

Subj:

FW: DG Emissions Discussion Draft -- delete if not interested

Date:

11/7/2001 11:19:12 AM Pacific Standard Time

From:

chaun@hpower.com

To:

rapweston@aol.com

CC:

PMcNeill@hpower.com, mwheeler@hpower.com

Sent from the Internet ([Details](#))

Rick:

I work for H Power, a proton exchange membrane fuel cell company developing small fuel cells, < 10 kws and had the following comments. I used to work at Brooklyn Union Gas (Keyspan) and met Joel Bluestein (Energy and Environmental Analysis) while I was there. Keep up the good work!

Page 6 / 7 Definitions

Base Load Generator and Peak Load Generator

Used cutoff of {700 hours}

Was that based on a review of the North America Electric Reliability Council Data, their Generation Availability Report, or GADS data?

While I see that brackets mean that's open for discussion, what's the basis of the original 700 number.

Page 7

Section III - Applicability

B) Exemptions

1) Generators that are less that 37 kws in capacity and operate fewer that 100 hours / year

Why 37 kws? Why not 42 / 32 kw or some other number? Is it driven by a certain technology like the 30 kw Capstone microturbine or a certain market like small commercial users?

On Page 13 Paragraph 3 of the comments "By virtue of their very small potential for significant impacts, certain resources are exempted form meeting the rules emissions standards" There's no discussion as to why 37 kws is that magical cut-off.

So any power source < 37 kws is not subject to the emissions criteria, namely Sections IV, V, VI would not apply? Why would you VII + VIII even be applicable, seems like you're asking for data collection to determine whether that cutoff number should be revised based on the number of hours units are being used.

Page 7

Section IV - Emmission

A) Emergency Generators. Generators may run up to a mx of 26 hours / yr... [up to a max of 300 hours / yr]

300 hours is almost 1 hour / day. Is that really an emergency or an onsite peaking facility, since it's used about 1 hour / day? 300 hours translates to the grid being only 96.6% reliable. $(1 - 300 / 8760)$ Number of hours /year)

Why not use the 99% figure of 87.6 hours or about 3 days 16 hours or even 100 hours if you want a nice round number. The power industry talks about reliable power using the 9s jargon, the Needy Nines as I like to call it. 99.99% reliable is off power for just 53 minutes and 6 9s in just 32 seconds!!! Who can do that w/o these backup systems I'd like to find out.

Page 12

VII Fuel Requirements

B) Monitoring

What's the purpose of the monitoring device? To collect data to see if the 37 kw cutoff should be changed as I indicated above? The H Power fuel cell (fuel cell of 4.5 kw and batteries providing off grid power of up to 10 kw) will use propane or natural gas. Seems like another meter, a sub meter would be required for a natural gas house. I'm not sure the gas companies would like that. For propane users a homeowner's tank might be supplying the customer's cooking as well as fuel cell needs. How are you going to set-up the logistics in installing that extra meter.

I hope these thoughts help. I also noticed you did not have any data for PEM fuel cells.

Chris Haun
973.249.5444 x523
chaun@hpower.com

H Power Corp.
1373 Broad St
Clifton, NJ 07013
<http://www.hpower.com>