Clean Coalition (formerly FIT Coalition) comments on PG&E GIP draft tariff

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I. Introduction

The Clean Coalition appreciates this chance to provide comments on PG&E's proposed WDAT/GIP tariff revision ("draft tariff"). We also appreciate some of the changes that have occurred already during this stakeholder process. That said, we believe significant additional changes are required before PG&E's proposed tariff will pass muster with FERC. We provide detailed comments in this document but we have also redlined the draft tariff and included various comments in that document. In summary, we request that PG&E:

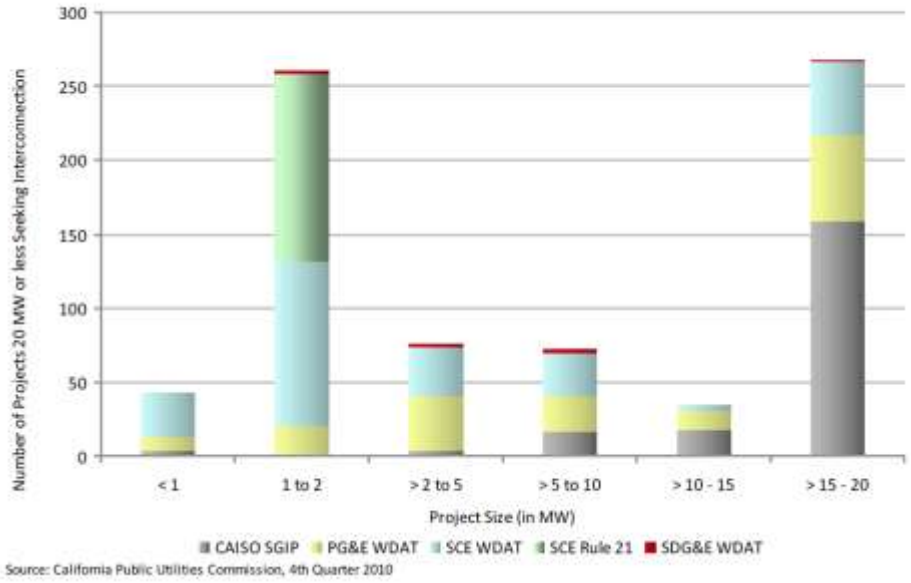
- Provide substantially more data about their interconnection procedures than has been provided to date
- Add flow charts for the entire interconnection process and for each major component, including Fast Track and the Independent Study Process (ISP)
- Change the tariff title to "Distribution Grid GIP"
- Change all days to "Calendar" days as the default, for simplicity
- Change the MW caps for Fast Track from mandatory to advisory because the Fast Track screens already serve the purpose of capping the capacity of each project
- Examine the feasibility of IREC's suggested approach of using minimum circuit loads for Fast Track's screen 2, where data is available, and examine the costs of adding SCADA to all circuits

- Modify section 2.2.10 so that it may be passed if only interconnection facilities are required, because almost all projects will require new interconnection facilities
- Include timelines for ISP study phases in the GIP tariff itself (instead of other documents), so that all relevant timelines are contained in the tariff
- Clarify section 4.8.1's suggestion that all distribution grid interconnection requests will "generally" be studied in one cluster due to electrical relatedness, because if this is the case how will any projects qualify for ISP or Fast Track as electrically independent?
- Add objective criteria in each reference in the draft tariff to "engineering judgment," in order to add transparency and predictability to what would otherwise be opaque aspects of the interconnection process
- Improve grid transparency to provide more information to developers outside of the cluster study process (this change appears to be in process as PG&E improves its online mapping tools)
- Improve queue transparency to provide more data and deadline tracking, ensuring that the process is transparent and deadlines are being met
- Improve pre-application exchange of information through a for-fee feasibility study
- Last but definitely not least: Agree to an independent process audit to review in detail PG&E's interconnection study procedures, staffing and software – this is key to reducing the time required for the way-too-long cluster study process.

We agree that there is a need to improve PG&E's current interconnection process to handle the backlogged WDAT/SGIP/Rule 21 queue and we recognize and appreciate a number of improvements between PG&E's WDAT reform principles, discussed at a workshop on December 13, 2010, and the draft tariff released in January by PG&E. We note, however, that by far the largest backlog appears to be in the SCE queue, based on

information contained in the CPUC's most recently quarterly RPS report (see figure).[1] PG&E's own data, presented at the December 7, 2010, workshop, suggested that there are 127 active interconnection requests and 41 withdrawn projects in its queue. And it appears, when combining the CPUC report with PG&E's data that practically all requests filed since 2008 are still active, highlighting the problem with current procedures.

Figure 5. Allocation of Projects 20 MW and Less Seeking Interconnection (2008-2010)[11]



Regardless of how severely backlogged PG&E's queue is, we feel that PG&E and the other Investor-Owned Utilities (IOUs) continue to assume that the development cycle for 20 megawatt and under energy projects follows a similar development cycle as that for larger projects, in which interconnection costs are simply accepted as a significant part of project costs and the project itself is driven by concerns about location, not transmission. For smaller projects, this is, in actuality, reversed: interconnection costs are often a major issue and interconnection analysis must be conducted at the beginning of the development cycle, not the end, to address economic viability early on. If

[1] http://www.cpuc.ca.gov/NR/rdonlyres/CFD76016-3E28-44B0-8427-3FAB1AA27FF4/0/RPSQuarterlyReporttotheLegislatureQ4_2010.pdf.

interconnection costs are significant, the project will generally not be viable, so this must be known as early in the process as possible.

Unfortunately, the draft PG&E tariff envisions a cluster study process that could take up to 840 days, assuming suggested time lines are met (which may not happen, leading to even further delay), as follows:

- November 15: close of first cluster window
- March 31: close of second cluster window (which will be the first window in 2011 only)
- June 1: Phase I study commences, to be completed within 134 days. Study results meeting to be held within 30 days of study conclusion.
- January 15: Phase II study commences, to be completed within 196 days. Study results meeting to be held within 30 days of study conclusion.
- Total study time: about 450 days
- BUT: the total interconnection study process time, as an AVERAGE will be 180 days (from 0 to 365 days, for an average of about 180 days) waiting for Phase I to begin, depending on the time of year the application is submitted, plus 420 days study plus 30 days waiting for a meeting to discuss results. Total AVERAGE time: 630 days.
- IN ADDITION: if the second cluster window is missed, the applicant must enter the next first cluster window and wait until June 1 of the following year for Phase I to begin. So if a party is ready to go on April 1 (the worst case scenario), it must wait until Oct. 15 to submit its application in the first cluster window and then until June 1 of the next year for Phase I to start, January 15 of the next year for Phase II to start, and then 226 days for the meeting to discuss Phase II results. Total WORST CASE duration is 28 months or about 840 days!
- And this doesn't even include time negotiating the Generator Interconnection Agreement or the time required to construct any necessary upgrades.

An average timeline of nearly two years just to get to the point of negotiating an interconnection agreement is far too long for small or new developers to hang on to projects without knowing if the chosen site is economically viable because options must be paid to landowners, at the least, and the biological study and permitting process is

unlikely to start in earnest until the full costs of interconnection are learned in the cluster study process due to the possibility that such activities would be mooted if the project could not be interconnected at a reasonable cost.

II. Solutions

We suggest a number of solutions, both immediate and mid-term, below.

A. Flow Charts

We request that PG&E include flow charts, with timelines and explanations of abbreviations, akin to, but expanded from, the charts included as an Appendix to the Jan. 25, 2011, PG&E presentation, for the following: 1) An overview of the entire interconnection study procedure, encompassing the cluster study process, ISP and Fast Track; 2) the cluster study process; 3) ISP; 4) Fast Track. Flow charts will make understanding PG&E's procedures far easier and save both developers and PG&E a lot of time. The Appendix contains just timelines and we urge PG&E to expand these basic timelines to flow charts with relevant data summarized in each chart.

B. Tariff Title

The Clean Coalition also requests that PG&E entitle the GIP tariff the "Distribution Grid GIP," in order to distinguish it from the CAISO GIP.

C. Data Transparency and Process Improvements

While we acknowledge that the current serial process is flawed, very little "behind the scenes" data has been provided to help understand where the problems lie, how those

problems can be addressed and what areas exist for future improvement, despite our numerous requests for more data. For example, would software and modeling improvements fix much of the delay? How about additional staff? (We note that a PG&E representative stated on PG&E's January, 2011, conference call: "We have a backlog that we're addressing with additional staff." As such, it is clear, as the Clean Coalition has been suggesting for many months now, that additional staff will indeed improve at least part of the backlog issue). Could improved software, with more staff and a cluster process dramatically improve the proposed reforms and allow studies to be completed in far less than 420 days? At this point, we can't say because we have so little information.

Here is a list of the kinds of information we feel should be available to all stakeholders before major changes are made to WDAT:

- Number of WDAT applications in the PG&E queue, with dates of entry
- Number successfully processed, time for processing and costs of studies
- Number of Rule 21 applications in the PG&E queue, with dates of entry
- Number successfully processed, time for processing, and costs of studies
- Number of Fast Track applications in the PG&E queue, with dates of entry
- Number successfully processed in Fast Track, time for processing and costs of studies. Information on rejected Fast Track applications, including specific screen that was failed (if relevant).
- Number of PG&E staff working on interconnection issues, staff added in the last two years, planned staff additions over the next two years
- Actual cost to PG&E of feasibility studies, system impact studies and facilities studies for all interconnection queues, with methodology for determining actual costs
- Cost of required upgrades for each project or cluster (PacifiCorp, for example, posts all of this information online as soon as it is completed)

If this information becomes publicly available, it would be possible to have a robust stakeholder process whereby participants could analyze data and suggest far more informed solutions. Given that other, similar information requests from the Clean Coalition have been gone unanswered in both this and the ISO process, we can only assume that this request too will also go unanswered. However, at a minimum, we ask PG&E, and the ISO and other IOUs, to conduct a thorough outside review of its interconnection procedures in order to identify areas for improvement.

Additionally, we believe that PG&E and the other IOUs should retain an Independent Evaluator similar to that used in SCE's SPVP program. We believe that the presence of an Independent Evaluator in the interconnection process could substantially ease the concerns of smaller developers and ensure that the WDAT process is: 1) constantly evaluated for adherence to stated procedures; 2) assessed for incremental improvements; and 3) is communicated clearly to all stakeholders.

D. Broader improvements to the current stakeholder process

As described above, PG&E's proposed cluster study has an average timeline of 630 days and is therefore substantially inferior to the current WDAT timelines. Accordingly, the proposed tariff appears to violate FERC requirements that reforms result in a WDAT that is "consistent with or superior to" existing procedures. In order to create a WDAT draft tariff that would be deemed acceptable by FERC, we believe that the following changes must be incorporated:

- Shorten the cluster study process considerably
- Improve Accelerated Options, such as Fast Track or the Independent Study Process (ISP), so they can be accessed by a substantial percentage of smaller developers

- Improve grid transparency to provide more information to developers outside of the cluster study process (this change appears to be in process as PG&E improves its online mapping tools)
- Improve queue transparency to provide more data and deadline tracking, ensuring that the process is transparent and deadlines are being met
- Improve pre-application exchange of information
- Agree to an independent process audit to review in detail PG&E's interconnection study procedures, staffing and software. It is our hope that such a process will eventually allow two full cluster studies to be completed each year, which would allow for all of the benefits of cluster studies to be realized, with none of the downsides.

It is important to note that FERC's standard of review for considering IOU tariff revisions is more stringent than that for ISOs like CAISO. FERC re-confirmed this regulatory point in its recent conditional approval of CAISO's GIP Proposal (133 FERC ¶ 61,223, Dec. 16, 2010, p. 25):

> Multiple parties raise concerns that CAISO's GIP proposal could have adverse consequences if adopted by the California IOUs in their WDATs. This order, however, narrowly addresses CAISO's proposal for interconnection procedures for its transmission system and, thus, the IOUs' WDATs are not before the Commission at this time. Therefore, any concerns with the California IOUs' WDATs are outside the scope of this proceeding. Our acceptance of the GIP proposal recognizes the special accommodations we afford independent entities under our interconnection policies, for the reasons summarized above. Any utility proposing to utilize an approach that mirrors the GIP will have to justify its consistency with Order No. 2003 and Order No. 2006 and Commission precedent under the relevant standard, and it will not enjoy an independent entity variation accommodation.

1. Fast Track improvements

As discussed above, we believe that the long timelines associated with PG&E's proposed cluster study process will only be acceptable to FERC if the cluster study process is accelerated and/or the Fast Track and the ISP (Accelerated Options) can be accessed by a substantial percentage of smaller developers. The Clean Coalition appreciates PG&E's decision to expand the Fast Track from the original proposed limit of 2 MW up to 5 MW for some lines. However, we discuss below additional refinements which we believe would further improve the Fast Track process.

a) MW caps as advisory limits

As we noted in PG&E's January, 2011, conference call, we urge PG&E to make the MW cap limits advisory and not mandatory. In other words, rather than limiting applicants to these MW caps for each type of PG&E distribution line, we request that PG&E revise the tariff language to make it clear that these MW caps are only advisory "rules of thumb." As such, they will act as guidance to applicants in setting expectations but won't act as a hard limit beyond the Fast Track screens themselves, which PG&E's engineers have noted on many occasions are the real limiting factors. As advisory limits, the MW caps will still act as a gatekeeper of sorts and limit applicants from submitting projects that clearly won't qualify for Fast Track. Moreover, many developers have interconnection consultants or their own modeling software that provides them with a reasonably accurate idea of how many megawatts can interconnect at each location without upgrades. And PG&E's proposed steps towards increased grid transparency will further increase the quality of Fast Track applications. By making the MW caps advisory only, developers will not be artificially limited and will be incentivized to build out the distribution grid in such a way that maximizes its potential for ratepayers. If developers can find locations that would permit a 5 MW solar project on a 12 kV or 21 kV line without upgrades, an artificial cap should not

limit this project from qualifying for Fast Track. If PG&E is concerned about being overwhelmed by Fast Track applications above the advised limits, it seems reasonable to consider higher deposits for such applications in order to ensure that the developers have done their homework and are not wasting IOU resources.

On the specific issue of 12 kV interconnections, PG&E has raised concerns about rural line loads and the need to maintain a 2 MW limit. However, it is our understanding that these concerns are generally only relevant to interconnections far from substations and are less relevant within one mile of a substation. We ask that PG&E address this issue and consider increasing the 12 kV limit to 3 MW for interconnections within one mile of a substation, whether or not the MW caps are mandatory or advisory.

b) Screen 2 improvements

On Screen 2, we remain unclear as to why review of this screen appears to be "off the table" in this reform process. To summarize, we and others have raised various issues around this screen, including:

- Discussion of how a screen based on minimum load may be more accurate and appropriate
- Discussion of how the screen should take into effect the positive attributes of solar generation and other peak renewable energy resources
- Questions about the origins of the 15% screen and how rigorously that standard has been studied and tested

The Clean Coalition supports IREC's suggestion to use minimum loads for Screen 2, instead of maximum loads. However, we acknowledge that PG&E does not have minimum load data for most circuits, so at this time we encourage PG&E to examine

the costs of adding SCADA to all circuits in order to collect more grid information and to permit the change that IREC suggests.

We also recommend that PG&E work with the CPUC and other utilities to analyze changes to Screen 2 more generally. As we've mentioned in previous comments, Black & Veatch's wholesale DG analysis for the CPUC used a 30% peak circuit load limit instead of 15%, after consulting with the utilities, including PG&E, as a way to estimate total resources for solar PV. The rationale is that solar PV is a peak resource so it should be accommodated at far higher percentages than the highly conservative 15% limit because maximum circuit load will often coincide with solar output. PG&E and SCE have, however, indicated no interest in modifying this screen without further study so we urge PG&E to engage in further study with alacrity.

c) Screen 10 improvements

We also appreciate PG&E's efforts to address the issue of Screen 10, which we believe has been the main factor in making the current Fast Track effectively inaccessible to new development projects in PG&E territory. Anecdotally, we understand that SCE has been using a similar "modified Fast Track" for some time now, resulting in increased numbers of projects clearing Fast Track in their territory. It seems that PG&E's approach is more complicated than required, as nearly all projects are likely to fail Screen 10 and be referred to Section 2.3.2. We encourage PG&E to modify the language of Screen 10 in order to address the specific issue of screening out projects that would require Network Upgrades on the ISO Grid or Distribution Upgrades on the Distribution System. In particular, Screen 10 should be clarified such that "interconnection facilities" will not trigger failure of Screen 10. Practically all projects will require interconnection facilities, so it makes little sense to build across-the-board failure into Screen 10 from the outset. We suggest modified language in the redlined draft tariff.

Despite the importance of Screen 2, especially assuming Screen 10 is reformed appropriately, none of these questions have been addressed in a satisfactory manner. We strongly encourage PG&E to take up this issue.

2. Independent Study Process

We agree that ISP should be an additional option for developers, but the lack of objective criteria around what projects will be able to access the ISP make the process highly uncertain. Developers should be able to refer to objective criteria rather than PG&E's "engineering judgment." More specifically, two sections are of concern to us:

- Section 3.1.1.1. What does it mean for a project to be "of sufficient MW size to be suspected of having potential impacts to the ISO grid"?
- Section 3.1.1.2 What does it mean that the Distribution Provider will use "engineering judgment to determine whether an Interconnection Request being evaluated for electrical independence on the Distribution System has to wait for the completion of studies of queued Generating Facilities to which the Interconnection Request is electrically related in order to be eligible for the ISP"?

We request that PG&E address these screens in a more objective manner in an effort to remove subjectivity from the interconnection procedures as much as is possible. The grid itself is not a subjective system. It is a physical and objective system and is modeled with software simulations. Accordingly, it seems that any judgments about electrical independence should be made using objective criteria instead of undefined and subjective engineering judgment. This concern is particularly relevant given that the IOUs are increasingly competing with Independent Power Producers for interconnections in programs like the Solar Photovoltaic Programs (SPVP), giving rise to at least the appearance of a conflict of interest that needs to be mitigated.

3. Cluster study process

We urge PG&E to clarify section 4.8.1's suggestion that all distribution grid interconnection requests will "generally" be studied in one cluster due to electrical relatedness, because if this is the case how will any projects qualify for ISP or Fast Track as electrically independent?

Section 4.6 makes reference to Business Days and Section 4.7 refers to Calendar days. There are other occurrences like this in the tariff and we request that PG&E standardize its "days" as either Calendar days or Business days throughout the document – it's confusing to have different types of days used in different places, with some "days" left unspecified as to whether they are Calendar or Business days. This standardization should be done in a manner that does not extend the existing timelines.

4. Grid transparency

We were greatly encouraged by comments from PG&E employee John Carruthers regarding interconnection data on the Jan 25, 2011, stakeholder call. Mr. Carruthers indicated that PG&E intends to provide the following information via a Google Maps format or equivalent:

- Access to specific circuit voltage, circuit capacity, circuit loading information (including peak load) and the amount of distributed generation already on that circuit
- Access to that same information by substation bank
- Ideally, information on what projects are in queue by circuit or substation

We request that PG&E release this substantially improved online distribution grid map available as soon as possible.

5. Queue Transparency

As the Clean Coalition has mentioned previously, PG&E's reform process has been data-starved, which impairs any stakeholder process and makes it difficult to accurately diagnose the problems and suggest optimal solutions. We request that PG&E proactively provide more data going forward. Additionally, we believe it is vital to understand whether or not the Accelerated Options are working appropriately and this can only be done by rigorously tracking each project and making this data public. Specifically, the online queue information should be expanded dramatically and we request inclusion of these additional items for each project: date application deemed sufficient, date of scoping meeting, date of feasibility study, date of system impact study and date of facilities study. Additionally, information should be provided on each project that fails to clear an Accelerated Option and the specific reason for that failure. This information should also be provided for all IOU-owned projects that participate in projects like the SPVP.

We note that the FERC provided similar commentary in its recent conditional approval of CAISO's GIP Proposal (133 FERC ¶ 61,223, Dec. 16, 2010, p. 31):

> In particular, CAISO should include information about the number of projects requesting interconnection through the ISP, the outcome of those requests, the complete length of time for recently completed ISP interconnection studies (from initial application through final approval), and the reason for any rejections of projects requesting ISP treatment. This information will improve the transparency of the ISP, which is in the best interest of all market participants.

We also encourage PG&E to increase the flow of information by posting the results of scoping meetings and system impact and facility studies, with information redacted where necessary. We believe this would cut down on multiple interconnection applications in areas where expensive upgrades would be required. For an example of a utility providing such information, please visit PacifiCorp's interconnection queue: http://www.oasis.pacificorp.com/oasis/ppw/lgia/pacificorplgiaq.htm. Pacificorp shares a substantial amount of more general interconnection data also, as part of its participation in FERC's OASIS program: http://www.oasis.pacificorp.com/oasis/ppw/main.htmlx.

6. Pre-application exchange of information

In PG&E's Key Reform Principles document circulated on December 13, 2010, PG&E indicated that the long timelines of the proposed cluster study process could be ameliorated by Accelerated Options and "pre-application exchange of information to assist Interconnection Customers in the applications process." We believe this exchange of information should be formalized with a "for fee" feasibility study, available anytime to developers of projects 20 MW and below. This would allow a developer to get an early read on a project and determine whether the project merits entering the proposed WDAT cluster process or a different option. The feasibility study would provide one more level of additional detail, above and beyond what is made publicly available per our previous suggestion. Information provided in the feasibility study would not be definitive, by any means, because cost projections can change dramatically from the feasibility study through the end of the facilities study process. However, having relatively easy access to feasibility studies, combined with ready access to up-to-date online interconnection data, would help developers make decisions about potential projects without wasting a lot of money and time.