
From: Spurgeon, Lawrence
To: Karl Kim
CC: Hogan, Steven; Dunn, James
Sent: 10/7/2008 11:09:05 AM
Subject: RE: additional information

Annualization factor is less than 365 days - We are using 308. This accounts for lighter weekend service.

I get 105 GWH/year. Not sure the "right" price of electricity to use, HECO's large demand rate on their website is 11.0668 cents/kWH. This sticks my estimate at \$13M/year, without re-checking any of my calculations.

-----Original Message-----

From: Karl Kim [mailto:karlk@hawaii.edu]
Sent: Tuesday, October 07, 2008 10:52 AM
To: Spurgeon, Lawrence
Subject: RE: additional information

So as an estimate of the annual energy costs:

340 MWH x 365 = 124 GWH/ year
at .25c per KWH = \$31M/ year?

Am I doing something wrong here?

Thanks, Karl

+-----+
+-----+

Karl Kim, Ph.D.
Professor
Department of Urban and Regional Planning University of Hawaii at Manoa
2424 Maile Way, #107
Honolulu, Hawaii, 96822 U.S.A.
Tel: 808-956-7381
FAX: 808-956-6870
E-mail: karlk@hawaii.edu
Website: <http://www.durp.hawaii.edu>

On Mon, 6 Oct 2008, Spurgeon, Lawrence wrote:

> Dr. Kim,
> At the most simple level, 19 mile route with 976 daily rail-vehicle
> trips, and 63,000 BTU/rail-vehicle mile (ORNL Transportation Energy
> Data Book, I used 26th Edition average numbers). Multiply that out
> and account for rounding we have 1,160 Million BTUs/day.
>
> These are our planning level calculations that are being taken into
> our EIS work. I understand that the systems design folks have a more
> detailed calculation that includes further vehicle, system operation,
> and passenger load detail that is within 10% of the planning value.
>
> Let me know if you need more information
>
> -----Original Message-----
> From: Scheibe, Mark
> Sent: Monday, October 06, 2008 3:04 PM
> To: Spurgeon, Lawrence
> Cc: Dunn, James
> Subject: Fw: additional information
>
> Can you or Jim deal directly with him. He's still looking at AA-level
> info.
>

> Thanks
>
>
> Mark H. Scheibe
> Parsons Brinckerhoff
> Sent from my BlackBerry Wireless Handheld
>
> ----- Original Message -----
> From: Karl Kim <karlk@hawaii.edu>
> To: Scheibe, Mark
> Cc: thamayasu@honolulu.gov <thamayasu@honolulu.gov>
> Sent: Mon Oct 06 20:43:27 2008
> Subject: RE: additional information
>
>
> Can you show me how this was calculated?
>
> +-----+
> Karl Kim, Ph.D.
> Professor
> Department of Urban and Regional Planning University of Hawaii at
> Manoa
> 2424 Maile Way, #107
> Honolulu, Hawaii, 96822 U.S.A.
> Tel: 808-956-7381
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> Website: <http://www.durp.hawaii.edu>
>
> On Mon, 6 Oct 2008, Scheibe, Mark wrote:
>
> >
> > Karl,
> >
> > Here is information on energy consumption. Will get back to you on
> > other questions.
> >
> >
> > 340 MWH/day or 1,160 Million BTUs/day.
> >
> > This is calculated from 63,000 BTU/rail-vehicle mile
> >
> >
> > Mark
> >
> >
> > -----Original Message-----
> > From: Hamayasu, Toru [mailto:thamayasu@honolulu.gov]
> > Sent: Monday, October 06, 2008 9:07 AM
> > To: Scheibe, Mark
> > Subject: Fw: additional information
> >
> >
> > -----Original Message-----
> > From: Karl Kim <karlk@hawaii.edu>
> > To: Hamayasu, Toru <thamayasu@honolulu.gov>
> > Sent: Mon Oct 06 07:51:08 2008
> > Subject: additional information
> >
> >
> > Toru,
> >
> > It would be really helpful if I could get more detailed information
> > on
>
> > the O/M costs for Sacramento. Is it possible to get a copy of the

> > O/M spreadsheet (both that which was used for FY03-04 and the 2007 data)?
> > I'm struggling over how to justify the reasonableness of our O/M
> > estimates.
> >
> > I also need some help on the utility costs. In the technology
> > selection papers you sent me, there are estimates of energy
> > requirements - not believable - submitted by Panos - one substation
> > per mile - 3 MW - requiring 30 substations for 90 MW! Requiring 7 -
> > 20
>
> > millions gallons of fuel per year. Can you get for me more
> > realistic
> > energy requirements.
> > How many kilowatts per hour? Per vehicle? To operate the system?
> >
> > Can you get for me the fixed guideway costs for Soundtransit's
> > Seattle
>
> > to SeaTac Airport - arranged in similar way to the spreadsheet you
> > did
>
> > for Horner?
> >
> > This would help me to validate the operating and capital costs.
> >
> > Thanks, Karl
> >
> > +-----+
> > Karl Kim, Ph.D.
> > Professor
> > Department of Urban and Regional Planning University of Hawaii at
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