From: Greg Blair [mailto:grgblair@gmail.com]
Sent: Tuesday, April 26, 2011 6:36 AM
To: Griswold, Bruce {Mkt Function}
Cc: Greg Blair (greg_blair@nationalpublicenergy.com); John Bremerman(JohnB@biomassone.com)
Subject: Re: Question on Biomass One submittal

Bruce:

Use 93% of the max numbers for a reasonable target for steady state monthly generation.

On the subject of turndown, we have the physical capability to ramp down from 30 to 22MW with about one hour if lead notice and one hour of ramp up back to 30MW. The next step down below 22MW would be to 14MW down to 10MW (involving the total shutdown of one boiler and one turbine). This can be accomplished within a two hour period but also involves five hours of additional shutdown work and would involve five to six hours of restart before synchronizing the restarted turbine back to the grid.

In all instances, cycling involves thermal losses which haven't been calculated. Obviously, the losses are most significant in the turndown below 14MW since we lose more than ten hours of boiler heat and incur five hours of increased parasitic load.

Needless to say, we will need to discuss completely the pros and cons of turndowns and dispatchability.

Greg

Sent from my iPhone

On Apr 25, 2011, at 6:47 PM, "Griswold, Bruce {Mkt Function}" <Bruce.Griswold@PacifiCorp.com> wrote:

Thanks Greg. I understand the max versus actuals versus average. It would be good to get an expected monthly average output based on your estimate of forced outages. Granted, if we reach some agreement on dispatch, it would be different but we will need the average expected monthly output assuming no dispatch.

Bruce Griswold
PacifiCorp C&T
503-813-5218 Office
503-702-1445 Cell
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From: Greg Blair [mailto:grgblair@gmail.com]
Sent: Monday, April 25, 2011 2:18 PM
To: Griswold, Bruce {Mkt Function}
Cc: Greg Blair (greg_blair@nationalpublicenergy.com); John Bremerman(JohnB@biomassone.com)
Subject: Re: Question on Biomass One submittal

Bruce:

You are correct that the daily max of 720 should be multiplied by actual month days to get monthly max generation. I must stress however that these amounts are generation ceilings and actual monthly gen could be lower as influenced by normal course of operation availability. I've asked John Bremerman to weigh in on the turndown gradation question.

Greg

Sent from my iPhone

On Apr 25, 2011, at 3:57 PM, "Griswold, Bruce {Mkt Function}" <Bruce.Griswold@PacifiCorp.com> wrote:

Greg

Our folks have completed their pricing but we need to confirm the item C. In that section, you state the plant will generate up to 720 MWh per day up to 21,600 MWh per month. We are assuming that the 21,600 is not a monthly limit but a 30 day month limit. Here is our proposed generation forecast. Please confirm.

We are also assuming that your ability to be dispatched is somewhat binary - 100% or 50%. If you are able to have partial load, can you provide the allowable step change, ie – 30 MW Max can be ramped down in ___MW steps to 15MW. Thanks.

Month	Output assuming 720 per day	Maintenance

Jan	22,320	
Feb	20,160	
Mar	22,320	
Apr	21,600	
May	16,560	8 days
Jun	21,600	
Jul	22,320	
Aug	22,320	
Sep	21,600	
Oct	17,280	7 days
Nov	21,600	
Dec	22,320	
TOTAL	252,000	

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