

**BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA**

In the Matter of the Application of Pacific Gas and Electric Company (U 39 E) for a Certificate of Public Convenience and Necessity Authorizing the Construction of the Jefferson-Martin 230 kV Transmission Project.

Application 02-09-043  
(Filed September 30, 2002)

**WOMEN'S ENERGY MATTERS' OPENING BRIEF  
ON THE JEFFERSON-MARTIN TRANSMISSION PROJECT**

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**Introduction: Will the Jefferson-Martin line help close Hunters Point Power Plant?**

Women's Energy Matters (WEM) entered into this proceeding because we are working to close the Hunters Point Power Plants (HPPP) and to make sure that any replacement for that power will be clean, non-polluting energy efficiency or renewables, or, at a minimum that it will have zero negative impact on the Bayview Hunters Point (BVHP) and Potrero neighborhoods. These are largely low-income and minority communities in Southeast San Francisco, where the dirtiest parts of San Francisco's energy infrastructure have long been located.

WEM's clients, Mr. Jesse Mason and Ms. Dorothy Edwards, are residents of BVHP. This community suffers alarming health damage caused by the cumulative impacts of the power plants and several other major toxic facilities in the area (the sewage treatment plant for all of San Francisco and Daly City, two highways, other industrial facilities and Hunters Point Naval Shipyard, a Superfund site).

PG&E had people running all around The Hill in BVHP, handing out cards for people to mail to CPUC to endorse J-M, and ran an ad in the Bayview Newspaper claiming the project was necessary in order to close HPPP.

WEM, Jesse Mason, and other members of the Community First Coalition (CFC) of which WEM is a member, attended many meetings with the Governor's Office of Planning & Research (OPR), PG&E, California Independent System Operator ("ISO"), the City & County of San Francisco (CCSF), state agencies and community members where the J-M line was discussed, among other things. What we heard from the

proponents was confusing — the numbers didn't add up, they kept changing, and the conditions for closing HPPP seemed to grow as time went on.

**...Or Is It Just a Line? Multiple Bait and Switch...**

Around the same time, WEM and CFC were investigating an Energy Efficiency project called the San Francisco Peak Energy Project (“Pilot”) that was proposed to the CPUC by PG&E in collaboration with San Francisco’s Dept. of the Environment (SFE). Proponents claimed, much like they do for Jefferson-Martin, that the Pilot would help ensure reliability for San Francisco, so that HPPP could close down by the end of 2005. We discovered many of the Pilot’s claims turned out to be empty.

As we became more familiar with the transmission system, we became more and more concerned that the community’s need for the power plant to close might be being used once again to pull heartstrings so that the CPUC would approve a project that would greatly benefit PG&E but could actually hurt the community, which would be on the hook, along with other California ratepayers, to pay for an extraordinarily expensive boondoggle.

Worse yet, ISO studies show that far from increasing reliability, the J-M project seriously decreases it, in the short term. According to the most recent study by ISO, the line will create congestion that will reduce load serving capability by as much as minus 370 MW!<sup>1</sup> ISO believes this congestion will later be relieved when the constraints are fixed, however up until two months ago, PG&E did not plan to fix constraints in San Francisco until 2011. Its most recent expansion plan (December 2003) moves that up to 2008. **If J-M were completed as planned by the end of 2005, it would be three years or more before the constraints were fixed. In the meantime, would HPPP have to keep running?**

Meanwhile, the City jumped into the act: we’ll just site these four peaker plants in your neighborhood and presto, close-o HPPP! (But isn’t that what they all said?)

J-M hearings confirmed WEM’s worst fears.

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<sup>1</sup> See WEM Motion to Reopen Record, 3/3/04

**WILL J-M CAUSE CONSTRAINTS THAT REDUCE LOAD SERVING CAPABILITY IN THE PROJECT AREA?**

The answers that have been given to this question are contradictory and extremely confusing. Unfortunately, BVHP residents will be the ones to find out whether or not the reduction is real — and will pay a high price, if it is. WEM spent considerable time in the proceeding trying to clarify this question.

All but two cases cited in ISO’S 2003 San Francisco Peninsula Load Serving Capability Study (Exhibit 4, Tab 4) showed J-M causes a reduction in LSC of –25 to –70 MW in the Project Area (ISO 2003 study, p. 51). The two cases that show an increase are a special study-within-a-study “Replicating Jefferson-Martin’s Import Contribution” that was done to verify a study by PG&E. The special study:

“1) applied slightly different criteria than used throughout the rest of the SF LSC Study, and 2) only focused on limitations and transfer capability within the San Mateo-Martin Corridor (i.e., possible limitations occurring “South of San Mateo” or “north of Martin” were not explored.)” (Ibid, p. 52)

We emphasize that it was only in these very carefully constricted cases that ISO showed an increase in LSC from J-M. All its other cases showed a decrease.<sup>2</sup>

**WOULD ISO BE WILLING TO WAIVE ITS CRITERIA TO CLOSE HPPP?**

How credible is this special study that claims an increase in LSC from J-M? WEM thought it was fascinating that ISO was willing to waive its planning criteria, discard its definition of the Project Area, copy a study by PG&E — and declare this was the definitive answer to whether J-M will increase reliability in the Project Area.

WEM believes this shows ISO’s standards and methodology are not set in stone. Delighted to see this newfound flexibility, we decided to nudge the envelope, asking ISO’s witness Gary DeShazo:

Q. Would ISO be willing to set aside its planning criteria in order to justify shutting down Hunter’s Point Power Plant?

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<sup>2</sup> WEM learned recently, and reported in our 3/3/04 Motion to Reopen the Record, that ISO produced further studies for the San Francisco Power Flow Group of the Large Core Working Group that show J-M will cause –370 MW load reduction in the Project Area — far greater than the –25 to –70 MW reductions in the 2003 SF LSC study. ALJ TerKeurst indicated in an email that she would deny our Motion, and therefore we do not discuss these figures in this brief. However, we consider the new data extremely troubling. We ask the CPUC to address these issues even more seriously considering the magnitude of possible reduction, and we strongly urge the CPUC to look into the wild discrepancies between these figures.

A. No.

Q. However, ISO is willing to set aside its criteria to justify siting Jefferson-Martin. (V. 8, p. 641-2)

### **PG&E: IT'S JUST A MODELING ISSUE**

PG&E's transmission planner Manho Yeung did not reveal at first whether or not he thought there would be a load reduction as ISO predicted. It took a long time, with endless objections by PG&E's lawyer, to get him to address this question. Finally:

Q. You rebutted our testimony regarding J-M reducing power to SF in some cases...

A. That's correct. On p. 33 of my rebuttal testimony, I stated that the Cal ISO clearly stated that the apparent SFLSC reduction was due to a modeling issue. (V.7, p. 557)

WEM's attempts to get more clarity from Mr. Yeung were unfortunately cut short because our time expired. Fortunately, ALJ TerKeurst followed up:

ALJ TerKeurst: Are there any modeling concerns comparable to this or different than this in the PG&E studies that have been presented in support of the proposed project in your testimony?

A. No, I don't believe so. I think this modeling issue is there only for situation that there's not enough capacity in the internal 115 kV network. And the analysis that we provided in my testimony are basically focusing on the amount of power or capacity that would be available to the project area and not looking at any particular small location. (V.7, p. 579)

SMALL LOCATION?? Yeung is talking about the City of San Francisco and part of Silicon Valley – everything outside the San Mateo to Martin “Corridor”!

At first, Gary DeShazo confirmed his statement in ISO's Rebuttal (p. 33) that the reduced capacity was due to a “modeling issue.” But then he asserts the opposite:

A ...I believe that if you look at the last sentence of that paragraph, which states a better interpretation is that the power – is the lower post Jefferson-Martin LSEs [typo – should be LSCs] indicate previously unrealized reliability concerns of a greater system, reliability concerns that may need to be addressed to and realized for Jefferson-Martin's benefit, that does not have anything to do with modeling errors...

The cases that you are – that are in this paragraph, the results are not related to modeling issues; they're related to system constraints that exist on a system that did not allow Jefferson-Martin to perform at its full potential. That's what the LSC study is – has attempted to illustrate. (V.8, p. 625-6)

## **IS SAN FRANCISCO AN “INDEPENDENT SYSTEM” OR PART OF THE PROJECT AREA?**

In his written testimony DeShazo attempted to escape the problem of reduced LSCs:

The City of San Francisco is an independent system, and any limitation within the city has to be fixed by projects other than Jefferson-Martin. (Exhibit \_\_\_ - ISO Rebuttal, p. 12)

WEM considers this statement downright bizarre, when San Francisco is clearly listed as part of the Project Area.<sup>3</sup> But it echoes Yeung’s dismissive statement about keeping the focus on the whole Project Area and not on any particular “small location.”

## **WILL THE CONSTRAINTS BE FIXED AND WHEN?**

ALJ TerKeurst also expressed concern that any constraints caused by J-M in the City should be fixed. PG&E hastened to assure her that everything was under control: “these upgrades or their equivalent have been or will be completed as needed.” (PG&E’s Rebuttal says p. 33-34).

WEM has looked closely at this question, and believe there’s a lot more to it than that. The first question is, what are the constraints that need to be fixed in order to get an increase in LSC from J-M, then the question is when they will be done.

WEM spent a great deal of time in the proceeding getting witnesses to confirm that the key upgrade in San Francisco is the Martin to Mission or alternately the Martin to Hunters Point cable.

In the hearings, PG&E tried to downplay this project and disassociate it from J-M. Yeung was extraordinarily careful about his answer when I asked him to confirm a statement in the report he authored, San Francisco Internal Transmission System After AP-1 (“After Ap-1”):

Q. On page 8 it talks about the Martin-to-Mission cable would be needed by the summer of 2011. And on page 10 that says...: This new cable can further increase the San Francisco load-serving capability from 992 MW to 1274 MW; is that correct? That’s a total of 282 MW, would you agree with that?

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<sup>3</sup> WEM does not believe DeShazo refers here (unless subliminally) to San Francisco’s attempts to establish a full public power system. However, WEM established in the hearings that if the City took over the entire electricity system in San Francisco, it could declare independence from ISO and FERC, as well as PG&E. This was confirmed by Jeffrey Shields, a witness for 280 Citizens who served as CEO of Municipal Power systems for many years. (See Vol. 19, p. 2183-4). The City could then establish its own criteria for “reliability,” for instance prioritizing Environmental Justice, renewable energy and energy efficiency. Something to think about.

A. That's – that's what the report stated. (V. 6, p. 551).

He claimed these projects had nothing to do with J-M:

These potential internal San Francisco improvements — and here I'm referring to the rerating of the internal 115 kV cables as well as this potential Hunters Point-to-Martin cable, they address movement of energy within San Francisco. They do not address the need to be able to input more energy into the project area, which is the purpose of the Jefferson-Martin project. So the two are not linked. One is addressing the internal 115 kV system, while the other one addressed bringing power into the project area.” (V. 6, p. 552)

He goes out of his way to avoid connecting the dots.

Although the Martin to Mission upgrade was illustrated as one of four “internal cable upgrades” in ISO's San Francisco Peninsula Long Term Technical Study, October 2000 (Exhibit \_\_\_), PG&E was very slow about proposing it. In its After AP-1 Study (July, 2003), the company indicated that it planned to do that upgrade in 2011 but might do it sooner. PG&E did not propose the Martin-Mission cable until its December 2003 Electricity Transmission Grid Expansion Plan. ALJ TerKeurst asked if that is in the record. (V.8, p. 695) DeShazo answered that he didn't know, but ISO won't be done reviewing it until April, and approvals would come sometime after that.

The Grid Expansion plan (p. 1-21) repeats the assertion in After AP-1:

Even though this new cable project may not be needed until 2011, PG&E plans to proceed immediately with the necessary environmental analysis and permit acquisition... in the event that this work is needed earlier should actual demands turn out to be higher than the current forecast.” (PG&E 2003 Grid Expansion Plan p. 1-21)

Again, no connection is made to the J-M project or the load reduction problem.

At the risk of increasing confusion, let's look closely at Yeung's figures. His assumption is that load serving capability in San Francisco is only 992 MW (in 2011). If that is so, the J-M line has not made much difference, since current LSC in SF is already almost this much (925 MW).

(Or do we get to the 992 MW number by assuming that HPPP #1 and #4 are shut down. If that is so, we should subtract 178 MW from current LSC— and assume J-M has increased LSC by 245 MW?  $(925-128=797 + 245 =992)$  But how then could the Martin-to-Mission cable increase LSC by *another* 282 MW in 2011? That would mean a total

increase of imports into San Francisco of nearly 530 MW — nearly twice J-M’s capacity — and assumes nearly all of it would be used in San Francisco, instead of spread throughout the Project Area. Where would the additional increase come from? Manho stated earlier that PG&E assumes NO new net generation in the project area through 2020. (V. 6, p. 496))

### **WHAT ABOUT THE “OPERATIONS ISSUES”**

After ISO and PG&E explain all the reasons they have to keep HPPP open because of this and that criteria, and the Greater Bay Area outage Standard, and the limited LSC, and the age of the cables, they’ll add, with utmost gravity – “there’s also operating issues.” One day at the 11/7/03 Power Flow Meeting<sup>4</sup> we learned that these refer to PG&E’s need to run HPPP in order to provide backup power while crews wash salty buildup off insulators on the 115kV lines at the San Mateo substation. After dancing around and avoiding the question for two pages (aided by his lawyer), Manho finally confirmed his statement at the meeting:

Q. If they don’t need to wash the insulators, they don’t need to spin HPPP during the washings... to take care of the contingencies?

A. Yes. (V. 6, p. 547)

### **WHAT’S IT REALLY ALL ABOUT?**

WEM’s arguments in our testimony about the real benefits of the J-M line were confirmed and enhanced in hearings. PG&E would get a big windfall Return on Investment on the astronomical construction costs, and reap continued fees from renting the line for power as well as telecom.

PG&E’s sweetheart contractor, Black & Veatch,<sup>5</sup> is making money already on planning and engineering work, and stands to make a bundle if it lands the fat contract

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<sup>4</sup> I explained the origins of this group at the hearings: “In 2002 the Governor’s office of Planning and Research convened a series of meetings that are called the large core working group meetings for the purposes of discussing what it would to shut down HPPP... There are two subgroups of that large core working group. One of them is the power flow subgroup and the other one is the energy efficiency or DSM subgroup. The San Francisco Energy Efficiency Pilot project came out of that subgroup.” (p. 544)

<sup>5</sup> WEM was not very familiar with this company, but the more we learned, the more we wanted to know. As WEM established with Mr. Billot, the company has a very sweet deal with PG&E. We didn’t have time to get very deeply into these issues in the hearings, but we believe a quick overview of B&V’s activities is relevant here. In addition to power, B&V has its hand in water, telecom — and international security. It is active in all these fields in the Bay Area. Through water and perhaps telecom, B&V is establishing ties to San Francisco’s Public Utilities Commission. It did a major study for SFPUC on how to set rates for



itself. WEM established in our questioning of PG&E's cost estimator, Alain Billot, that B&V did not have to bid on its current consulting contract, and would be allowed to bid on the construction as well. The company has an enormous advantage over other bidders, having been paid to prepare detailed engineering plans and cost estimates (at ratepayer expense). (See V. 13, p. 1254-6)

The project is part of the brave new deregulated world where transmission is supposed to be overbuilt, ratepayers be damned, in a manner that suits fossil-fuel generating companies who want to sell power from anywhere to anywhere, in ever-more complex, shadowy and shaky schemes. I asked Gary DeShazo to comment on reports that Enron clogged Path 15 and caused the June 14, 2000 blackout on the SF Peninsula:

A. "Clogging," I don't know what that means... But I assume it might, this is just my speculation, is that it might be related to schedules. And that the thought was at least that what is alleged is that Enron flooded that path with so many schedules that you weren't able to actually schedule power from south to north... It was not a reliability issue, it was related to the ability that you couldn't schedule it. If you can't schedule load to serve your load then you have to shed the load. (V.8, p.655)

## **WILL J-M FACILITATE EXPORTING POWER OUT OF THE PROJECT AREA?**

In cross-examining DeShazo, we asked:

Q. ...One of the opportunities of deregulation is that a power plant owner can sell power some place, elsewhere, they can get more money for it, isn't that right?

A. The transmission system can be used to do that....

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privatized sewer services. It also did an upgrade of a chemical water treatment facility for SFPUC. The company is no doubt salivating over the \$4B bond-financed Hetch Hetchy project which is gearing up. It is involved in privatizing water, in other countries.

On behalf of Williams Telecommunications, B&V surveyed routes for fiberoptic cables from Sacramento to San Francisco and from San Francisco to Santa Clara. (The J-M line could carry such cables.) Until recently, this company was a subsidiary of Williams Corp., the gouger that is providing 4 peakers to SFPUC in a settlement. (WEM believes Williams retains the privilege of selling gas to CCSF for these peakers, leading Paul Fenn to remark "the City got a free syringe; it's the drug that's expensive." Fenn is the author of Prop H, SF's solar bond measure, and the Community Choice law AB117.

B&V is also getting into the business of protecting us on the high seas. It recently landed a contract from the Coast Guard to provide security in SF Bay. (Does this mean the Coast Guard has been privatized while we were all distracted by suicide bombers in Iraq?) Speaking of Iraq, B&V was reportedly on Bechtel's short list to help rebuild that devastated country. The company clearly has connections: it also was handed the job of finishing the ghastly \$2B gas power plant in Dabhol, India, after Enron failed there.

To some, this may sound like a great success story. To WEM, it sounds more like trouble. B&V's rolling into town and snapping up top dollar in all these contracts has the smell of an invading army.

Back home, this company has some serious racist baggage. One of its subcontractors, owned by a highly educated black man, charged B&V with discrimination and is currently pressing charges.

WEM asked Yeung about his statement (Needs testimony -p. 90):

[I]]f substantial amounts of renewable generation were sited in the Project Area, then the Jefferson Martin line would facilitate export of such renewable power from within the Project Area.

Q. Would Jefferson-Martin line facilitate export of any kind of power from within the project area or just renewable power?

A. Well, generation is generation. It's — there's no distinction between whether it's renewable or other types of generation. And I believe the key word here is substantial amount. If there is a substantial amount of generation sited in the project area, then the J-M line will facilitate export of such power from within the project area.

Q. How much would substantial amounts be?

A. It would be an amount that is more than enough to serve demand in the project area and still have excess to be exported. (p. 549-50)

This is a curious exchange for two reasons. One is that elsewhere in his testimony, Yeung dismissed renewable energy because only small amounts were likely to be generated, yet here he makes a point of mentioning the potential for J-M to facilitate export of renewable energy if “substantial amounts” were sited in the Project Area. Of course, the other message is that any kind of generation can be exported by J-M, over and above what's used in the project area.

### **DOES J-M REALLY DO A THING FOR RENEWABLE ENERGY?**

A battle has been raging for years over access to the grid for wind and other “intermittent” renewable energy. Obviously, hydropower is also intermittent, in that it is seasonal, but the daily, even hourly fluctuations of wind and solar energy poses a greater dilemma for transmission owners — or so they say. For this reason in part, the Renewable Portfolio Standard continues to languish.

A Committee of Energy Commission staff, with a couple of members from the CPUC, was created over a year ago to work on this problem. There has been no resolution as yet, to WEM's knowledge. It's not so much a technical engineering issue, it's that nobody has been able to come up with a way to juggle the financial issues. Transmission owners want to keep their lines full of power at all times; to make the most money. It's simpler if they can buy big blocks of “firm” power for that purpose.

Some renewables advocates are hung up on how you can pair a renewable energy project with a “firm” source, so you can guarantee those chunks.

WEM certainly believes that wind energy is a Good Thing and wonderfully cheap. But we believe wind enthusiasts are kidding themselves if they think that big boondoggle transmission projects such as J-M will usher in the Age of Wind.

WEM advocates a rapid increase in locally based renewables right here in San Francisco and the Peninsula. There is lots of wind, plenty of sun, and tidal resources on all sides. No need for transmission to import faraway wind.

### **WHAT DOES ALL THIS COST RATEPAYERS?**

When ISO staff approved the J-M line<sup>6</sup>, it was estimated at \$110 million. It ballooned to \$179 by the time the ISO Board approved it in April 2002 (See Gary DeShazo V. 8, p. 690, 692). Now the estimates are \$212 m up to \$260 m, depending on route. Extensive testimony in hearings indicated that the cost would be far higher than that. All that, for a line that reduces power -25 to -370 MW!

### **WHAT IS THE TRUE CAPABILITY OF THE CURRENT SYSTEM?**

The hearings brought a bit more clarity about the existing system. 280 Citizens was especially helpful, walking Manho Yeung through 280's transmission expert, Bill Stephenson's analysis of San Mateo to Martin LSC

#### Ability to calculate the load serving capability.

Yeung says:

“I further stated that, on page 22 of my testimony, that a person cannot simply add up all the numbers on the transmission circuits, and that power system engineers used a computer model to do their system simulation and calculation.” (p. 526)<sup>7</sup>

280 Citizens' Attorney Gray discusses Stephenson's written testimony that PG&E could install series reactors in some of the lines and then their total capacity would be equal to the total of their individual capacity. (p. 516) Manho disagrees, but it seems to be the issue of the dips, not whether the series reactors would allow one to add up the lines.

Capability of the cables in the SM-M area: The lines are limited by the capability of the cables (aka “conductors”) in the “Dips” where the six overhead 115 kV lines dip under

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<sup>6</sup> WEM brought out during hearings that the Stakeholder Study Group actually voted for the San Mateo to Martin alternative, but ISO staff overrode the vote, claiming that since J-M came in a close second, the “extreme planning criteria” (loss of all 115 kV lines) would be the determining factor, and J-M would be the choice. This is clearly described in the ISO 2000 Study, (Exhibit \_\_, p. 70, 74)

<sup>7</sup> His statement that the engineers used a computer model appears to warn us not to attempt to re-create their conclusions. However, CPUC Rule regarding computer models says that a model must be capable of being explained to a lay person.

ground to cross a highway. Yeung says the overhead 115 kV overhead cables and the Dips cables have been replaced and “rerated” and are now good for 261 MVA (p. 515), but the “Dips” cables are of a different material and only capable of carrying 231 MVA. (p. 518). Yeung says you multiply MVW by .975 to get MW; therefore the capability is: 115 kV overheads: 254 MW and Dips: 225 MW (p. 524-5).

“Emergency” ratings same as “normal” ratings. Emergency ratings refer to how much power a cable is allowed to carry in an emergency, i.e., for a short time before the extra heat would damage the cable or start a fire. Usually, emergency ratings are higher than normal ratings. Oddly, Yeung claims that for cables used in the SM-M overheads and the dips, “emergency ratings” are the same as normal ratings.

By contrast, PG&E has been trying to get ISO to allow them to increase the emergency ratings on San Francisco’s 115 kV cables, which are 30-50 years old. (p. 521-522). () Manho says emergency ratings “are assigned based on an engineering evaluation of the facility itself, taking into account its design and operating conditions.” (p. 516) Age is a factor but not the only one. “A more important factor is the condition of the cables and also the operating characteristics of the cables.” (p. 523)

Gray attempted to get Yeung to consider a hypothetical “emergency” rating 115% of normal, as in the San Francisco cables but Mr. Raushenbush, PG&E’s lawyer, raised vociferous objections.

“Line loss” observed in Project Area reduces capability by 5% (p. 527

Also, “Utilization factor” reduces cable capability to 95%

Not only does Manho say the emergency ratings are the same as the normal ratings, he assumes only a “95% utilization factor” because he says “it is highly unlikely that each of the 115 kV lines can be loaded to 100% of its rating” (PG&E Rebuttal, p. 23)

The above figures are summarized in Table 1:

Table 1. Capacity of San Mateo to Martin “Corridor” Transmission Lines Assuming “Normal” and “Emergency” Ratings Are the Same

	Overhead lines	x 5 lines	Dips section	x 5 lines
Normal/Emergency rating	254 MW	1270	225 MW	1125
“Utilization factor” of 95%	241.3	1207	213.75	1069
“Line loss” – reduce 5%	229.235	1146	203.0625	1015

PG&E’s Rebuttal (p. 23) comments on these figures:

Assuming a 95% utilization factor, the overall load serving capability of the five remaining 115 kV lines, under the planning contingency of the 230 kV cable and one San Mateo-Martin 115kV line out of service, would be 1069. As depicted in PG&E’s Direct Need Testimony in Figure 9-1 at 84, the North of San Mateo Transmission Corridor Capability is calculated as 1034 MW. The 1069 MW figure derived from the 280 Citizens’ proposal represents merely a 35 MW increase.

Here’s one of those instances where PG&E says, so what, the number is small. Who cares? WEM cares. Often, the devil is in the details. And conversely, small numbers add up to big numbers. **WEM believes that if we focus on steadily adding small amounts of energy efficiency, distributed generation, and renewable energy — plus some small transmission upgrades, San Francisco could have plenty of power for the next hundred years, without Hunters Point or Potrero power plants, the C-Ts or the Jefferson Martin project..**

So let’s focus on some small numbers. Let’s assume that these cables, like most cables, really can carry more power in an emergency. (Or, if not, that PG&E should immediately replace them at their own expense, because they have just wasted ratepayers’ money by installing inferior cables that might force ratepayers to build the enormously expensive J-M line for lack of a lousy 15% emergency capacity on these lines.) Total capacity, assuming Emergency Ratings, is summarized in Table 2.

Table 2. San Mateo to Martin “Corridor” Transmission Capacity  
Assuming “Emergency” Ratings 15% higher than “Normal” Ratings

	Overhead lines	x 5 lines	Dips section	x 5 lines
Hypothetical “Emergency Ratings” (115% of Normal)	292.1	1460.5	258.75	1293.75
“Line loss” – reduce 5%	277.495	1387.475	245.1	1225.5
“Utilization factor” of 95%	263.62025	1318.10125	232.845	1164.225

**Transmission alone can presently serve the entire load of the PG&E “Project Area”**

Following Yeung’s lead<sup>8</sup>, we’ll use the figure of 1225 MW capacity total for the “Dips” section of the five cables.

<sup>8</sup> It appears that Yeung did not reduce his own figure of 1034 MW for both 95% “Utilization Factor” and 5% Line Loss. So why should we? (WEM could not duplicate his total of 1034. We assume it results from

We note that the recorded peak in this area was only 1201 MW although it was originally forecast as 1443 MW (p. 532; Needs p. 56-67)

**This means the Corridor transmission system (assuming two lines out of service, line loss of 5%, and “Emergency” ratings 15% above “Normal”) is currently capable of serving 1225 MW all by itself, with no power plants operating — more than the entire load of Northern San Mateo County and San Francisco!**

Even without emergency ratings, using Yeung’s 1034 total capacity or Stephenson’s 1069 capacity, the system only needs 132-167 MW of additional power (or energy efficiency). The three peakers at Potrero can provide all or almost all of that power in emergencies (assuming for planning purposes that the main unit, Potrero 3, is offline).

#### **WHAT ABOUT THOSE 230 kV LINES THEY NEVER TALK ABOUT?**

As if this story weren’t twisted enough already, there’s one more issue that must be considered in determining whether there is really a “reliability problem” in San Francisco. When PG&E talks about San Francisco LSC, it carefully mentions only the “network” of 115kV lines. There are also two 230 kV lines that go directly from Martin to Embarcadero substation, but these are hardly ever discussed.

These lines used to simply drop off the radar, because PG&E’s criteria was N-2, G-1. In other words, two lines were automatically assumed out of service. Now, however, in certain instances, such as the Greater Bay Area Outage Standard (G-2, L-1), ISO assumes just one line out of service. That means that one of the 230 kV lines should be counted towards LSC in San Francisco. We asked Barry Flynn (CCSF’s transmission expert, who worked for many years at PG&E) whether one of these lines (good for 400 MW) was counted in the total LSC for San Francisco:

Q. You believe the 400 Megawatts are included in the 992 megawatts?

A. No, I do not believe that. (V. 15, p. 1521)

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slight variations in the capacity of the lines. Stephenson testified that the lines could each carry the same amount, if series reactors were installed in some of them.)

## **WHAT IS THE REAL POTENTIAL FOR LOAD REDUCTION?**

PG&E, ISO and Aspen's Environmental Impact Report (EIR) all dismiss the potential for energy efficiency ("EE"). They say they take EE from "historical data" and it is thereby included in their load forecasts.

WEM established in hearings that the potential for Energy Efficiency is far greater than anything PG&E achieved in the past. In questioning William Miller, PG&E's witness on Energy Efficiency, WEM showed that there is nothing to prevent PG&E from applying its entire "procurement" budget of \$250 m. to energy efficiency in the Project Area (V. 6, p 424-59). Using a very conservative estimate of the cost per MW, PG&E could get one megawatt per million. Furthermore, it could target those megawatts in the exact areas where load reductions were most needed.

ISO has a demand reduction program too, though it is so little utilized that Gary DeShazo had never heard of it.

## **CONCLUSION**

WEM is not the first party that ever came to ISO transmission planning meetings trying to get them to close the Hunters Point Power Plant. In this proceeding, a different organization is pursuing a different approach to same ends. We agree on many things, including the Environmental Justice complaint we filed jointly at the US Dept. of Energy, charging racism in ISO and PG&E's failure to shut down HPPP.

In 2000, another group, the Southeast Alliance for Environmental Justice, also tried to get ISO and its SF Peninsula Stakeholder Study Group to address the power plant closure within the process of assessing what's needed for reliability on the SF Peninsula. In their comments (Exhibit 26, also included in the back pages of the ISO 2000 Study), they express their disappointment with the choice of J-M:

Effectively ignoring load management and distributed generation precludes the possibility of meaningfully applying the cost, environmental, and justice criteria called for in the report. (Exhibit 26, SAEJ comments, p. 1)

Women's Energy Matters sincerely hopes that the Commission will consider the capability of the system, determine what is really needed, and take another look at all the options. We believe that would lead to dismissal of the Jefferson-Martin project and the immediate closure of the Hunters Point Power Plant

DATE: March 4, 2004

Respectfully submitted,  
WOMEN'S ENERGY MATTERS

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**CERTIFICATION OF SERVICE**  
**A. 02-09-043**

I, Barbara George, certify that on this day March 4, 2004, I caused copies of the attached "WOMEN'S ENERGY MATTERS' OPENING BRIEF ON THE JEFFERSON-MARTIN TRANSMISSION PROJECT" to be served on all parties by emailing a copy to all parties identified on the service list provided by the California Public Utilities Commission for this proceeding, and also by delivering an original and six copies to the Docket office and a copy to Administrative Law Judge Charlotte E. TerKeurst and Presiding Commissioner Loretta Lynch.

Dated: March 4, 2004 at Sacramento, California.

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