

Comments Concerning Public Scoping for RUS EIS
Related to Energy Answers Arecibo Incineration Project

Submitted by:

Cambio

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I. Introduction

Cambio is a non-governmental organization whose mission is to promote sustainable and responsible development for Puerto Rico and the Caribbean Region. Our interest in commenting on the Rural Utilities Services' Environmental Impact Statement ("RUS EIS") process for the Energy Answers Arecibo Puerto Rico Renewable Energy Project ("Energy Answers incineration project"), as provided for under the National Environmental Policy Act ("NEPA"), the Council on Environmental Quality's regulations for implementing NEPA (40 CFR Parts 1500-1508), and RUS's Environmental Policies and Procedures (7 CFR Part 1794), stems from the reality that the local or state EIS process related with the Energy Answers incineration project was, to put it simply, a biased and irresponsible one designed to fast-track the approval of the Energy Answers incineration project by denying constitutionally-protected public comment and participation rights, as well as preventing the legally-required local agency evaluation of the same. Hence, the local EIS process resulted in an EIS document prepared exclusively by Energy Answers's consultants that essentially justifies and promotes the approval of this incineration project, instead of the critical analysis instrument it is meant to be to facilitate the consideration of environmental issues in the local agencies' decision-making process. Consequently, the local EIS document does not comply with either NEPA or Puerto Rico's Environmental Public Policy Act (Law No. 416, September 22, 2004), as both require the final EIS be an independent and objective document. (See, e.g., [Greene County Planning Board v. Federal Power Commission, 455 F.2d 412, 420 \(2nd Cir. 1972\)](#), cert. denied, [409 U.S. 849 \(1972\)](#)) ("The Federal Power Commission has abdicated a significant part of its responsibility by substituting the statement of PASNY for its own. The Commission appears to be content to collate the comments of other federal agencies, its own staff and the interventors and once again to act as an umpire. The danger of this procedure, and one obvious shortcoming, is the potential, if not likelihood, that the

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applicant's statement will be based upon **self-serving assumptions.**” *Id.*) (citations omitted; emphasis added); [Natural Resources Defense Council, Inc. v. Callaway, 524 F.2d 79, 87 \(2nd Cir. 1975\)](#) (“[T]he preparation of the [Environmental Impact Statement] by a party . . . with an individual “axe to grind”, i.e., an interest in seeing the project accepted and completed in a specific manner as proposed. Authorship by such a biased party might prevent the fair and impartial evaluation of a project envisioned by NEPA.” *Id.*); *Municipio de San Juan v. Junta de Calidad Ambiental, 149 D.P.R. 263* (1999) (not improper for public agency to receive assistance from private party in drafting of Environmental Impact Statement (EIS), however, it is indispensable that the agency maintain an independent and objective posture, *Id.* at 278, fn. 6).

Due to the above fact, *Cambio* welcomes RUS’s decision to cancel its prior Supplemental Final Environmental Impact Statement process related with Energy Answers Arecibo, LLC’s (“Energy Answers”) financial assistance request for the construction of its proposed municipal waste incineration facility in Arecibo, Puerto Rico. *Cambio* also welcomes RUS’s determination to prepare an independent RUS EIS and provide an unbiased process that complies with its responsibilities under National Environmental Policy Act (“NEPA”), the Council on Environmental Quality’s regulations for implementing NEPA (40 CFR Parts 1500-1508), and RUS’s Environmental Policies and Procedures (7 CFR Part 1794). Nonetheless, we object to RUS’s intention to incorporate by reference the local or state EIS for the Energy Answers incineration project (“local EIS document”). RUS must not incorporate by reference in its independent EIS process incomplete, inaccurate and flawed information and documents, including the local EIS document. Specific examples of such inaccuracies, flaws and self-serving assumptions will be discussed throughout our comments contained herein.

II. The local EIS process

The local EIS document did not follow the ordinary process provided for under Puerto Rico’s Environmental Public Policy Act (Law 416, September 22, 2004) and the Puerto Rico Environmental Quality Board’s Regulation No. 7948 on the Evaluation and Process of Environmental Evaluations (September 2010). Instead, the local EIS process followed an exceptional or extraordinary evaluation process. More specifically, Puerto Rico Executive Order 2010-034 declared an “Energy Emergency” regarding energy generation in Puerto Rico, and ordered an expedited evaluation process for the development of renewable energy projects on the Island, including for the environmental evaluation mandated by the Puerto Rico Environmental Public Policy Act (Law 416, September 22, 2004). The 2010 Executive Order explained that the basis for an expedited evaluation process was the “alleged” energy crisis faced by Puerto Rico due to the Island’s heavy dependence on fossil fuels (~70% oil based) and the elevated price of fossil fuels at the time (2010). It is worth noting that said Executive Order also recognized the deterioration of Puerto Rico’s air quality due to fossil fuel burning and the health effects of said air contamination; important facts which were superficially evaluated in the local EIS document.

Over thirty renewable energy projects were submitted through the expedited process between 2010 and December 2012. Most of them were solar or wind projects, which generally pose positive environmental trade-offs. The exception, however, was the Energy Answers incineration project. A municipal waste incineration facility that was evaluated through the expedited process on the alleged basis that the project would come to alleviate Puerto Rico's elevated energy costs. Clearly, this is a "self-serving assumption" in and of itself, as energy production is just a small by-product of the main operation of the facility: waste handling through incineration. The emergency, exceptional or extraordinary evaluation process under the 2010 Executive Order was so accelerated that the local EIS document was made accessible to the public through a public notice issued on October 26, 2010, while the period for public comments closed on November 9, 2010, after a November 8, 2010 public hearing (pgs. 2-3, November 26, 2010 EIS transmittal letter from the Puerto Rico Industrial Development Company to the Puerto Rico Environmental Quality Board). Merely eleven working days from the date of notification and only one day after the public hearing were afforded to the public and local agencies to evaluate and comment on such a complex and ambitious project. RUS should view with suspicion the fact that local agencies submitted comments to the local EIS document within days of its receipt:

"Energy Affairs Administration – letter dated November 1st, 2010; Puerto Rico Aqueduct and Sewer Authority – letter dated October 29, 2010; Puerto Rico Highway and Transportation Authority, Department of Transportation and Public Works – letter dated October 27, 2010; Solid Waste Management Authority – letter dated November 1st, 2010; Puerto Rico Ports Authority – letter dated November 1st, 2010; Puerto Rico Fire Department – letter dated October 27, 2010; Department of Agriculture/Land Authority – letter dated November 1st, 2010; Department of Environmental and Natural Resources – letter dated October 29, 2010; Department of Health – letter dated November 5, 2010; Puerto Rico Electric Power Authority – letter dated November 8, 2010; Institute of Puerto Rican Culture – letter dated October 26, 2010; State Historic Preservation Office – letter dated October 28, 2010; Department of Labor and Human Resources – letter dated October 29, 2010; and the Municipality of Arecibo – letter dated November 8, 2010." (pgs. 2-3, November 26, 2010 EIS transmittal letter from the Puerto Rico Industrial Development Company to the Puerto Rico Environmental Quality Board).

Hence, our characterization of the local EIS process as biased and irresponsible. The fact that a municipal waste incineration project was allowed to be evaluated in this extremely short timetable must ring alarms in the context of Puerto Rico. It must be highlighted that currently there is no municipal waste burning facility on the Island because public policies enacted through

the years by both the Executive and Legislative Branches had previously prohibited incineration as a main waste handling option for the Island. Some examples were:

- In 2000, the Puerto Rico Legislature passed a joint resolution prohibiting the Solid Waste Authority from spending public funds in the research, development or construction of incineration technologies (Joint Resolution 733, December 28, 2000);
- In 2001, the Puerto Rico Legislature passed a concurrent resolution asserting the Legislative Assembly's public policy of rejecting incineration as a means to dispose solid waste within Puerto Rico's jurisdiction (Senate Concurrent Resolution 9, February 5, 2001);
- In 2001, Governor Sila Calderón issued an executive order declaring as public policy that reduction, reuse and recycling are the favored methods for waste management in Puerto Rico, and specifically limiting the use of incineration for waste which cannot be reduced, reused or recycled (Executive Order OE-2001-58^a, October 5, 2001);
- In 2003, the Puerto Rico Solid Waste Authority approved the Strategic Plan for the Management of Solid Waste in Puerto Rico (November 2003), which established the necessary strategies and actions for the effective implementation of Governor Calderón's waste management hierarchy;
- In 2004, Governor Sila Calderón issued an executive order adopting the 2003 Strategic Plan for the Management of Solid Waste in Puerto Rico as public policy (Executive Order OE-2004-41);
- In 2006, the Legislature issued a joint resolution reasserting the order it gave in 2000, to prohibit the Puerto Rico Solid Waste Authority from spending public funds in the research, development or construction of incineration technologies, while also expanding its definition of incineration (Joint Resolution 285, December 22, 2006); and,
- In 2007, Governor Anibal Acevedo Vilá issued an executive order reemphasizing the waste management hierarchy of: 1) reduction; 2) reuse; 3) recycling and composting; 4) waste to energy recovery facilities; and 5) landfills. However, a supplemental priority was emphasized of waste to energy facilities over landfills.

Pursuant to Puerto Rico Law 76 of May 5, 2000, executive emergency orders can only be effective for 6 months. Thus, in 2011 and 2012 additional Executive Orders were promulgated to extend the emergency period initiated by Executive Order 2010-34, particularly because oil prices continued to soar during said period. The last executive order promulgated by former Governor Luis Fortuño extended the emergency period to December 31, 2012. In May 2013, current Governor, Alejandro García Padilla, enacted Executive Order 2013-38 to discontinue the expedited evaluation process for renewable energy projects, as well as order that all renewable energy projects submitted on or prior to December 31, 2012, which had yet to be evaluated be submitted to the ordinary process of evaluation. Further, Executive Order 2013-38 recognized

the need for the continued expansion of renewable energy sources on the Island, but recognized that “the development of renewable energy projects had to be consistent with our geophysical reality as a Caribbean Island.” Many of the projects presented in the 2010-2012 period were proposed on productive agricultural lands or sensitive natural resource areas. Puerto Rico imports over 80% of the food it consumes and agricultural development and import substitution is an important element of the Island’s future food sustainability. Thus, renewable energy projects are currently evaluated through a more rigorous process that provides for ample public participation and comment and a more coherent evaluation of proposed location, land use, cost and environmental impacts.

However, since the local evaluation process for the Energy Answers incineration project was initiated and carried through in record time, Governor García Padilla’s Executive Order 2013-38, did not affect this project and local agencies did not reopen its evaluation under the ordinary process.

To complicate matters more the current Puerto Rico Environmental Quality Board’s (“EQB”) President, has inhibited herself from evaluating any aspect of the Energy Answers incineration project as her husband is a lawyer whose firm is currently contracted by Energy Answers. This further limits the government’s radius of action for revision on this matter, as EQB is the local agency responsible for certifying the compliance of an EIS pursuant to the Puerto Rico Environmental Public Policy Act.

III. Public Policy

The local EIS document correctly points to the hierarchical nature of Puerto Rico’s waste management public policy as specified in Article 3 of Law No. 70 of September 18, 1992 (Law for the Reduction and Recycling of Solid Waste in Puerto Rico). As discussed above, the policy hierarchy applicable in Puerto Rico is as follows:

- “1. Source reduction;
2. Reuse;
3. Recycling/composting;
4. Waste to energy plants; and finally
5. Landfill.” (local EIS document, p.1-16).

Puerto Rico law clearly mandates that reduction, reusing and recycling/composting of waste be implemented effectively as a priority, and that incineration and landfills be used as a last resort of a much reduced waste stream. This is the same hierarchical policy favored in leading

jurisdictions. In the local EIS document, Energy Answers claims that their project puts into effect one of the waste management methods established by Law 70. However, Energy Answers incineration project, as well as the local EIS document, ignore the fact that since the waste management methods of Law 70 are presented in a hierarchical priority scale, it is imperative that strategies 1 through 3 be effectively implemented first (which has yet to be done in Puerto Rico) prior to any exploration of strategy 4 to proceed. In other words, the conditions under which Energy Answers incineration project may be evaluated have yet to mature, as a matter of fact and law.

IV. Project Need

The local EIS statement's preamble identifies the "Need" for the Energy Answers incineration project thusly: "The Project responds to the urgent need to develop new energy generation infrastructure that uses alternative sources to petroleum fuels to stabilize the high cost of electricity in Puerto Rico, in accordance with the Energy Reform public policy of the Government of Puerto Rico." (Local EIS document, p.i). This "Need" relates to the 2010 Executive Order declaring an "energy emergency", and which is no longer in effect nor recognized as an emergency by Executive Order 2013-038.

Furthermore, Puerto Rico's current energy demand fluctuates between 2,700 MW and 3,200 MW. Energy Answers will produce 80 MW, of which 10MW will be used in the facility and 70 MW are to be sold to the Puerto Rico Energy and Power Authority (PREPA). This is less than 0.026 of the total electricity demand in the Island and clearly will not make a dent in the terms of energy costs. In addition, as we see oil prices plummet we must reassess the overall project cost (environmental, environmental justice, health, etc.) and relative benefit of pursuing a municipal waste incineration facility, particularly after not having implemented other legally-mandated and favored waste management (reducing, reusing, recycling) and energy (solar, wind) alternatives that have much less environmental and health impacts.

V. Job creation

The local EIS states that the Energy Answers project will create 4,283 direct jobs and 4,004 indirect and induced jobs during construction phase and 150 direct jobs and 675 indirect and induced jobs in operation phase. These numbers appear to be grossly overstated from a basic comparison with other similar facilities in the United States.

An article published in 2013 by the MSW Management, a journal for municipal and waste professionals, provides comparative data on other waste to energy facilities and the job creation during construction and operation phase (http://www.mswmanagement.com/MSW/Editorial/SWANA_News_Economic_Benefits_of_Wa stetoEnergy_Jobs_21552.aspx). The range of direct employment for a 1,500 TPD facility during

construction is close to 250 and during operation phase between 50 and 75. A reasonable expectation for a 2,100 TPD facility would be 350 direct jobs in the construction phase and between 70 and 105 jobs during operations. Thus, once again, the information provided in the local EIS document is misleading and incorrect. Job creation has been one of the most persistent arguments used by Energy Answers proponents in defending the project. A more in depth analysis and comparison of what really will be the job creation benefit from the Energy Answers facility needs to be performed in order to evaluate responsibly the alleged economic benefits from this facility.

VI. Municipal Solid Waste characterization

Puerto Rico recycles less than 14% of its waste stream (<http://www.ads.pr.gov/ads/mapas/mapa-reciclaje.html>). The last waste characterization study was commissioned over 10 years ago (2003) by the Puerto Rico Solid Waste Authority. Surprisingly, this is the waste characterization Energy Answers uses as basis in the local EIS document. It is more than reasonable to argue that waste generation practices and behavior on the Island must have changed considerably in the past 10 years. For one thing, over 500,000 inhabitants have left the Island during said period, and our demographics now show a much older population with different consumption and waste disposal behavior. Manufacturing jobs and production have been reduced by more than a half in said period. Moreover, the past 10 years have seen the expansion of stores such as Costco, Sams and Walmart which use large excessive packaging as part of their consumer strategy.

The Energy Answers incineration project proposes to separate and recycle only the metal components of the waste stream (~10%), leaving plastics and other toxic waste commonly found in municipal waste streams to enter the incineration process. Having no recent waste characterization study, it is impossible to know what will in effect enter the incineration waste stream and the amount of resulting air pollutants to be released. At a minimum, a new waste characterization study should be completed as part of the evaluation of the Energy Answer process to better assess the type of pollutants and amounts that can be expected to be released, thus, allowing for a more certain assessment of the environmental and health impacts of this polluting activity.

VII. Population estimates

The local EIS document presents outdated population estimates from 2006, in order to justify an increase in waste production up to 2025. Below, the information included in the local EIS document:

	“Year Pop. Projection	SW Projection (Tons/year)
	2010 4,030,152	4,089,395
	2015 4,110,528	4,170,953
	2020 4,172,242	4,233,574
	2025 4,214,387	4,276,338.” (Local EIS document, p. 1-19).

Contrary to what is presented in the local EIS document, the US Census Bureau’s census for 2010 provided population estimates for Puerto Rico of 3,725,789, already demonstrating a marked and immediate decrease in population (US Census Bureau, Population Data for Puerto Rico, Enrique Lamas, Nov. 2010 <http://www.estadisticas.gobierno.pr/iepr/LinkClick.aspx?fileticket=DhUavOY-CBE%3D&tabid=104>). The U.S. Census Bureau’s population estimates for 2013 are of 3,615,086, proving the decreasing trend (https://www.census.gov/popest/data/puerto_rico/asrh/2013/index.html). Recent Planning Board projections indicate the Puerto Rico population could be below 3,300,000 by 2020 (<http://www.caribbeanbusinesspr.com/news/pr-population-could-decline-by-8-percent-to-3.3m-by-2020-planning-board-predicts-92360.html>). This is one million less people than the projection included in the local EIS document, which in turns translates to one million tons per year less applying the same methodology used by Energy Answers in its local EIS analysis.

Information and data presented in the local EIS document regarding population and waste projections are simply incorrect. This incorrect information is what Energy Answers uses as justification for the viability and need for the incineration facility. This alone should trigger a more profound, in depth and transparent evaluation for this project, and invalidate the use or reliance of the local EIS document and attachments as currently proposed by RUS.

Projections presented on Table 1-5: Projected Sources of Raw Materials for the PRF, local EIS document, page 1-33 are thus incorrect; as well as the Socioeconomic Study presented in Section 2.5 of the local EIS document.

VIII. Plant components

The local EIS document indicates in its description of plant components: “Component 1: Receiving of Solid Waste/ A reduction in the amount of solid waste generated by communities, industry and government will be actively promoted through effective programs to reduce, recycle and compost.” (Local EIS document, p. ES-5). However, there is no actual, aggressive communities, industry or government (state or municipal) policy implementation effort to comply with this first component. As indicated earlier, Puerto Rico recycles less than 14% its

waste. Also important to emphasize is that according to the Puerto Rico Solid Waste Authority's Strategic Plan for the Management of Solid Waste in Puerto Rico (November 2003), our waste composition is: 35% organic material and yard waste (compostable); 41% paper, cardboard, plastic, metals and glass (recyclable and reusable); 17% construction and demolition waste (recyclable and reusable); and 7% other. These percentages are prior to any effort to reduce our waste production. Hence, the development of a municipal waste incineration facility at this time, when acceptable recycling rates have not yet been attained and no reduction, reuse or recycling plans are in place, will inevitably jeopardize the effective implementation of reducing, reusing, and recycling efforts. Further, given the 2,100 ton/day waste stream required to make this project economically feasible for the proponents, it is reasonable to anticipate that at least 1,400 ton/day of recyclable materials will necessarily enter the Energy Answers incineration waste stream.

IX. Site location

⇒ Floodzone

The local EIS document states: "Floodway limits have been revised to follow the perimeter of the proposed development, and to reclassify the land as Zone AE outside the floodway, where the provisions of Section 7.03 of Regulation #13 apply. The proposed amendment would require a change to the topography of the area between the Project site and the river channel, for a maximum ground elevation of 3.5 meters-msl, and to provide greater flow area along the river bank. The letter requesting the amendment to the FEMA Flood Map was filed with the [Puerto Rico Planning Board] on October 8, 2010." The reason for the request is that the project is located within the Rio Grande de Arecibo flooding zone (Junta de Planificación, Consulta Número 2010-06-0231-JPU). Locating an incineration facility within the floodzone of one of Puerto Rico's main rivers should be questioned particularly when the Puerto Rico Department of Natural and Environmental Resources has identified:

"Los meandros en la desembocadura del río al mar forman uno de los estuarios más importantes en la Isla, penetrando la cuña de agua salada hasta la vecindad de la Central Cambalache, aproximadamente una milla aguas arriba de la desembocadura del río al mar."(<http://www.drna.gobierno.pr/oficinas/saux/secretaria-auxiliar-de-planificacion-integral/planagua/inventario-recursos-de-agua/cuencas-hidrograficas/Cuenca%20del%20Rio%20Grande%20de%20Arecibo.pdf>)

It is precisely in these ecologically rich last miles of meanders of the Arecibo River that the Energy Answers project is to be located.

⇒ Land Use

The local EIS document states: “The Project will reuse and revitalize a previously impacted industrial site, resulting in an efficient land use because (a) it prevents land use for landfill operation, and revitalizes a previously impacted area”.(local EIS document, p.1-11). However, how can the local EIS document conclude this when there is no serious analysis of a No Action Alternative or an analysis on the cumulative impact of polluting activities in the area as part of the local EIS process. Arecibo is a very contaminated zone because of previous industrial activities developed throughout the municipality and a No Action Alternative in the proposed project site could actually be the best alternative in terms of adequate land use for the zone. A thorough No Action Alternative and a cumulative impact analysis need to be responsibly evaluated and addressed as part of the RUS EIS.

Furthermore, Arecibo has suffered from the lack of adequate land use planning. Arecibo does not have an approved Land Use Plan to provide orderly logic to development zones. The result has been the careless and chaotic development of areas near ecologically sensitive and important natural resource areas for the Island. In the absence of an approved Land Use Plan, EIS documents and processes for high impact projects proposed for Arecibo, such as the Energy Answers project, need to be thorough and cannot be subject to fast-track analysis that curtail adequate evaluation and transparency.

X. Water

The local EIS document states: “Provide 2.1 MGD brackish water for the cooling tower and boiler steam production, to be pumped from the surplus that the Department of Natural and Environmental Resources (DNER) discharges from Caño Tiburones into the ocean, and will be transferred by force line from El Vigía Pump Station to the Plant” (local EIS document, p. ES-8). No Hydrology and Hydraulics (H/H) study was presented in the local EIS document to evaluate the impact of such extraction on the Caño Tiburones Reserve. Furthermore, on February 2014 the Department of Natural Resources denied Energy Answers the request to extract water from Caño Tiburones because of the environmental impacts such an extraction would impose on this valuable natural ecosystem.

No alternative water supply was evaluated as part of the local EIS document, thus the alternative water source to be presented by Energy Answers (not yet identified) must be evaluated and the local EIS revised and updated to account for such amendment in the original plans.

XI. Air pollution

The local EIS document states: “Arecibo and nearby areas are classified as attainment areas in the National Ambient Air Quality Standards for criteria pollutants.” (p.2-48)

However since 2011, USEPA has classified the Arecibo area as non-attainment because of exceedance in lead air limits (<http://www.epa.gov/airquality/greenbook/mnp.html>). The main source for lead pollution is related to the battery recycling operation in the same Cambalache Ward where the Energy Answers facility is proposed. Thus, once again, the information presented in the EIS is not representative of current conditions.

During a public hearing held in December 2013 regarding the Battery Recycling operations, the Puerto Rico Medical Board (“Colegio de Médicos” in Spanish) indicated:

“ ‘Tomamos nota de que ya en 2004 había evidencia de niveles elevados de plomo en empleados de la compañía. En el 2008, EPA ordenó la investigación de los suelos circundantes, viviendas y negocios cercanos a TBRCI, habiéndose encontrado el metal tóxico plomo en un número significativo de muestras. En el 2010, se encontró plomo en sangre de niños de Head Start, familiares de empleados de TBRCI, lo cual causó que la agencia federal CDC de Atlanta hiciera pruebas adicionales a otros niños y adultos, y un número de ellos también salieran con niveles elevados de plomo en sangre.’ Indico Angel González presidente del Comité de Salud Pública y Ambiental (CSPA) del Colegio de Médicos-Cirujanos de Puerto Rico (CMCPR) durante la vista.”
(<http://puertorico.sierraclub.org/blog/2013/12/exigen-el-cierre-de-battery-recycling-company-inc-en-vistas-publicas-de-arecibo>)

The fact that Arecibo is a non-attainment area should also constitute an important element of the Environmental Justice evaluation of the EIS, as the Energy Answer’s project will inevitably further increase air pollution in a community that has already suffered for more than 10 years the impact of contaminating industries.

Furthermore, the Human Health Risk Assessment (HHRA) referenced on page 3-40 of the local EIS document needs to be revised since it is clearly based on incomplete information due to an absence of: an updated waste characterization study, a cumulative impact analysis, incorporating local studies made by Colegio de Médicos de Puerto Rico and the Center for Disease Control. Furthermore, the HHRA study included as Appendix K of the local EIS document study evinces a clear bias towards favoring the project when it states on page 2, Background: “RRF provide a good alternative to land-filling wastes”. This self-serving statement is made even prior to presenting any health data or information to support it.

Moreover, the HHRA study is based on data collected at the SEMASS facility at West Wareham, Massachusetts, where the waste stream is considerably different from the Puerto Rico waste stream. For instance, recycling rates from the municipalities that deliver waste to SEMASS far exceed Puerto Rico recycling rate, attaining levels that are over 3 times the Island’s rate. (*See,*

for example, recycling rates for Cape Cod communities). Therefore, the base information and data used in the HHRA study is not pertinent to Puerto Rico making conclusion on health risk not relevant to the Puerto Rico project.

XII. Landfill impact and ash

The impact assessment made in the local EIS document as to the effect on reduced contamination on landfills is highly overstated and lacks precision and quantifiable data. Statements included are biased and self-serving. The EIS indicates: “Through the Project, the practice of burying the solid waste (approximately 2,100 tons per day) in landfills, some of which are in environmental compliance and some that are not, will be avoided, thereby minimizing the impacts to soil, air and surface water and groundwater (aquifers) that are a consequence of this practice. The Project also reduces, among other impacts (a) the uncontrolled air emissions that occur as a result of the operation of landfills, and (b) uncontrolled leachate discharges to soil, surface water and groundwater”(local EIS, p. 1-11). However, unless solid waste scavenging is employed (which is not a proposed as part of this project) there will be no reduction on the impact of solid waste deposited on landfills. Uncontrolled air emissions from garbage trucks having to haul waste from one corner of the island to get to the Arecibo site is disregarded and not accounted for in this analysis. In addition, ash to be deposited on landfills will have a higher concentration of contaminants than regular municipal waste stream on a per volume basis. Since information regarding the handling of this residual ash is not discussed as part of the EIS and has not been disclosed by Energy Answers, the assertion made in the EIS regarding decreased impact on landfills is false and misleading.

Currently, Puerto Rico faces an enormous challenge handling ash generated by the AES Cogeneration facility in Guayama, Puerto Rico:

“AES dumped its toxic ash in the Dominican Republic before it spread its poison locally. When the Guayama plant opened, AES sent thousands of tons of toxic ash to the Dominican Republic, where it was dumped in Samaná Province, contaminating Manzanillo and ruining Samaria Bay. In 2005, the Dominican Republic sued AES, saying that the ash contained unsafe levels of cancer-causing metals and radioactive materials and that it polluted the environment and harmed residents’ health. Citizens exposed to the ash suffered health problems. The case settled for \$6 million, and AES stopped shipping coal ash to the Dominican Republic.” (<http://earthjustice.org/2012-september/tr-ash-talk-puerto-rico-communities-seek-justice-protection>).

Over 20 municipalities, including Guayama, have prohibited the use of ash (specifically, Agremax, which is a partially solidified mixture of coal combustion fly ash and bottom ash) in

road and construction projects because of carcinogenic and other health concerns. A 2012 study commissioned by USEPA and performed by Vanderbilt University titled “Leaching Behavior of ‘Agremax’ collected from a Coal-Fired Power Plant in Puerto Rico” (<http://nepis.epa.gov/Adobe/PDF/P100G02B.pdf>), presents the leaching properties of Agremax collected from the AES Guayama facility. Results demonstrate concentrations exceeding maximum limits for arsenic, boron, chloride, chromium, and fluoride, among others, thus confirming concerns for environmental fate and transport of contaminants present in ash and resulting health risks. AES coal ash was in origin presented by proponents as theoretically innocuous, much in the same fashion as Energy Answers is presenting through flawed theory that ash to be generated from the proposed waste to energy facility does not present health threat or danger.

USEPA is currently evaluating how to address the health issues created by Agremax and ash generated in the AES Guayama facility.

XIII. Noise levels

The local EIS states that existing noise levels at several Receptor points identified, including a quiet zone, exceed allowable noise limits. These are caused mainly by vehicular traffic from state road PR-2 (local EIS document, p. 2-84). The local EIS document disregards the noise impact to be caused by the operation of the facility, particularly the dramatic increase in garbage trucks in the area that will precisely transit through PR-2.

Assuming that each garbage truck can hold on average 15 tons of waste, this would imply that at a minimum 140 garbage trucks would have to visit the site daily to dump waste in order to supply the 2,100 tons/day required. This activity would be on-going for six days a week. The facility and its operation will inevitable worsen noise levels, and yet the impacts are not adequately addressed in the local EIS document.

XIV. Natural and Human environment

A glaring flaw in the local EIS document is the superficial evaluation of environmental impacts on the natural and human environment in the proposed project’s very backyard.



<http://www.elnuevodia.com/areciboescenariodecrisisecologica-1556715.html>

⇒ Natural Environment

The ecological importance of the proposed plant's surroundings cannot be ignored (as done by Energy Answers in the local EIS document). Section 2.7.1 Natural Ecosystems in the vicinity of the Site (Num. 4 in orange, above) of the local EIS document fails to adequately describe or evaluate the natural ecosystems that exist within the Arecibo region.

1. Caño Tiburones Natural Reserve (Num. 2 in blue, above) – The proposed incineration plant is located within the western tip of Caño Tiburones. Delimited by the Río Grande de Arecibo and Río Grande de Manatí and covering an area of approximately 7,000 acres, Caño Tiburones is the largest wetland in Puerto Rico. Fresh water from the karst and salty ocean water interact creating a unique habitat consisting of estuarine, palustrine and lacustrine wetlands with around 200 bird species and more than 100 flora species. Caño Tiburones is recognized as an important migratory bird habitat in the Caribbean Region.
2. Cambalache State Forest, Arecibo – (Num. 3 in blue). A few miles to the east of the proposed incineration plant is the Cambalache State Forest, approximately 1,600 acres of limestone forest. The Forest provides an important service in the protection of the karst ecosystem in the region, including its flora, fauna, caves, sinkholes and limestone hills, as well as underground water system. Important

populations of endemic birds and trees are protected within the Cambalache State Forest.

3. Río Abajo State Forest, Arecibo – (Num. 4 in blue). A few miles to the south of the proposed incineration plant and consisting of 5,780 acres, Río Abajo houses two types of forests: a moist limestone forest with very irregular topography, subterranean drainage, caves, natural depressions or sinkholes and haystack hills (all characteristic of karst geological development); and a large subtropical wet forest. There are about 175 types of trees, 47 of which are considered endangered species. Two important programs for the recovery of two endemic birds are also underway in Río Abajo: recovery of the Puerto Rican Red-Tail Hawk and the Puerto Rican Parrot. These programs are successfully recovering these bird populations in a joint effort between the Puerto Rico Department of Natural and Environmental Resources, the U.S. Fish & Wildlife Service and the U.S. Forest Service.
4. Dos Bocas Reservoir, Arecibo – (Num. 5 in Blue). One of the Island's most important reservoirs, as 100 mgd are extracted and sent to the San Juan metropolitan area for potable water. The 2003 H/H water study of the Caño Tiburones relied upon by Energy Answers in the local EIS document was made precisely to evaluate the potential impact of the extraction of 100 mgd in the Dos Bocas Reservoir as both water systems are part of the same hydrological system. Any proposed additional extraction from the Caño Tiburones requires a new H/H water study to evaluate the accumulated impact of the Dos Bocas extraction during the past decade, as well as the impact in future extractions that may be required from the Superaqueduct system.
5. Indian's Cave and the Bishop's Waterhole, Arecibo (Num. 1 in blue). Both of these natural resources are a few hundred meters away from the proposed incineration project, and are important historic and cultural sites, as well as important components of the region's ecological system.

⇒ Human Environment

The quality of the human environment in the Arecibo region is precarious. A combination of past and present factors have aggravated the surroundings in the Arecibo region, including serious coastal erosion, contamination of its superficial and underground water systems by toxics and sediments, ground contamination by hazardous substances, and air contamination. In

Hanley v. Mitchell, [460 F.2d 640](#) (2d Cir. 1972) (Feinberg, J.), *cert. denied*, 41 U.S.L.W. 3247 (U.S. Nov. 7, 1972), impacts significantly affecting the quality of the human environment included the following: “[NEPA] must be construed to include protection of the quality of life for city residents. Noise, traffic, overburdened mass transportation systems, crime, congestion and even availability of drugs all affect the urban 'environment' and are surely results of the 'profound influences of . . . high-density urbanization [and] industrial expansion.” *Id.* at 647. In evaluating if a proposed action will significantly impact the human environment, one must consider both the comparative effect and the absolute effect.

“(1) the [comparative] extent to which the action will cause adverse environmental effects in excess of those created by existing uses in the area affected by it, and (2) the absolute quantitative adverse environmental effects of the action itself, including the cumulative harm that results from its contribution to existing adverse conditions or uses in the affected area. Where conduct conforms to existing uses, its adverse consequences will usually be less significant than when it represents a radical change. . .

Although the existing environment of the area which is the site of a major federal action constitutes on criterion to be considered, it must be recognized that even a slight increase in adverse conditions that form an existing environmental milieu may sometimes threaten harm that is significant. One more factory polluting air and water in an area zoned for industrial use may represent the straw that breaks the back of the environmental camel. Hence the absolute, as well as comparative, effects of a major federal action must be considered.” (*Hanly v. Kleindeist*, 484 F.2d 448 (2d. Cir. 1973).

Though the existing environment of the area is an important criterion when evaluating a proposed action, the accumulation of additional impacts to the existing, even if a slight increase, may endanger a human environment. Such is the case of the Arecibo area. Hence, the quality of the human environment must be carefully evaluated. This was not done by Energy Answers in the local EIS document. Past and current activities that affect the human environment in the region include:

1. 11 Superfund Sites – Pesticide Warehouse I, Arecibo; Pharmacia & Upjohn Caribe, Arecibo; Pesticide Warehouse II, Manati; Barceloneta Landfill, Florida; [Merck, Sharp & Dohme Quimica de Puerto Rico](#), Barceloneta; RCA del Caribe, Barceloneta; Upjohn Facility, Barceloneta; Vega Alta Public Supply Wells, Vega Alta; V & M Albaladejo, Vega Baja; Vega Baja Solid Waste Disposal, Vega Baja; and Papelera Puertorriqueña, Utuado. (http://www.epa.gov/region2/cleanup/sites/prtoc_sitename.htm). The existence of so many Superfund Sites and numerous industrial activities with

potential to contaminate with hazardous substances and toxics in such a small region of Puerto Rico (a poor and mostly racial minority under EPA Environmental Justice standards) should be, in and of itself, cause of concern and in depth analysis.

2. Battery Recycling – (Num. 3 in orange). A few meters from the proposed incineration plant, this existing company is a recurrent permit violator, and has received several fines by U.S. E.P.A. and the local Environmental Quality Board. As mentioned before this is the main source for the lead air quality non-attainment area.
3. Puerto Rico Electric Power Authority's Cambalache Power Plant – (Num. 2 in orange). Just a few hundred meters away from the proposed incineration plant, the Cambalache Power Plant is one of the region's top air polluters burning low quality oil in order to produce electricity. This plant has not undergone significant improvements in order to upscale its efficiency and environmental compliance.
4. Puerto Rico Acqueduct and Sewer Authority's Barrio Islote Sewer Treatment Plant – (Num. 1 in orange) – located within 1,000 meters of the proposed incineration plant, and right in the heart of the Barrio Islote residential community. The odors and noise produced by this sewer treatment plant are constant source of complaints for the local community.
5. Arecibo Municipal Landfill – (Num. 5 in orange). For decades, the local communities have had to coexist with the RCRA non-complying landfill, which is located within the Caño Tiburones Reserve and just a few hundred meters from the proposed incineration plant. Even in its eventual closure, this landfill will continue contaminating the Caño Tiburones waters, as well as the region's air.

The local EIS statement does not evaluate the cumulative effect over the natural and human environment resulting from the above industrial activities neither in a comparative or absolute analysis. The RUS EIS must evaluate these criteria.

⇒ Residential and Quiet Zones

The local EIS document describes the residential and quiet zones as follows:

“The closest house is located north the Project site, adjacent to State Road PR-2. This house is located at 569 meters from the center of the Project site. The schools, courts, hospitals, mental health hospitals and clinics are considered as quiet zones by the EQB. The closest school is located at approximately 1,480 meters northwest of the Project site, and the closest hospital is located at approximately 2,035 meters northwest the Project site.” (Local EIS document, pg. 2-59).

The local EIS document then shows in its **Figure 2-17** some examples of houses and hospitals close by. However, even this superficial analysis of the proposed project’s surroundings cannot hide the reality that within just a few hundred meters of the proposed project there are residential houses, and within a couple thousand meters there are hospitals and schools; nor can the local EIS document hide that tens of thousands of persons live and work within a couple thousand meters of the proposed site. This reality mandates a profound, thorough and in depth evaluation of the impact that the direct and indirect activities will have in the quality of the human environment surrounding the proposed incineration plant.

Furthermore, the local EIS states on page 3-39:

“During the operation phase, the visual resources of the current setting will improve since the proposed Project’s landscape includes a plan for reforestation and maintenance, which will maintain the appeal of the external areas of the Plant. In addition, the Plant itself will add extra appeal because it will have a maintenance plan that will maintain its curb appeal. On the long term, the impact to visual resources as result of the Plant development will be positive because it will add attractiveness to the Project site and nearby areas, since currently they look abandoned and careless.”

Such a statement seems generic and incomplete as it does not consider the impact of over 140 garbage trucks hauling solid waste to the facility on a daily basis, and the inevitable accumulation of waste and ash at the site. There are no renditions of the visual impact of the project on the region and particularly from reference points outside property delimitations. Another example of biased and self-serving conclusions presented in the local EIS document, in order to justify the approval of the proposed Energy Answers incineration project.

XV. Contradiction “Put or Pay” on local EIS document versus Solid Waste Authority contract

The local EIS document states:

“It is important to note and emphasize that Energy Answers contracts will not include “put or pay” clauses, which financially penalize customers (municipal or private) for reducing the incoming amount of waste for the Plant because of the implementation of recycling initiatives. On the contrary, Energy Answers contracts do not contain this penalty, therefore allowing the municipalities that dispose of their waste at the Plant to have the option of reducing their amount of generated waste through the programs.”(Local EIS document, p.1-3).

However, the contract signed on April 4, 2012, between the Solid Waste Authority and Energy Answers (Waste Delivery and Support Agreement 2012-000060) states that the Solid Waste Authority shall issue Performance Directives to municipalities to ensure delivery of 2,100 TPD. Performance Directives are defined in the 2012-000060 Contract as:

“Performance Directive” means, with respect to all Designated Municipalities, an administrative order, rule or regulation or similar official document issued by the Authority, directing each of such Designated Municipalities, for the duration of the term of this Agreement (or if earlier, until the date of the execution of a Municipality Contract between Energy Answers and such Designated Municipality) to: (a) commence delivery to designated waste disposal facilities (including the Resource Recovery Facility) of a stated annual amount of MSW for each Designated Municipality, which stated amounts: (i) are anticipated to include all MSW under the direct or indirect control of the Designated Municipality less any source separated recyclable materials, and (ii) to total in the aggregate the Required MSW Amount minus the aggregate amount of MSW under Municipality Contracts that have been executed by Energy Answers and the respective municipalities, all in accordance with Schedule 2.3 to this Agreement; (b) pay the Disposal Fee therefor in respect of such stated annual amount; and (c) comply, in the case of Performance Directives relating to or affecting the Resource Recovery Facility, with such other terms and conditions as shall be necessary in order for the Resource Recovery Facility to be in compliance with applicable provisions of the Resource Recovery Facility’s operating permit as approved by the EQB. With respect to any Designated Municipality, a Performance Directive shall remain effective until the earlier of: (a) the date such Designated Municipality enters into a Municipality Contract with Energy Answers; or (ii) the expiration of the Term of this Agreement, whether by the lapse of time or earlier termination hereof.

Thus, the Solid Waste Authority becomes the enforcer through the 2012 Contract that guarantees that waste volumes are not reduced (see below, article 2.4 of Contract 2012-000060).

2.4. Enforcement Mechanisms. The Authority shall employ all of its lawful powers to cause Designated Municipalities to comply with the terms of the applicable Performance Directive to which such Designated Municipalities are subject, all in accordance with and subject to the terms established in the Authority Regulations. In furtherance of the foregoing, the Parties intend to carry out the procedures outlined in Schedule 2.4 hereto.

Furthermore, the contract states in Article 2.5 that the SWA can impose fines to municipalities that do not comply with Performance Directives or contracted volumes as part of its administrative proceedings. Hence, the Energy Answers incineration project will, in fact, be penalizing municipalities that reduce amounts included in Performance Directives through the Solid Waste Authority. Again the information included in the local EIS document is misleading.³

XVI. Financing

“The Project will be completely financed with private funds, without the need to use municipal or state public funds.” (local EIS document, p.1-26). However, government subsidies through state and municipal tax exemptions and credits and preferential treatments are part of the financing scheme of the project. Thus, municipal and state governments will be providing indirect financing contrary to what is stated. Even the Socioeconomic Study included as part of the local EIS document recognizes that economic benefits calculated do not incorporate this type of tax preferential treatment, which is to be expected. It is imperative that the impact of said subsidies be presented particularly given the fiscal and economic challenges being faced in Puerto Rico.

XVII. SEMASS reference

The reference made in the local EIS document to the SEMASS incineration facility in West Wareham, Massachusetts and the awards it received back in the 20th Century are precisely the type of “biased” and “self-serving assumptions” that RUS should not allow in its EIS process. To begin with Puerto Rico is not Massachusetts. Puerto Rico is smaller (3,423 sq. miles to 7,840 sq. miles), yet it has higher population density (1,088 persons per sq. mile to 839 persons per square mile). More importantly, the part of Arecibo where the plant is proposed (a few hundred meters from Arecibo Pueblo and Barrio Islote) are definitely not West Wareham. For instance, Arecibo Pueblo has a population density of 5,915 persons per square mile and Barrio Islote Urbano has a population density of 2,774 persons per square mile compared to West Wareham’s

³ It is important to note that on June 6, 2013 the Secretary of Justice issued a formal opinion declaring null Contract 12-000060 between Energy Answers and the Solid Waste Authority because it violates municipal autonomy provided in the Municipal Autonomy Law (Law No. 81 of Aug. 30, 1991, as amended), it undue interference with existing and future contractual relations, and is in conflict with SWA public policy regarding reduction and recycling. SWA voided the contract filed suit in local court for Declaratory Judgment of the matter.

population density of 512 persons per square mile. (U.S. Census Bureau, 2010 Census Report for Puerto Rico and Massachusetts).

More relevant to Puerto Rico is Energy Answers' proposed incineration plants for the Baltimore area, whose construction was recently stopped by public opposition and permit non-compliance. (<http://www.citypaper.com/news/features/bcp-trash-talk-20140722,0,981899.story>). This discussion is akin to Puerto Rico's given similar population density and minority percentages in the Baltimore area as in the Arecibo urban/industrial area.

XVIII. Discussion of Alternatives

One of the best known axioms when studying NEPA is that the discussion of alternatives to a proposed project is the "heart of the environmental impact statement." (Section 1502.14 of the Council on Environmental Quality Regulations, 40 C.F.R. sec. 1502.14). It is precisely while discussing alternatives to a proposed project, that a government agency can truly internalize environmental considerations into its decision-making process. Without an honest and effective discussion of alternatives, the agency is many times left with a situation in which it decides to continue with a project "by default," even when faced by an accurate analysis of its significant environmental impact. This is why the Regulations of the Council on Environmental Quality ("CEQ regulations") set very clear criteria for the adequate discussion of alternatives in an EIS document. More precisely, CEQ regulations clearly specify that an EIS document must:

- “(a) Rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated.
- (b) Devote substantial treatment to each alternative considered in detail including the proposed action so that reviewers may evaluate their comparative merits.
- (c) Include reasonable alternatives not within the jurisdiction of the lead agency.
- (d) Include the alternative of no action. . .” (*Id.*).

Although the Energy Answers incineration project is primarily a solid waste management strategy, the local EIS document does not evaluate well-known and available alternatives, such as the reduction, reuse and recycling of solid waste. This is particularly irresponsible in the context of Puerto Rico, where, as we have discussed above, the long-standing public policy on the matter is to favor the implementation of reduction, reuse and recycling/composting of solid waste, particularly over incineration and landfilling. Instead, the local EIS document presents a superficial discussion of alternatives to non-renewable energy, although the Energy Answers incineration project is insignificant as an answer to the Island's energy needs and costs. Here,

once again, it is evident that the local EIS document is a biased and self-serving document aimed at justifying the Energy Answers incineration project.

XIX. SCOPING

In conclusion, we summarize and list specific scoping areas which, at a minimum, should be included as part of NEPA regulated RUS EIS process:

- ❖ Discard local Environmental Impact Statement or any studies included in the document as reference or basis documents of the RUS EIS process.
- ❖ Reassess project viability and overall impact given that population estimates, waste characterizations studies, economic benefit analysis and socioeconomic studies used in the local EIS document are outdated and/or incorrect, and that air emission data used to evaluate air quality impact is from West Wareham, Massachusetts and not applicable to Puerto Rico. Furthermore, reassess project viability given that the Waste Delivery and Support Agreement between the Solid Waste Authority and Energy Answers has been declared null and void, and there are no guarantees for municipal waste flows.
- ❖ Request new comments from local and federal agencies regarding project need and impact as both, a major solid waste management project and an a minor energy generation project.
- ❖ Evaluate the project in the context of current local policy regarding waste management and the hierarchy established in Article 3 of Law No. 70 of September 18, 1992, as well as subsequent policy statements from the Executive and Legislative Branches.
- ❖ Define and responsibly evaluate the need for the project in the absence of an energy emergency as established by Executive Order 2012-034 and versus other waste management alternatives such as reduction, reuse and recycling.
- ❖ Conduct an unbiased economic analysis that incorporates a benefit/cost analysis and assesses the real job creation potential of the project.
- ❖ Conduct an updated Waste Characterization Study to determine real waste flows based on correct and updated population estimates and predictions. This should provide the specific volumes of recyclables and toxic materials that would enter the incineration waste stream and also determine the viability of the project.
- ❖ Conduct a new Socioeconomic Study with correct and updated census and economic data.

- ❖ Conduct analysis of the impact of locating this facility in the floodway and ecologically rich meanders of the Arecibo River.
- ❖ Conduct a comprehensive and responsible Cumulative Impact analysis that considers the project impact on ecologically sensitive and environmentally rich areas of the Arecibo Region.
- ❖ Define and evaluate the water supply source and the impact of utilizing such water supply source, since the Department of Natural and Environmental Resources denied water extraction from Caño Tiburones. Conduct the related H/H studies.
- ❖ Conduct a new air quality impact analysis given that Arecibo is classified since 2011 as non-attainment area because of exceedance in lead air limits. Also, incorporate in the air impact analysis a new Human Health Risk Assessment study using data that is pertinent to Puerto Rico and the Island's waste stream, and not SEMASS data.
- ❖ Reassess landfill impact given conditions at local landfills will not be significantly altered. Furthermore, conduct a responsible ash characterization, disposal and fate and transport study to define health and environmental risks. Define and make public ash management and disposal strategy.
- ❖ Conduct a new unbiased noise level study that accounts for predictable noise polluting activities to be expected and the impact on quiet zones and residential areas.
- ❖ Conduct a responsible assessment of the natural resources of the region and not just the site as this is an activity that will cause impact beyond property limits and the Arecibo region is surrounded by environmentally sensitive, ecologically rich and important natural resources that serve the entire Island.
- ❖ Include an analysis of the comparative and absolute effect and impact the facility will have on the human environment in the Region, as required by NEPA. This is to include past and current activities affect the human environment and the impact on the visual resources.
- ❖ Reassess the impact on municipalities that will not be able to implement effective reduction and recycling programs because of possible fines and penalties to be imposed through the Solid Waste Authority, as specified in the Waste Delivery and Support Agreement.

- ❖ Incorporate and present as part of the evaluation of the project's financing structure: the municipal and state tax subsidies, credits and preferential treatments; their impact on municipal and state fiscal conditions; and, the real resulting economic tax benefit from construction and operation activities.
- ❖ Eliminate SEMASS facility references or comparisons as they are self-serving and biased. Incorporate comparisons of incineration facilities that have similar population, socioeconomic, health and environmental conditions as Arecibo.
- ❖ Conduct an unbiased Alternative analysis that evaluates responsibly a No Action Alternative and the alternative of effectively implementing reduction, reuse, recycling.
- ❖ Conduct an in depth and thorough Environmental Justice study as required by NEPA and CEQ regulations, specifically taking into account the persistent siting of contaminating and polluting industries and activities in the Arecibo Region within economically depressed communities.
