysis on the potential risks associated with a full suite of agricultural issues, including consumption of locally grown meat and byproducts like milk.” Final EIS at C-13.

- The HHRA’s failure to incorporate background disease rates, including for asthma and cancer, in the interpretation of the risk assessment;
- The HHRA’s reliance on the Clean Air Act ambient air quality standard—a standard that is concededly not fully protective of the entire population—in finding that the risks from lead are acceptable;
- The HHRA’s reliance on an outdated blood lead reference level, rather than the Centers for Disease Control and Prevention’s current reference level of 5 µg/dL, in estimating the risk arising from lead exposure;
- The HHRA’s assessment of human exposure only within a 10-km radius of the proposed facility;
- The HHRA’s unconventional and unjustified calculation of reasonable maximum exposure, which set exposure frequency and duration at high end values, but used average exposure levels for all other exposure parameters;
- The HHRA’s failure to incorporate a reasonable high-end exposure scenario to evaluate the risk estimates for a subpopulation that might be exposed at the highest levels in order to ensure the protection of this vulnerable population;
- The HHRA’s failure to consider several key exposure scenarios, including prenatal exposure, exposure of breastfed infants and children at various life stages, exposure of off-site commercial and industrial workers, and exposure of workers on the site of the proposed incinerator.

RUS’s continued reliance on a non-transparent risk assessment and failure to grapple with critical flaws in this assessment raised in the public comment period render the Final EIS’s conclusions concerning public health and safety both unreliable and irrational.

B. The Final EIS Fails to Take a Hard Look at the Project’s Air Quality Impacts, Particularly from Lead Emissions

The Final EIS’s discussion of the Project’s air quality impacts suffers from incomplete and inaccurate information, particularly with regard to lead. First, RUS continues to ignore the well-established science demonstrating that there is no safe level of lead exposure.²⁶ Adding a new source of lead emissions to a community already overburdened with lead exposure is simply not safe for public health. Instead of addressing these concerns directly, however, RUS continues to stand behind an outdated and fundamentally flawed HHRA.

RUS further relies on the Project’s Prevention of Significant Deterioration (“PSD”) permit to support its claim that the emissions will not impact human health or the environment. Final EIS at C-26. However, the PSD permit regulations for lead are woefully outdated. Under those regulations, Energy Answers was not required to undertake PSD analysis for lead emissions because the projected emissions fell below EPA’s threshold level for triggering such analysis. *Id.* But EPA promulgated this threshold level for triggering PSD analysis in 1980,

²⁶ See Comments at 33–35; see also Decl. of Bruce P. Lanphear, M.D., M.P.H (Aug. 18, 2016) (attached as Exhibit 1).

when the scientific understanding about lead's impacts was far less advanced than it is today.²⁷ Almost thirty years after promulgating this threshold level, EPA strengthened the National Ambient Air Quality Standards ("NAAQS") for lead by a factor of ten²⁸ but failed to adjust the PSD threshold. Thus, the current (36-year old) PSD threshold is completely untethered from decades of science demonstrating lead's insidious health impacts. A hard look at lead and its scientifically well-established impacts therefore could not rely solely on compliance with the PSD permit to conclude that adverse health impacts from the Project's lead emissions are acceptable.

The Final EIS's conclusions related to the acceptable impacts of lead emissions also rely on faulty data. The Final EIS provides air quality monitoring data through 2014 only, and in some instances mischaracterizes that data. For example, the Final EIS states that there was only one exceedance of the NAAQS for lead between 2012 and 2014 in Arecibo, *see* Final EIS at 3-43 tbl.3-18, but EPA's monitoring data actually show multiple exceedances of the 0.15 µg/m³ (three-month rolling average) NAAQS during that period.²⁹ These data show an 8-month exceedance with a maximum three-month average value over *seven* times the NAAQS in 2012; an 8-month exceedance over *sixteen* times the NAAQS in 2013; and a 3-month exceedance over *thirteen* times the NAAQS in 2014.³⁰ While the Final EIS notes that annual average lead concentrations for these three years were below 0.15 µg/m³, *see* FEIS at 3-43 tbl.3-18, annual averages are irrelevant to the NAAQS determination: it takes only one *three-month* average exceedance of the NAAQS to render an area in nonattainment for the following three years.³¹

An accurate description of the proposed incinerator's lead impacts is critical given that the Project will be sited in a lead nonattainment area. *See* Final EIS at 3-39. The Final EIS appears to write off lead emission impacts since the nearby battery recycling facility "entered into an agreement to take corrective measures in 2012" to reduce its lead emissions, and monitoring data since then "appear to show these control measures have substantially reduced ambient lead concentrations compared to 2012 levels (*see* Table 3-18), and the area may potentially be redesignated to 'maintenance' in the future if the current trend continues." Final EIS at 3-39. This conclusion is both legally and factually incorrect. It is legally incorrect because the Final EIS cites to annual average lead concentration values which, as noted above, are irrelevant to the lead attainment analysis.

²⁷ Requirements for Preparation, Adoption, and Submittal of SIPS; Approval and Promulgation of State Implementation Plans, 45 Fed. Reg. 31,307, 31,312 (May 13, 1980) (codified at 40 C.F.R. § 51.165(a)(2)(i)).

²⁸ National Ambient Air Quality Standards for Lead, 73 Fed. Reg. 66,964, 66,975 (Nov. 12, 2008).

²⁹ *See* Monitoring Value Reports (attached as Exhibit 2).

³⁰ *See id.*

³¹ *See* National Ambient Air Quality Standards for Lead, 73 Fed. Reg. 66,964, 66,993 ("a monitor, initially or after once having violated the NAAQS, would not be considered to have attained the NAAQS until three years have passed without the level of the standard being exceeded.").

In addition, the assertion that lead concentrations have been improving to a degree that Arecibo may soon be redesignated to maintenance is factually incorrect. As noted above, NAAQS exceedances continued through 2013 and 2014. And as shown in Table 1 below, there have been at least 68 instances in which the rolling 3-month average concentration value exceeded the NAAQS since January 2014. The Arecibo area was not in compliance with the NAAQS for the entire period from at least January 5, 2014 through September 9, 2015. Thus, assuming no further NAAQS exceedances after this date, the earliest that the Arecibo area could attain the NAAQS and be redesignated “maintenance” is September 2018.³²

Table 1: NAAQS Exceedances in Arecibo (Monitor #1 at Road 2 Site) (3-Month Averages)³³

Date Range	Average Lead Concentration ($\mu\text{g}/\text{m}^3$)
1/5/2014 – 4/5/2014	2.025
1/11/2014 – 4/11/2014	2.007
1/17/2014 – 4/17/2014	1.995
1/29/2014 – 4/29/2014	1.784
2/4/2014 – 4/29/2014	1.824
2/10/2014 – 5/5/2014	1.676
2/16/2014 – 5/11/2014	1.464
2/22/2014 – 5/17/2014	1.260
2/28/2014 – 5/23/2014	1.138
3/6/2014 – 6/4/2014	0.847
3/12/2014 – 6/10/2014	0.759
3/18/2014 – 6/16/2014	0.480
3/24/2014 – 6/22/2014	0.416
3/30/2014 – 6/28/2014	0.446
4/5/2014 – 7/4/2014	0.394
4/11/2014 – 7/10/2014	0.340
4/17/2014 – 7/16/2014	0.287
4/23/2014 – 7/22/2014	0.270
4/29/2014 – 7/28/2014	0.279
5/5/2014 – 8/3/2014	0.230
5/11/2014 – 8/9/2014	0.231
5/17/2014 – 8/15/2014	0.241
5/23/2014 – 8/21/2014	0.237
5/29/2014 – 8/27/2014	0.221
6/4/2014 – 9/2/2014	0.168
6/10/2014 – 9/8/2014	0.161
9/2/2014 – 12/1/2014	0.216

³² See *id.*

³³ As of the date of these comments, Arecibo monitoring data up to June 29, 2016 are available on EPA’s website, <https://www.epa.gov/outdoor-air-quality-data>.

9/8/2014 – 12/7/2014	0.240
9/14/2014 – 12/13/2014	0.241
9/20/2014 – 12/13/2014 ³⁴	0.257
9/26/2014 – 12/13/2014	0.275
10/2/2014 – 12/13/2014	0.295
10/8/2014 – 12/13/2014	0.316
10/14/2014 – 1/12/2015	0.317
10/20/2014 – 1/18/2015	0.315
10/26/2014 – 1/24/2015	0.311
11/1/2014 – 1/30/2015	0.311
11/7/2014 – 2/5/2015	0.315
11/13/2014 – 2/11/2015	0.314
11/19/2014 – 2/17/2015	0.313
11/25/2014 – 2/23/2015	0.310
12/1/2014 – 3/1/2015	0.309
1/12/2015 – 4/6/2015	0.157
1/18/2015 – 4/12/2015	0.174
1/24/2015 – 4/24/2015	0.184
1/30/2015 – 4/30/2015	0.187
2/5/2015 – 4/30/2015	0.199
2/11/2015 – 5/6/2015	0.213
2/17/2015 – 5/12/2015	0.231
2/23/2015 – 5/18/2015	0.235
3/1/2015 – 5/30/2015	0.223
3/7/2015 – 6/5/2015	0.227
3/13/2015 – 6/11/2015	0.312
3/19/2015 – 6/17/2015	0.318
3/25/2015 – 6/23/2015	0.320
3/31/2015 – 6/29/2015	0.329
4/6/2015 – 7/5/2015	0.326
4/12/2015 – 7/5/2015 ³⁵	0.218
4/18/2015 – 7/5/2015	0.214
4/24/2015 – 7/5/2015	0.208
4/30/2015 – 7/5/2015	0.221
5/6/2015 – 7/5/2015	0.236
5/12/2015 – 7/5/2015	0.232
5/18/2015 – 7/5/2015	0.228
5/24/2015 – 7/5/2015	0.246
5/30/2015 – 7/5/2015	0.272

³⁴ EPA's publicly available data contain no entries for Monitor Number 1 at the Road #2 site between December 13, 2014 and January 12, 2015.

³⁵ EPA's publicly available data contain no entries for Monitor Number 1 at the Road #2 site between July 5, 2015 and September 3, 2015.

6/5/2015 – 9/3/2015	0.272
6/11/2015 – 9/9/2015	0.261

In addition to the Final EIS’s misstatement of the potential impacts from lead emissions, the Final EIS glosses over a critical fact about the PSD permit that governs the emissions of all other criteria pollutants from the incinerator. RUS notes that “EPA issued a PSD permit to Energy Answers for the Project on June 11, 2013,” Final EIS at 3-118, and RUS relies on the PSD permit’s emission controls and the air quality modeling that Energy Answers provided in its 2011 permit application, *see id.* at 2-24, 2-28, 3-41, 3-48, 3-49, 3-118. But the Final EIS fails to note that unless it commences construction, this permit will expire on April 10, 2017.³⁶

C. The Final EIS Does Not Comply with NEPA’s Mandate to Consider Cumulative Impacts and Mitigation Measures

The Final EIS does not comply with NEPA’s mandate to consider cumulative impacts. *See* 40 C.F.R. §§ 1508.7, 1508.8. Although the Final EIS purports to consider the cumulative effects on some resources, including water resources and air quality, it explicitly does not consider the cumulative effects on other resources, most notably public health. As discussed in the Citizen Groups’ comments on the Draft EIS and reiterated below, both RUS’s failure to fully consider the Project’s cumulative impacts and its flawed analysis when it does purport to consider cumulative impacts violate NEPA.

The Final EIS repeats the nonsensical rationale presented in the Draft EIS for omitting consideration of certain cumulative impacts: “The cumulative effects analysis excludes from consideration those resources where significant cumulative effects are not expected.” Final EIS at 4-4. This duplication of the text in the Draft EIS provides no response to the Citizen Groups’ comment that NEPA requires consideration of cumulative impacts—not merely *significant* cumulative impacts—and that without having undertaken the required cumulative impact analysis, the agency has no basis for its conclusion that the Project would not have a significant cumulative impact on certain resources.³⁷

The Final EIS “excludes from consideration” cumulative effects on public health, for instance. Final EIS at 4-4. The HHRA relied on by RUS likewise does not consider the cumulative effects of the Project on human health. By ignoring facts in the record demonstrating that the Project will be sited in an area already substantially burdened by polluting sources,³⁸ and failing to consider the cumulative effects of the Project on human health, the Final EIS is patently not in compliance with NEPA.

³⁶ *See* Letter from John Filippelli, Director, EPA Region 2 Clean Air and Sustainability Division, to Patrick Mahoney, President, Energy Answers, LLC (Oct. 1, 2015) (Ex. 5 of Comments).

³⁷ *See* Comments at 38.

³⁸ *See id.* at 38–42.

Even where the Final EIS purports to analyze cumulative impacts, it does not correct fatal flaws in its analysis.³⁹ First, the cumulative effects analysis vaguely references “projects that have been filed with Puerto Rico Planning Board from 2005 to 2015 (March).” Final EIS at 4-3. But nowhere in the Final EIS are these projects identified and their impacts assessed. Thus, critical elements of a cumulative effects analysis—the incremental impact of “other past, present, and reasonably foreseeable future actions,” 40 C.F.R. § 1508.7—are simply missing from the Final EIS. This lack of transparency concerning other relevant projects and the impacts of these projects makes a mockery of NEPA’s cumulative impact requirement and highlights the unsubstantiated nature of the vague assertions throughout the Final EIS’s cumulative effects analysis. *See, e.g.*, Final EIS at 4-5 (“Other projects recently built or proposed in the watershed include residential, commercial, and industrial developments. It is likely that developers of these projects would implement stormwater measures . . .”).

Second, like the Draft EIS, the Final EIS points to allegedly minimal incremental impacts to conclude that cumulative impacts will be insignificant. *See, e.g.*, Final EIS at 4-6. With respect to air resources, the Final EIS concludes that because Energy Answers’ modeling did not show that the Project emissions would lead to an exceedance of the NAAQS, there would be no cumulative adverse impacts. *See id.* at 4-7. But NEPA’s implementing regulations specifically acknowledge that “[c]umulative impacts can result from individually minor but collectively significant actions taking place over a period of time.” 40 C.F.R. § 1508.7. The Final EIS’s illogical assumption that minimal incremental impacts translate to minimal or no cumulative effects thus does not withstand scrutiny.

The Final EIS is further flawed as a result of its repeated vague references to mitigation measures, like the “Spill Prevention Plan” and “stormwater best management practices,” without actual disclosure of these measures or any study of their impacts. *See* Final EIS at 4-6. Based on these references to unidentified mitigation measures, the Final EIS concludes that the Project would not have adverse cumulative impacts. *See id.* (“Energy Answers would take the necessary mitigation measures during Project construction, and therefore, it is not expected that the Project would cause an adverse cumulative impact on surface water resources . . .”). As the Citizen Groups already pointed out in their comments on the Draft EIS, this approach utterly fails to comply with NEPA’s mandate to consider cumulative impacts and mitigation.⁴⁰

D. The Final EIS’s Consideration of Impacts on Water Resources Falls Short of the Hard Look Required under NEPA

The Final EIS also fails to remedy any of the deficiencies identified by the Citizen Groups and others regarding the analysis of impacts on water resources. As reiterated below, the Final EIS does not take a hard look at the impacts of the proposed water withdrawals from Caño Tiburones or the impacts of the Project’s construction and operation on surface and groundwater, and continues to rely on vague, unidentified mitigation measures to dismiss the possibility of any

³⁹ *See id.* at 42–43.

⁴⁰ *See id.* at 43.

significant impacts on water resources. For all of these reasons, the Final EIS does not comply with NEPA.

The Final EIS simply ignores facts presented by the Citizen Groups and others demonstrating that the two million gallons per day of water proposed to be extracted from Caño Tiburones actually are not excess water already being pumped out of the wetlands.⁴¹ The Final EIS nowhere even acknowledges these facts in the record and instead merely reiterates, with no supporting evidence, that “[t]he 2.1 mgd of water from Caño Tiburones is water that is currently being pumped into the ocean” Final EIS at C-7. But just saying this is so does not make it so. The Final EIS’s blind adherence to unsupported fact is the antithesis of taking a hard look.

The Final EIS’s description of the Project’s water withdrawals arbitrarily and capriciously flies in the face of the overwhelming evidence in the record and leads RUS to entirely overlook impacts of the proposed withdrawals on the biologically rich wetlands ecosystem of Caño Tiburones. The Final EIS nowhere acknowledges, for instance, that Caño Tiburones is a designated “Important Bird Area”; nor does the Final EIS address the expert assessment of the Biodiversity Research Institute, which noted a “high probability” that daily water withdrawals could cause irreversible damage to these wetlands.⁴² The Final EIS similarly ignores the record demonstrating the concerns raised by DNER, the very agency charged with overseeing the Caño Tiburones Nature Reserve, which noted that “the use of surface waters extracted on a continuous basis from El Vigia Pumping Station must cause degradation of the ecosystem of the Nature Reserve . . . that has not been studied and that was not documented in the analysis submitted by the proponent” and that “this extraction could affect the saturation level and soil conditions necessary to sustain the wetlands, swamps, and marshes contained in the Caño Tiburones Natural Reserve.”⁴³

The Final EIS likewise fails to address gaping holes in the Draft EIS’s assessment of impacts on surface water and groundwater quality. Despite evidence presented in the Citizen Groups’ comments about the importance of assessing and remediating on-site contamination from the prior operation of the Global Fibers paper mill, the Final EIS undertakes no such evaluation and merely repeats its vague reference to “Energy Answers’ investigative studies,” which “indicated some areas of contamination on the property.” Final EIS at 3-73. This does not suffice as a hard look and provides no support for the Final EIS’s conclusion that the Project’s construction and operation will have only temporary impacts on surface waters.

Additionally, although the Final EIS purports to have “included additional information . . . on the karst geology in the region” in response to comments, in fact, it continues to avoid taking a hard look at the Project’s potential impacts on groundwater, including the placement of unlined

⁴¹ See, e.g., Comments at 51; DNER Denial of Water Franchise Application (Ex. 2 of Comments); DNER Rescission of Agreement with Energy Answers Arcibo LLC (Ex. 3 of Comments); Letter from José Raúl Colón Roque (Ex. 8 of Comments).

⁴² See Comments of Oksana Lane, Biodiversity Research Inst. (Ex. 10 of Comments).

⁴³ See DNER Rescission of Agreement with Energy Answers Arcibo LLC (Ex. 3 of Comments).

ponds to hold nutrient and contaminant runoff on karst terrain over an unconfined aquifer. Like the Draft EIS, the Final EIS acknowledges that “almost half” of the “[g]roundwater flow *within the Project area*” goes to the “eastern area of Caño Tiburones” while the “other half flows directly to the Atlantic Ocean.” Final EIS at 3-18 (emphasis added). Even so, the Final EIS contains no evaluation of the potential for contaminants collected in the unlined stormwater ponds to enter the groundwater system and to travel beyond the confines of the Project site.

Instead, the Final EIS continues to rely impermissibly on undisclosed mitigation measures, such as “the Project’s Spill Prevention Plan,” Final EIS at 3-31, to conclude that impacts will be minimal or temporary. In their comments on the Draft EIS, the Citizen Groups noted that these mitigation measures have not been disclosed or discussed beyond reference to their hypothetical existence, in violation of NEPA.⁴⁴ The Final EIS does not remedy this significant flaw in its analysis.

E. The Final EIS Inadequately Assesses the Project’s Impacts on Biological Resources, Including on Federally Protected Species

The Final EIS’s analysis of impacts on biological resources is largely unchanged from the analysis in the Draft EIS. As such, for all the reasons already noted by the Citizen Groups, the Final EIS falls far short of meeting the agency’s duty under both NEPA and the Endangered Species Act.⁴⁵

In analyzing potential impacts on federally protected species, RUS again takes an inappropriately narrow approach by assessing only the direct footprint of the Project site. Although the Final EIS adds a new sentence noting that “[t]he Biological Resource Project Area includes the Project site, the interconnection to the substation and the proposed brackish water line . . . and the habitat areas within 6.2 miles (10 kilometers) of the Project site,” Final EIS at 3-59 (emphasis added), it does not actually assess effects of the Project on federally protected species in this broader “Project Area.” Instead, the Final EIS’s analysis repeats nearly verbatim the Draft EIS, which relied on the CSA Group’s Flora and Fauna study and communications from the U.S. Fish and Wildlife Service (“FWS”).

As the Citizen Groups have already noted, the Flora and Fauna Study conducted by Energy Answers’ consultant in 2010 examined only whether special status species were found within the direct footprint of the Project.⁴⁶ Similarly, FWS appears to have assessed only whether suitable habitat for federally listed species was present within the Project footprint. Thus, although the Final EIS identifies a list of federally protected species that could occur in the broader “Project area” (presumably including within the newly identified 10-kilometer radius around the Project site), RUS nowhere attempts to assess whether these species actually exist in the Project area and how they could be affected. Strikingly, for instance, the Final EIS does not consider whether withdrawing 2 million gallons per day of water from the Caño Tiburones

⁴⁴ See Comments at 55-56.

⁴⁵ See *id.* at 58-60.

⁴⁶ See *id.* at 58.

Nature Reserve might have any impacts on biological resources, including any special status species.

For all the reasons already articulated by the Citizen Groups, moreover, reliance on the 2010 Screening Level Ecological Risk Assessment (“SLERA”) prepared by Energy Answers’ consultant does not substitute for a hard look.⁴⁷ In assessing impacts on special status species, the Final EIS relies on the SLERA to conclude that “the ecological risk to habitat within the Project area is . . . so low as to not warrant any additional evaluation.” Final EIS at 3-69. This unsubstantiated conclusion ignores the Citizen Groups’ comments noting that (1) RUS cannot lawfully rely on the SLERA unless it reveals the methodologies and assumptions underlying that analysis, and (2) the SLERA likely substantially underestimates risk due to its reliance on inappropriate air emissions modeling and data.⁴⁸ Even apart from its significant limitations and flaws, moreover, the SLERA claimed only to address risk arising from the deposition of air emissions from the Project’s combustion units and does not consider the Project’s non-air emissions-related impacts on biological resources. Thus, although the Final EIS points to the SLERA to conclude that “Project operation would present a low potential of ecological risk to wildlife or vegetation in the Project vicinity,” in fact, the SLERA cannot serve as the sole basis for such an assertion.

F. The Final EIS Fails to Rectify Any of the Draft EIS’s Deficiencies in its Evaluation of the Impacts of the Proposed Incinerator’s Generated Ash

The discussion of incinerator ash in the Final EIS fails to rectify many of the deficiencies and ambiguities in the Draft EIS that were highlighted by the Citizen Groups. For example, like the Draft EIS, the Final EIS notes that “[f]ly ash would be conditioned with the addition of a conditioning agent (if required) and water,” Final EIS at 2-26, but the Final EIS again fails to specify which conditioning agent would be used and how Energy Answers would determine whether a conditioning agent is required to be used. Since selection of the proper treatment method is highly dependent on the chemical and physical characteristics of the ash, the Final EIS’s vagueness concerning the conditioning agent indicates that RUS has failed to take a hard look at whether the conditioning agent will truly render the ash nonhazardous, or will instead be used merely to dilute the ash, in clear violation of EPA regulations.⁴⁹

The Final EIS, in fact, creates *more* ambiguity with respect to just how much ash the incinerator would produce. The Final EIS alternates between stating that the Project would produce 420 tons of ash per day, Final EIS at 3-77, 3-133, 430 tons per day, *id.* at 2-19, and 470 tons per day, *id.* at 2-20 fig.2-5, 2-25, 2-26. The Final EIS also now states that “[o]ver a 50-year period, the plant would generate about 7 million tons of ash,” but this would equate to a daily production of only about 384 tons. *Id.* at 3-78. Using 470 tons per day – the upper bound of ash production provided in the Final EIS – would result in over 8.5 million tons of ash produced over 50 years. Thus, the Final EIS may be undervaluing the ash produced by the project – and by

⁴⁷ See *id.* at 59-60.

⁴⁸ See Comments at 60.

⁴⁹ See *id.* at 44-45

extension, the impacts from that ash – by over 1.5 million tons, or nearly 20 percent of total ash production.

It is critical to have accurate ash production figures given that the management of such large amounts of ash is one of the great unresolved issues with the Project. Though the Final EIS continues to claim that the ash will be disposed of at an EPA-compliant landfill, *see* Final EIS at 2-26, RUS’s response to comments ignores evidence provided by the Citizen Groups of the strong local opposition to the landfiling of ash in Puerto Rico and, particularly, in the municipality of Peñuelas, the location of the only landfill that has indicated an intent to accept the incinerator’s ash.⁵⁰

For example, the Final EIS fails to note that Peñuelas is one of the 45 municipalities in Puerto Rico that currently ban the landfiling or reuse of coal ash within their borders.⁵¹ The Final EIS lists only eight other compliant landfills in Puerto Rico, Final EIS at 1-10, but the existing municipal bans would prevent at least six of these landfills from accepting coal ash.⁵² In addition, numerous bills currently before the Puerto Rico legislature would extend the coal ash ban throughout the island, a move supported by the Mayors Association of Puerto Rico.⁵³ And since the close of the comment period on the Draft EIS, the Puerto Rico Supreme Court has affirmed the Peñuelas ordinance that bans the use of coal ash as fill or aggregate within the municipality, broadly upholding the authority of all municipalities in Puerto Rico to create such prohibitions. *See Municipio Autónomo de Peñuelas v. Ecosystems, Inc.*, 2016 TSPR 247 (P.R. Dec. 19, 2016). The Superior Court in Ponce recently upheld Peñuelas’ prohibition of the

⁵⁰ *See id.* at 45–47.

⁵¹ *Crece la lucha contra las cenizas de carbón en Peñuelas*, El Nuevo Día, Nov. 28, 2016, <http://www.elnuevodia.com/noticias/locales/nota/crecelaluchacontralascenizasdecarbonenpenue las-2266988/>; Carla M. Pérez Meléndez and Hermes Ayala, “¡Júbilo en Peñuelas!” *ante fallo del Tribunal Supremo*, Diálogo, Dec. 20, 2016, <http://dialogoupr.com/jubilo-en-penuelas-ante-fallo-del-tribunal-supremo/>; *see also* Peñuelas, P.R., Ordenanza Num. 13, Serie 2012-13 (May 1, 2013) (attached as Exhibit 3).

⁵² *Fajardo prohíbe las cenizas de carbón sobre sus terrenos*, El Nuevo Día, Jan. 12, 2017, <http://www.elnuevodia.com/noticias/locales/nota/fajardoprohibelascenizasdecarbonsobresusterre nos-2280425/>;

Vilmar Trinta Negrón, *Denuncian depósito ilegal de cenizas de carbón en Humacao*, Periódico el Oriental (last visited Mar. 6, 2017), <http://www.lafederacionpr.com/noticias/45-denuncian-deposito-ilegal-de-cenizas-de-carbon-en-humacao>; *Prohíben en Cabo Rojo cenizas de carbón de planta energética*, El Calce (last visited Mar. 6, 2017), <http://elcalce.com/pr/contexto/prohiben-en-cabo-rojo-cenizas-de-carbon-de-planta-energetica/>; Salinas, P.R., Ordenanza Num. 17, Serie 2012-2013 (Feb. 8, 2013) (attached as Exhibit 4).

⁵³ *See* S. 81, S. 123, and S. 128, 81st Leg., 1st Sess. (P.R. 2017); *Asociación de Alcaldes aprobó resolución para impedir el depósito de las cenizas de carbon*, Noticel, Nov. 28, 2016, <http://www.noticel.com/noticia/197470/asociacion-de-alcaldes-aprobo-resolucion-para-impedir-el-deposito-de-las-cenizas-de-carbon.html>.

landfilling of coal ash, as well.⁵⁴ In addition, an August 2016 study of Peñuelas soil found that the municipality is already being impacted by fugitive emissions of coal fly ash blowing from the landfill.⁵⁵

The strong local opposition to the landfilling and reuse of coal ash has already expanded to an opposition to the landfilling and use of incinerator ash. In September 2015, Vega Baja became the first Puerto Rican municipality to ban both the landfilling of incinerator ash and the use of incinerator ash as fill.⁵⁶ And Peñuelas is currently working to approve a new ordinance that would ban the landfilling of incinerator ash, specifically.⁵⁷ RUS cannot have taken the “hard look” required by NEPA when it ignores this evidence that directly contradicts its key assumption that the Project will be able to properly manage the 470 tons of ash it would produce every day.

G. The Final EIS Continues to Rely on Flawed Assumptions to Conclude the Project Will Lead to a Net Reduction in Greenhouse Gas Emissions

The Final EIS continues to rely on flawed assumptions to conclude that the Project will result in a net reduction of greenhouse gas emissions. For example, RUS assumes that each megawatt of electricity generated by the incinerator will displace a megawatt of electricity from an oil-fired generating station along with its corresponding greenhouse gas emissions.⁵⁸ However, the record lacks any evidence indicating that the Project will actually displace oil-fired megawatts, much less at a 1:1 ratio. This 1:1 ratio ignores the reality of Puerto Rico’s generating mix. While more than half of the mix comes from oil-fired power plants, the remainder does not. Approximately one quarter of Puerto Rico’s electricity comes from power plants that burn natural gas, which emit far fewer greenhouse gasses than oil-fired power plants. *See* Final EIS at 1-2. Moreover, Puerto Rico is transitioning away from oil to power its electric sector. PREPA’s “preferred strategy,” as identified in its IRP, for satisfying its electric power requirements for the next 20 years includes retiring or placing on limited use each of its existing units that run on No.

⁵⁴ Omar Alfonso, *Tribunal valida prohibición de cenizas de carbón en Peñuelas*, *Periodismo Investigativo*, Oct. 13, 2016, <http://periodismoinvestigativo.com/2016/10/tribunal-valida-prohibicion-de-cenizas-de-carbon-en-penuelas/>

⁵⁵ Desarrollo Integral del Sur, *Expert Air Quality Analysis Provided by the Community Science Institute to “Pulmones Saludables, Ahora!”*, an Environmental Justice Project 3-4 (Aug. 22, 2016) (attached as Exhibit 5).

⁵⁶ *See* Vega Baja, P.R., *Ordenanza Num. 17 Serie 2015-2016* (Sept. 10, 2015) (attached as Exhibit 6).

⁵⁷ *Alcalde no quiere las cenizas de Energy Answers*, *El Nuevo Día*, Feb. 27, 2015, <http://www.elnuevodia.com/noticias/locales/nota/alcaldenoquierelascenizasdeenergyanswers-2013278/>.

⁵⁸ Comments at 60–63. *See also* *Energy Answers*, *Arecibo Puerto Rico Renewable Energy Project Prevention of Significant Deterioration (PSD) Air Permit Application 4-4* (Feb. 2011); *Energy Answers*, *Arecibo Renewable Energy Project, Additional Information Requested by EPA for the PSD Air Permit Application at App’x C, Table 13* (Sept. 9, 2011).

6 fuel oil.⁵⁹ As the Citizen Groups pointed out in their Comments, once the illusion of displaced oil-fired power plant emissions is removed from the calculation, the Project actually results in a net increase in greenhouse gas emissions.⁶⁰

H. The Final EIS Does Not Use Consistent and Current Data to Analyze the Socioeconomic Impacts of the Project

Like other sections of the Final EIS, the consideration of socioeconomic impacts suffers from outdated and internally inconsistent data. The Final EIS, for example, uses population, income, employment, housing, and demographic data from the 5-year American Community survey that ended in 2013, even though an updated 5-year Survey that ended in 2015 is readily available. *See* Final EIS § 3.11.1. Comparing these two data sets from 2013 and 2015, Puerto Rico’s population fell nearly three percent over those two years, from 3,682,966 to 3,583,073.⁶¹ These more recent population figures further call into question the Final EIS’s assumptions about increased waste production that would justify the Project’s purpose and need. *See supra* Section II(C).

In addition, the Final EIS’s assessment of employment impacts is not credible. As the Citizen Groups noted previously, the Final EIS’s estimate that the Project would create 4,286 full-time construction jobs is based on general construction sector data, but studies show that 1,500 tpd incinerators may actually create only 683 full-time equivalent construction jobs.⁶² While the Final EIS now recognizes that “[s]imilar sized projects in other areas of the United States typically require between 300 and 1,000 construction workers,” the Final EIS attempts to write off this discrepancy by baselessly stating that these figures “may not account for all the trades involved in preparing the materials or other Commonwealth-specific practices.” Final EIS at 3-132. This reasoning fails to come close to justifying employment estimates that are over four times the upper bound of employment at similarly sized incinerator projects.⁶³ It is worth noting, in any event, that construction jobs are only temporary.

⁵⁹ PREPA, Integrated Resource Plan Volume I: Supply Portfolios and Futures Analysis, Draft for the Review of the Puerto Rico Energy Commission 4-19 (July 7, 2015), <http://goo.gl/01ATcr>. “Limited use units cannot be dispatched with capacity factors greater than 8 percent averaged over two years and are assumed available only to confront Major Events, such as large disruptions to the transmission system produced by hurricanes.” *Id.* at xvi n.4.

⁶⁰ Comments at 62.

⁶¹ U.S. Dep’t of Commerce, Census Bureau, American FactFinder, ACS Demographic and Housing Estimates, 2011-2015 American Community Survey 5-Year Estimates (last visited Mar. 6, 2017), <https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF>.

⁶² *See* Comments at 64–65.

⁶³ The Final EIS’s assessment of employment impacts is further rendered unreliable by its internal inconsistency. While Section 4 of the Final EIS claims that construction “is estimated to last three and a half years,” Final EIS at 4-3; *see also id.* at 4-9, Section 3 continues to state, as the Draft EIS did, that construction will only last three years, *id.* at 3-132 and Draft EIS at 3-130. An accurate construction time is critical to estimate the economic impacts of the project, which are already vastly overstated because the Final EIS uses inflated employment estimates.

Data since the release of the Draft EIS continue to show that burning waste to make energy makes little, if any, economic sense. The most recent *2017 Energy Outlook* of the U.S. Energy Information Administration still lists municipal solid waste incinerators as the costliest way to produce energy, in terms of base overnight cost, total overnight cost, and fixed operations and maintenance.⁶⁴ RUS’s analysis of the socioeconomic impacts of this project must take this into account, particularly in light of Puerto Rico’s dire financial situation.

I. The Final EIS Fails Entirely to Consider Recreational and Cultural Resources in the New Expansion of the Area of Potential Effect

The Final EIS’s section on recreational and cultural resources suffers from internal inconsistencies that show that RUS has failed both to undertake the consultation required by the National Historic Preservation Act (“NHPA”) and to take the hard look required by NEPA. While the Draft EIS only identified two areas of potential effect (“APE”) under the NHPA for the Project – “the proposed renewable power generation and resource recovery plant, and the connection routes of a brackish water line and electric transmission line,” *see* Draft EIS at 3-103 – the Final EIS identifies a third, “the proposed changes to the floodplain,” Final EIS at 3-105. But, much like the Final EIS’s failure to analyze the expansion of its Biological Resource Project Area, *see supra* Section IV(E), the Final EIS’s discussion of whether there may be cultural resources in the APE completely ignores this third floodplain area. *See* Final EIS at 3-116–117.

It is the “statutory obligation” of RUS to fulfill the requirements of NHPA. 36 C.F.R. § 800.2(a). Under that Act, RUS, “prior to the approval of the expenditure of any Federal funds on the [proposed federally assisted] undertaking . . . , shall take into account the effect of the undertaking on any historic property.” 54 U.S.C. § 306108. A “historic property” is “any prehistoric or historic district, site, building, structure, or object included on, or eligible for inclusion on, the National Register, including artifacts, records, and material remains relating to the district, site, building, structure, or object.” *Id.* § 300308. Implementing regulations specify that:

[t]he agency official shall make a *reasonable and good faith effort* to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews, sample field investigation, and field survey. The agency official shall take into account past planning, research and studies, the magnitude and nature of the undertaking and the degree of Federal involvement, the nature and extent of potential effects on historic properties, and the likely nature and location of historic properties within the area of potential effects. . . .

36 C.F.R. § 800.4(b)(1) (emphasis added).

⁶⁴ U.S. Energy Information Admin., *Cost and Performance Characteristics of New Generating Technologies, Annual Energy Outlook 2017* at 2, Table 8.2 (Jan. 2017), http://www.eia.gov/outlooks/aeo/assumptions/pdf/table_8.2.pdf.

The FEIS's complete lack of discussion concerning the floodplain APE suggests that RUS has failed to take the "reasonable and good faith effort" to identify historic properties required by the NHPA. *Id.* § 800.4(b)(1). Indeed, there may be many sites that qualify as historic properties in this new, unanalyzed floodplain APE. These sites include the Cambalache Bridge, which is already on the National Register of Historic Places,⁶⁵ and a farmhouse property 1/3 of a mile east of the Project. Communications with RUS archaeologist Dr. Erika Martin Seibert confirm that this farmhouse may have been built in the 1950s and is therefore eligible for listing in the National Register of Historic Places.⁶⁶ If it has not already done so, RUS must conduct a thorough survey of historical properties in *all* portions of the APE, and must ensure that this process "is initiated early in the undertaking's planning, so that a broad range of alternatives may be considered during the planning process for the undertaking" "prior to the approval of the expenditure of any Federal funds on the undertaking." 36 C.F.R. § 800.1(c). And since RUS intends to "use the FEIS to meet its responsibilities under . . . the National Historic Preservation Act," 82 Fed. Reg. 11,340, 11, 340 (Feb. 22, 2017), it must describe this survey and its results in its NEPA documents.

⁶⁵ See U.S. Dep't of the Interior, Nat'l Park Serv., Nat'l Register of Historic Places, Asset Detail (last visited Mar. 6, 2017), <https://npgallery.nps.gov/NRHP/AssetDetail?assetID=a67edc56-79e6-46e7-97a5-1e0447c55e75>.

⁶⁶ Email from Erika Martin Seibert, RUS (Feb. 3, 2017) (attached as Exhibit 7).

CONCLUSION

For all the reasons set forth above and also in their earlier comments on the Draft EIS, the Citizen Groups continue to believe that the environmental review of the Arecibo incinerator does not withstand scrutiny under NEPA. NEPA requires agencies to, among other things, “insure the professional integrity, including scientific integrity, of the discussions and analyses in environmental impact statements.” 40 C.F.R. § 1502.24. Apart from all the reasons raised by the Citizen Groups demonstrating RUS’s failure to take the requisite hard look at the impacts of the Project and its alternatives, the numerous internal inconsistencies in the Final EIS; the Final EIS’s reliance on flawed data, including on flawed analysis that was derived using secret parameters not disclosed to the public; and the Final EIS’s failure to reference or consider uncontested evidence in the record all lead to a conclusion that RUS has not met its obligations under NEPA. We urge the agency to ensure its compliance with “the cornerstone of our Nation’s modern environmental protections”⁶⁷ before deciding to expend federal taxpayer dollars on what will be a costly, polluting, and ultimately doomed project.

Sincerely,

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⁶⁷ Press Release, The White House, Presidential Proclamation—40th Anniversary of the National Environmental Policy Act (Jan. 4, 2010), 2010 WL 11179.