



THE VIRGIN ISLANDS
CONSERVATION
SOCIETY, INC.
5032 Anchor Way Suite 3
Christiansted, VI 00820

Testimony
before the Virgin Islands Public Services Commission
Barbel Plaza, St. Thomas, USVI
October 6, 2009
Paul Chakroff
Member, VICS Board of Directors

Thank you for the opportunity to testify before the Public Services Commission (PSC) on the VI Water and Power Authority (WAPA) request for PSC approval of Power Purchase Agreements (PPAs) signed with Alpine Energy Group through its subsidiaries AEG Anguilla Power LLC and AEG Bovoni Power, LLC. The Virgin Islands Conservation Society (VICS) endorses and includes by attachment herein the testimony of our Chapter Organization, St. Croix Environmental Association (SEA). In addition to points raised by SEA, VICS offers the following testimony.

1. The PSC's authority requires that it **protect the interests of** both utilities and **ratepayers** and that one of the main objectives of the PSC is to **ensure public safety** (Ref. PSC website homepage, <http://www.psc.gov.vi/>). There are serious questions pertaining to public safety, health and welfare (as well as direct and indirect costs to be borne by ratepayers and taxpayers) with regard to the proposed petroleum coke / pelletized refuse-derived fuel (PRDF) facilities on St. Croix and St. Thomas.
2. Power generation from the combustion of petroleum coke and PRDF is a very complex issue, from the standpoint of economic forecasting, public benefit and cost, public health risk, and environmental costs. On the basis of 3-minute statements (extended to 5 minutes at the St. Croix PSC hearing) from members of the public, the PSC is not in a position to make an informed decision with regard to approval of the WAPA/AEG PPAs.
3. Information was presented at the St. Croix PSC hearing and in personal communications with AEG representatives after the St. Croix hearing that is not included in documents provided heretofore for public review. Without careful consideration of this new information, the public and the PSC are not in a position to make a decision about the advisability of going forward with the project as currently conceived.
4. Testimony was offered at the St. Croix PSC hearing that solar and wind cannot provide baseload energy needs and that batteries are prohibitively expensive. We would like to see the economic comparisons. Solar, wind and batteries become comparatively affordable when we are looking at a \$440 million dollar project in a community that pays 34 cents per kWh for electricity. Energy Storage and Power, LLC in McIntosh, GA, has been running a power plant using compressed air energy storage since 1991. Bonaire is installing 2.5 MW batteries to level energy fluctuations from wind generated power. The US Navy is contracting for a 10MW Ocean thermal Energy Conversion (OTEC) facility on Diageo Garcia. I do not accept on face value that *green*

alternatives are not economically viable in the USVI today (and especially when projected over the next 20 or more years of the WAPA/AEG PPA).

5. Larry Pollack spoke at the St. Croix PSC hearing about risk being relatively low to the ratepayer. What about risks to public health and the environment? These appear not to have been modeled, thus not considered in the decision-making process. Also, Mr. Pollack emphasized that the WAPA/AEG PPA shifted most of the risks to other parties. However, under the PPA, WAPA is still subject to the risk of petroleum coke price fluctuations, and taxpayers are subject to the risk of high tipping fees for the PRDF portion of the project. Thus all of the fuel price risk is still on WAPA ratepayer and VI taxpayer shoulders. With WAPA's guarantee to purchase a minimum amount of power to guarantee debt coverage, it is not clear what (if any) risks have been shifted. The PSC should challenge WAPA and AEG on this point.
6. What is the projected tipping fee for the municipal solid waste? This fee will affect the net savings to the WAPA ratepayer/taxpayer. While there may be savings to the WAPA ratepayer, they will come at the expense of higher VIWMA costs to be financed by the taxpayer. It's all the same pocket: one cannot assess the net benefit to ratepayers and taxpayers without taking the tipping fee into consideration.
7. Usually, rate regulation attempts to provide balance between impacts on ratepayers while providing the utility with a reasonable – but not excessive – return on investment. There has been no discussion to date of the return on investment that this PPA will provide AEG and its equity partners. If it is above the 6% to 8% in the PSC law, then WAPA should be sent back to the bargaining table by the PSC.
8. It is well and good for Executive Director Hodge to claim carbon credits for reduced methane generation at the Anguilla and Bovoni landfills. Methane is a greenhouse gas with 72 times more global warming potential than CO₂ over the 20 year life of the WAPA/AEG PPA. The problem is that Executive Director Hodge failed to mention that the combustion of petroleum coke generates 40% more CO₂ than combustion of fuel oil, and that Nitrous Oxide (part of the NO_x emissions) is a greenhouse gas with 289 times more global warming potential than CO₂ over the 20-year WAPA/AEG PPA. The public and the PSC are only hearing part of the story from the applicant and their consultants.
9. AEG currently does not have a viable location for their facility on St. Croix. The Preliminary Site Layout for the AEG facility (Ref. R.W. Beck, Aug 3, 2009, Technical Review, Proposed Bovoni and Anguilla Alternative Energy Power Generation Projects, p. 31) includes property along the Martin Marietta Channel that belongs to the VI Port Authority. The channel, submerged lands of the channel and the dock belong to the St. Croix Renaissance Group. Therefore AEG currently has no way of receiving or shipping materials from their property.
10. The public and the PSC have yet to hear from the VI Waste Management Authority (VIWMA) or the Bouldin Corporation about the viability of their *WasteAway* solid waste processing technology. The *WasteAway* process is undemonstrated at anywhere close to the scale proposed for St. Croix and St. Thomas.
11. Our research has identified no facility in the country burning petroleum coke in combination with PRDF. We request AEG and the Energy Products of Idaho (EPI) to address the challenges of cofiring with these two fuels.

12. Atty. Kevin Rames testified at the St. Croix PSC hearing that “solar and wind alternatives did not make the [RFP] cut” when compared to the AEG petroleum coke/ PRDF alternative. If a) economic assumptions introduce a bias in favor of petroleum coke and/or b) external costs are not considered in the modeling exercise, it is easy to generate a decision that favors a predetermined outcome. We wish to know how petroleum coke prices and external costs were addressed in R. W. Beck’s *ProMod*™ model.
13. I was assured in personal communication after the St. Croix PSC hearing that USEPA will require prevention of significant deterioration (PSD) permits for both St. Croix and St. Thomas facilities. We question whether a PSD permit will be granted to AEG, given the proximity of the Anguilla facility to other major sources. We call upon the PSC to withhold approval until the facilities have been found to be permissible under USEPA PSD permits as major sources.
14. Petroleum coke prices are more volatile than oil – reference and attach figure from a PowerPoint presentation at the July 10 & 11, 2008, Petcoke Conference in Houston, TX, showing that petroleum coke price per MMBtu rose on the Mediterranean Market by 18 fold between 1998 and 2008 compared to a 6-fold increase in fuel oil prices during the same period. In personal communications with the PowerPoint presenter, I was assured that St. Croix petroleum coke is part of the Mediterranean Market and this graph is a fair reflection of relative market influences in HOVENSA petroleum coke.
15. The public and PSC have not heard any discussion of Nickel toxicity/carcinogenicity, Polycyclic Aromatic Hydrocarbon (PAH) toxicity/carcinogenicity, Vanadium toxicity or other public health hazards posed by the handling or disposal of fly ash. What will be done with the fly ash, and at whose expense?
16. While we applaud the prospect, what is the real story with the sidelining of Richmond #10 and #11 boilers? Richmond Units #10 and #11 have a combined rated capacity of 29.1 MW. Obviously they cannot both be sidelined by 16 MW of new energy generation from petroleum coke / PRDF combustion. However, we understand that they could be converted to burn propane or syngas for as little as \$50,000 per unit.
17. What is the proposed status for boiler units #11 and #13 at St. Thomas’ Randolph E. Harley Power Plant? The two boilers have a combined rated capacity of 55.4 MW. Converting the antiquated boilers at the Richmond and Randolph E. Harley power stations to burn syngas, propane and natural gas would provide 84.5 MW of baseload energy for a fraction of the \$440 million to be capital construction costs committed to the AEG petroleum coke/PRDF project. We wish to see the comparative analyses of these (cleaner than fuel oil or petroleum coke) energy generation alternatives.
18. At this point in time, neither the public nor the PSC knows the projected bottom line cost to WAPA ratepayers or VI taxpayers, nor do we know projected air emissions levels for either Anguilla or Bovoni facility, since they have been declared to be proprietary by the EPI (Ref. Beck, Aug. 3, 2009, pp. 21& 33).

In summary: There is no need for the PSC to rush to judgment on the request for an approval of the WAPA/AEG PPA. In order for the PSC to “**ensure public safety**” of the citizens of the Virgin Islands, the Commission needs to take the application under further consideration before rendering a decision.