

From: Dietrich, William
Sent: 8/6/2012 1:20:45 PM
To: Jacobson, Erik B (RegRel) (/O=PG&E/OU=Corporate/cn=Recipients/cn=EBJ1)
Cc:
Bcc:
Subject: RE: amended - Mvar and MW per unit: capital cost of recently-approved conventional generation

Erik,
Thanks!
I'll return your return of my call this afternoon or tomorrow.
Best,
Bill

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

From: Jacobson, Erik B (RegRel) [<mailto:EBJ1@pge.com>]
Sent: Monday, August 06, 2012 9:05 AM
To: Dietrich, William
Subject: RE: amended - Mvar and MW per unit: capital cost of recently-approved conventional generation

Bill,

Attached is the amended information you requested in Excel and Word format.

Sorry for the delay in getting it to you.

Best regards,

Erik

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

From: Dietrich, William [<mailto:william.dietrich@cpuc.ca.gov>]
Sent: Tuesday, July 24, 2012 10:47 AM
To: Jacobson, Erik B (RegRel)
Subject: amended - Mvar and MW per unit: capital cost of recently-approved conventional generation

Erik,
Thanks!
I'd like to amend the request. If PG&E would like to put the table in native Excel format and send that along with text in Word format, that would be fine.

Best regards,
Bill

From: Jacobson, Erik B (RegRel) [EBJ1@pge.com]
Sent: Tuesday, July 24, 2012 10:30 AM
To: Dietrich, William
Subject: RE: Mvar and MW per unit: capital cost of recently-approved conventional generation

I will follow-up. The person with the MVAR data is currently out of the office. I will call him when he returns on Thursday.

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

From: Dietrich, William [mailto:william.dietrich@cpuc.ca.gov]
Sent: Tuesday, July 24, 2012 9:45 AM
To: Jacobson, Erik B (RegRel)
Subject: Mvar and MW per unit: capital cost of recently-approved conventional generation

Erik,

Thanks again for the data response.

Further data requests to PG&E:

1) To make the Mvar responses understandable, please provide the sizes of each unit (in MW) corresponding to the Mvars. The tiny table provides only the overall MW of the entire plant. For example, the response provides Mvars by turbine at Gateway. How many gas turbines are at Gateway, and what are their sizes?

What is the total Qmin and total Qmax for each plant?

PG&E could use the attached table template, for example. If PG&E would like to add the construction cost (and year of the nominal dollars) to this template, so there would be one table providing all the information, that would be fine.

2) Please provide an estimate of the Mvars to be provided by Oakley. Based on another data response from another company, it appears this can be estimated.

3) Please provide the entire data response in one Microsoft Word document (including the email from earlier this morning). (This is to avoid the png table, and make it easier to use the response.)

4) Please include a statement (as you communicated verbally) that PG&E does not have the construction costs for the other power plants mentioned in the original request (by name).

Thanks very much.

Best regards,
Bill

William Dietrich
Generation and Transmission Planning Section CPUC Energy Division

From: Jacobson, Erik B (RegRel) [EBJ1@pge.com]
Sent: Tuesday, July 24, 2012 1:06 AM
To: Dietrich, William
Subject: RE: capital cost of recently-approved conventional generation

Bill

I'm sorry it has taken me so long to get back to you. It proved harder than I expected to wrap this up because of my vacation schedule.

The table below contains the capital cost information you requested for the Oakley, Gateway and Colusa power plants. As you can see, there is a wide variation in cost numbers that makes straight comparison problematic. There are numerous reasons for these differences. While it is impossible to reconcile or adjust for all the differences, some of the more important factors include:

- * The capital cost of Gateway is substantially below market because it was acquired as part of a settlement of litigation with Mirant
- * Each project has a different risk profile and was developed at a different time
- * The capital cost figures are in different year dollars ---- the year for each project's commercial operation date is noted in the table
- * While all the projects are combined cycles, they have different technical specifications and capabilities. For example, the Oakley Project has a lower heat rate and emissions rate. It also incorporates GE's Rapid Response technology that improves the unit's operational flexibility compared to conventional combined-cycle plants.

[cid:image002.png@01CD6938.8CDE8210]

Comparisons of MVAR statistics are also problematic because they are dependent on the requirement of the grid, not the plant. MVAR statistics are different from one area to another, irrespective of the type of plant. The statistics below for Gateway and Colusa are based on their unique circumstances. We don't have any statistical MVAR numbers for Oakley because it is not yet in operation.

1. Gateway: The statistical min/max MVAR for the gas turbines (CT) is -28/0, and for the steam turbine (ST) is -35/0. Minus mean import power (MVA), and positive means export power (MVA). Very rarely, Gateway saw a positive MVAR around 10.

2. Colusa: The statistical min/max MVAR for the CT1 is -23/37, for CT2 is -7/39 and for the ST is -32/67.

I hope this helps, despite the difficulty of comparing the data. Let me know if you have questions or need additional information.

Best regards,

Erik

From: Dietrich, William [mailto:william.dietrich@cpuc.ca.gov]<mailto:[mailto:william.dietrich@cpuc.ca.gov]>
Sent: Monday, July 09, 2012 1:59 PM
To: Jacobson, Erik B (RegRel)
Subject: capital cost of recently-approved conventional generation

To Erik Jacobson, PG&E Regulatory Relations

Hi Erik,

As we discussed, I'm looking for the capital cost of recently-approved conventional generation projects, excluding peakers. I assume these will all be gas-fired. I'm looking for a lump sum capital cost and the year dollars that number is in (e.g., \$600 million in 2010 dollars). The corresponding megawatts nameplate capacity is necessary. If PG&E knows the reactive power absorption and supply capability, that would be helpful. I'm most interested in projects for which the CPUC has already approved the PPA or other application.

Most of the procurement data (PRG) is understandably in \$/kW-year, but that is not a useful unit for my purpose. I realize this information will likely be confidential under Section 583.

Below is an initial list of plants likely involving PG&E (either as owner or buyer). An answer for some, but not all, is preferable, because sooner would be better than later. If PG&E has other plants to suggest, that's great. About five or six data points would be enough.

In sum, please let me know the nominal capital cost (specify year of the dollars) and megawatt nameplate capacity. If you have the reactive power capability (Qmin / Qmax) in Mvars, that would be helpful.

CANDIDATES within the last four years or so:

Marsh Landing

Oakley (as originally proposed? as currently proposed in new application?) Russell City (A08-09-007) Gateway

Colusa(?)

Are there other projects developed by Calpine, where the PPA is with PG&E, or it will be UOG?

Thanks very much!

Best regards,
Bill

William Dietrich
Senior Analyst
Generation and Transmission Planning Section Infrastructure Planning & Permitting Branch Energy Division
California Public Utilities Commission

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