

CITY AND COUNTY OF SAN FRANCISCO

Mayor Gavin Newsom  
City Attorney Dennis Herrera  
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Supervisor David Chiu  
Supervisor Sopenia Maxwell  
General Manager Edward Harrington



May 8, 2009

Yakout Mansour  
President and Chief Executive Officer  
California Independent System Operator  
151 Blue Ravine Road  
Folsom, CA 95630

Re: **Closing the Potrero Power Plant**

Dear Mr. Mansour:

For many years San Francisco (the City) leaders and community members have worked to close the old, polluting power plants in southeast San Francisco to protect public health and the environment. Under the leadership of the California Independent System Operator (ISO), the reliability of the electric infrastructure serving the City and the greater Bay Area has been improved substantially during the last decade. Now, as we describe in this letter, projects that are in place or currently underway make it possible to permanently close the remaining old, polluting generating facility, the Potrero Power Plant.

**Current studies indicate that Potrero Unit 3 can close by the end of 2009 and Potrero Units 4, 5, and 6 can close by the end of 2010.**

The current reliability information analyzed by the City, including the ISO's own studies, indicates only a very small need for in-City generation under emergency conditions through at least 2013. The analysis also shows that there are feasible alternatives to meet this small amount of need, thus allowing Potrero Power Plant Unit 3 to close by the end of 2009 and the remainder of the plant to close by the end of 2010.

**Closing the Potrero Power Plant is essential to achieving important State policies, including remedying environmental injustice.**

The ISO has stated its support of the State's energy policies, including implementing renewable portfolio standards and mitigating greenhouse gas emissions and other environmental impacts from power generation. One of the critical steps in achieving these State goals is the retirement, as soon as possible, of old, dirty power plants that continue to operate only under the ISO's mandate.

The Potrero Power Plant is one of the oldest and dirtiest plants in California, operating using a once-through cooling system that does not meet current standards for protecting the Bay and its aquatic resources. The plant is located on the waterfront in Southeast San

Francisco, near other industrial facilities and residential communities. These communities include some of San Francisco's most economically disadvantaged residents. Many of these residents use the bay for recreation and subsistence fishing. These communities experience disturbingly high rates, disproportionate to the rest of the City, of cancer, asthma and other healthcare problems that are known to be influenced by environmental factors. For decades, the Hunters Point and Potrero Power Plants have been workhorses providing baseload capacity to serve San Francisco and the peninsula. The residents of Southeast San Francisco have done their part to ensure reliability by shouldering the environmental burdens posed by these facilities. Closing the Potrero Power Plant is an important step toward achieving environmental justice in our community.

There are other compelling environmental reasons to close the Potrero Power Plant as soon as possible. Closing the plant would facilitate expeditious remediation of toxic contamination on the Potrero Power Plant site by its previous owner, PG&E. Also, PG&E has stated that it cannot begin the process of cleaning up toxic sediments until Potrero Unit 3 is closed. Mirant has stated publicly that it is willing to close the Potrero Power Plant when it is not needed for reliability.

**The 2004 San Francisco Action Plan does not reflect current electric reliability studies that provide the basis for closing the Potrero Power Plant.**

In 2004, working with the City and community, the ISO adopted the San Francisco Action Plan. The Action Plan led to the 2006 closure of the Hunters Point Power Plant. Although not all projects contemplated by the Action Plan have been realized, other new projects have been developed. As a result, since 2004, the ISO has approved extensive upgrades to the electric transmission system in and to the City that have eliminated the need for in-City generation to maintain reliability. For these reasons, the five-year old Action Plan is outdated and does not reflect the current state of the electric system serving San Francisco.

Your letter to me in June 2008 indicated that Potrero 3 could close when the Trans Bay Cable begins service. According to information provided by the ISO, this project can deliver 400 megawatts (MW) of electric power to San Francisco and is expected to be operating well before the summer peak of 2010. Once the Trans Bay Cable begins service, there will be more than enough transmission capacity in and to the City to meet local capacity requirements. Given the progress of Trans Bay Cable and local capacity requirements, we believe the ISO can agree not to renew the reliability must run contract for Potrero Unit 3 beyond 2009.<sup>1</sup>

The ISO's recent studies for the San Francisco area indicate a need for local resources of 25, 10, and 15 MWs, respectively for the years 2010, 2011, and 2013, assuming the Trans Bay Cable is in operation. (See Attachment 1, Documents 2 and 3.) This requirement was developed by assuming the rare event of an overlapping outage of two major transmission lines. Studies by both PG&E and the City indicate that there are relatively low-cost and easy to implement projects that can reduce the 25, 10, and 15 MW requirements to zero. Given the remote risk of such overlapping outages and the feasibility of alternative means to ensure reliability, as noted below, this modest need

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<sup>1</sup> Even without the Trans Bay Cable, PG&E studies undertaken in 2008 indicate that when the third Martin-Hunters Point 115kV transmission project is placed in service, only 96 MWs of electric generation will be required in San Francisco. Based on this study, the requirement for 96 MWs of generation could be met without the continued operation of Potrero Unit 3. (See Attachment 1, Document 1.) More recent studies by the City indicate similar requirements.

cannot justify the continued reliance on any of the old, dirty generation at the Potrero Power Plant beyond 2010.<sup>2</sup>

There are a number of modest transmission system improvements that could eliminate the small need for local generation. The ISO already has recognized that the need for local generation would be eliminated by having adequate reactive compensation in service at Martin Substation. And it is very likely that PG&E will assign higher ratings to the new cables in a few months after PG&E completes additional tests. (See Attachment 1, Document 4a.) As a further reinforcement to the 115kV network, there are inexpensive measures such as the installation of series reactors<sup>3</sup> that can provide a long-term solution beyond the dates proposed for new major transmission additions from the East Bay. (See Attachment 1, Document 4b.)

Effective demand side management and back-up generation programs would also reduce or eliminate the currently projected need for small amounts of local generation. These programs could be implemented either in combination with or as alternatives to the modest transmission system upgrades discussed above. Renewable energy projects being developed within the City will also contribute to meeting this small need for local generation. The City is committed to working with PG&E to ensure such resources will serve the long term reliability requirements of the grid in a more sustainable and economical manner than retaining Potrero generation.

**The technical analysis does not support the continued operation of any generation at the Potrero Power Plant beyond 2010.**

Despite the small need for local generation identified by the ISO's studies, we understand that the ISO has stated it will require 150 MWs of in-City generation to remain in service indefinitely, to ensure reliability while new transmission infrastructure is brought on-line. This new requirement is not reflected in the criteria set forth in the ISO's own Local Capacity Requirement technical manual. Based on our research, analysis, and work with PG&E, we have not found other examples of the ISO using this rationale to require generation far in excess of the amounts indicated by its technical analysis.

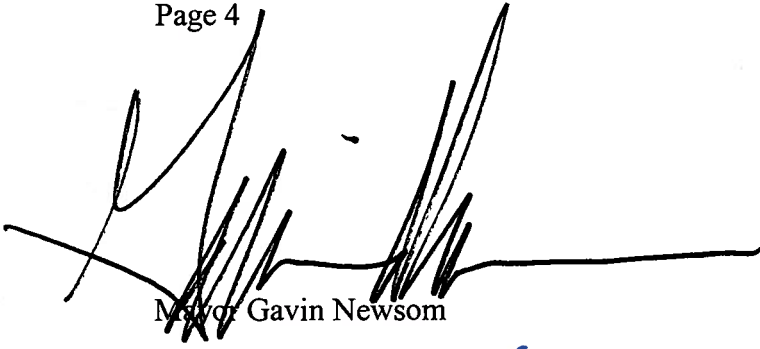
Attached to this letter we provide a summary of the documents and technical analysis that support the main conclusions in this letter, that Potrero Unit 3 may close by the end of 2009 and that the entire plant may close by the end of 2010. We are committed to continuing our work with you to ensure electric reliability in San Francisco while improving public health and environmental quality. We will continue to work with your technical staff and we hope to meet with you personally in the coming weeks to discuss these issues. As always, we appreciate the ISO's ongoing commitment to working with us to improve the electric system serving San Francisco.

Sincerely,

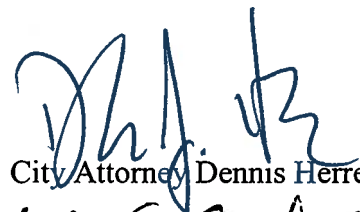
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<sup>2</sup> It is our understanding that there has never been such an overlapping outage on PG&E's system. In addition we believe that there are larger deficiencies in other local sub-areas for similar events.

<sup>3</sup> City studies indicate that small reactors placed in series with two or more 115kV cables would provide a long term solution to the 115kV cable loading problems in the City. These studies indicate that this solution would allow the recabled 115kV network to meet expected load growth beyond that projected for 2018. Our research suggests that the cost of the equipment for up to four series reactors (not including installation) could be as little as \$1 million.



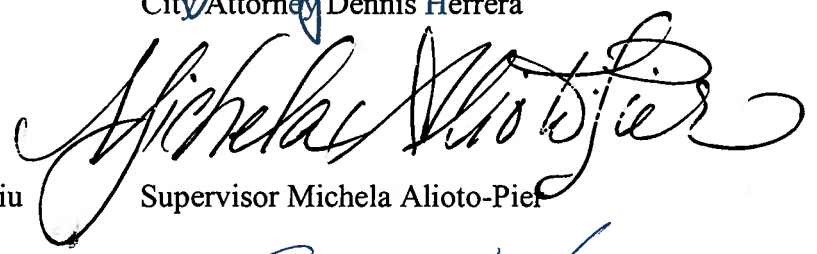
Mayor Gavin Newsom



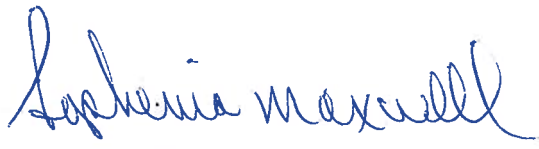
City Attorney Dennis Herrera



Board of Supervisors President David Chiu



Supervisor Michela Alioto-Pier



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General Manager Edward Harrington

Cc Via Electronic Mail:

- Members, ISO Board of Governors
- Members, San Francisco Board of Supervisors
- Members, San Francisco Public Utilities Commission
- Members, California Public Utilities Commission
- Members, Power Plant Task Force
- John Chillemi, President, Mirant California
- Nancy McFadden, Senior Vice-President, Public Affairs, PG&E

**Attachment 1: The List of Studies/Documents Supporting the Conclusions**

#	Source	Date	Principal Finding(s) that Support the Conclusions in the Letter
1	PG&E's 2007 Electric Transmission Local Capacity Requirement Assessment Study Report	Feb-08	For 2009 (without Trans Bay Cable), the most limiting outage for LCR in the San Francisco Sub-area is the Martin - Larkin 115 kV overlapped with Martin – Bayshore – Potrero 115 kV Cable No. 1. During summer peak conditions, loss of these 115 kV facilities could overload the Martin – Bayshore – Potrero 115 kV Cable No. 2. To address this overload, 96 MW of local generation is required to be online.
2	CAISO's 2010 Local Capacity Technical Analysis	May-09	After the Trans A-H-W #2 115 kV re-cabling project and the Bay DC cable are operational, the LCR needs (at peak) for San Francisco will be based on an outage of the Trans Bay DC cable and A-H-W #1 115 kV cable. The area limitation is thermal overloading of the A-H-W #2 115 kV cable (at the current projected rating). This limiting contingency establishes a LCR of 25 MW in 2010.
3	CAISO's 2011-2013 Local Capacity Technical Analysis	Dec-08	The most critical contingency (in the San Francisco Sub-area) is an outage of the TransBay cable and the A-H-W #1 115 kV cable. The limiting contingency is an overload of the A-H-W #2 115 kV Cable. This limiting contingency establishes a local capacity need of 10 MW and 15 MW (includes 0 MW of QF and Muni generation) as the minimum capacity necessary for reliable load serving capability within this sub-area in 2011 and 2013, respectively.
4	PG&E Assessment (PG&E Comments to the ISO on the Initial 2010 LCR Study Results of March 10, 2009)	Mar-09	(a) Replacement of the Martin-Bayshore section of the A-W-H No. 2 is scheduled for completion by Dec 2009, while the remaining section of the A-W-H No. 2 cable will be replaced by April 2010. The A-W-H No. 1 cable will be replaced by Sept 2010. After replacing these cables with newer and larger capacity cables, PG&E expects to obtain similar, if not higher, emergency ratings than currently in place. (b)...preliminary studies by PG&E indicate that installation of series reactors on the four 115 kV import lines into San Francisco could reduce emergency loadings on those lines, which could also reduce the amount of LCR needed for the San Francisco Sub-area in the near term planning horizon.