From: Hamayasu, Toru
To: Bonnet, Bill
CC: Waller, Dave; Scheibe, Mark; Spurgeon, Lawrence
Sent: 8/22/2006 12:24:41 PM
Subject: RE: Draft Energy Technical Report

Thank you, Bill. I will forward your comments to PB. I think their system consultant can respond to them. Annual consumption of 200,000 MWH +/- 20% and peak demand of 60 MW in the year 2030 were mentioned in the e-mail summary attached. I will reconfirm those figures.

Toru

From: Bonnet, Bill [mailto:bill.bonnet@heco.com]
Sent: Tuesday, August 22, 2006 12:11 PM
To: Hamayasu, Toru
Cc: Waller, Dave
Subject: RE: Draft Energy Technical Report

Toru, Dave Waller (HECO VP Customer Solutions) and I read this report last evening. It's orientation is, appropriately, toward transportation sector energy consumption among alternatives. HECO has no unique expertise in that area and would not presume to comment on the validity of your consultant's analysis and conclusions.

However, this report provides essentially no insight into the single assumption that is made in the footnote on page 5-3 regarding consumption of electrical energy by the Fixed Guideway Alternative. We cannot draw any conclusions about the impact of this alternative on our grid based on that limited information.

In order to do work which would be useful to you, we need to know:

1. Your estimate of annual electricity consumption and peak demand.
2. Voltage levels required for service.
3. An explanation of how this rail transit system would work
   a. Type and number of transit vehicles
   b. Where the system would draw power from the grid
   c. How operations would vary electrically over time
4. Your assumptions about ancillary electricity use
   a. What you assume for electric load at transit stations, and where they are located
   b. Please isolate your assumptions about system losses...we can do that

We're pleased to work with you on this matter, but need more information than the consultant report provided.

From: Hamayasu, Toru [mailto:thamayasu@honolulu.gov]
Sent: Monday, August 21, 2006 10:00 AM
To: Bonnet, Bill
Subject: FW: Draft Energy Technical Report

Bill,

Thank you for agreeing to discuss the rail energy consumption and its impacts to HECO. Attached is the draft energy report from PB. E-mail below summarizes the highlights. I look forward to your call to set up a meeting to discuss this issue. My office number is 527-6978.

Toru

I have attached the DRAFT Energy Report. Most of the report is dedicated to gasoline consumption, but fixed guideway electricity use is calculated in Table 5-2.

In summary, by 2030, the fixed guideway alternative would have a daily electricity demand of between 1,800 and 2,300 Million BTUs (550 to 670 Mega Watt Hours) per day depending on alignment selected. Peak load would be on the order of 60 MW. Annual energy consumption about 200,000 MWH +/- 20%.

In the year of opening (2012) our energy demand would probably be about 1/3 of the 2030 projection, or about 200 MWH per day, with a peak demand around 20 or 30 MW.

As more of the system comes online (say 2015) this would increase to probably 400 MWH per day, with the full demand coming online around 2020 or so.

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