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August 2, 2013

Via Electronic Submission

Clerk of the Board
California Air Resources Board
1001 I Street
Sacramento, CA 95812

Re: Comments of Powerex Corp. on the Proposed Amendments to the Cap-and-Trade Program (July Discussion Draft)

Dear Dr. Cliff:

On behalf of Powerex Corp. ("Powerex"), I submit the following comments on the California Air Resources Board's ("ARB's") July 2013 Discussion Draft of Proposed Amendments to the Cap-and-Trade Regulation (the "CTR").

Powerex is a corporation organized under the Business Corporations Act of British Columbia, with its principal place of business in Vancouver, British Columbia, Canada. Powerex is the wholly-owned energy marketing subsidiary of the British Columbia Hydro and Power Authority ("BC Hydro"), a provincial Crown Corporation owned by the Government of British Columbia. Powerex sells power wholesale in the United States, pursuant to market-based rate authority granted by the Federal Energy Regulatory Commission in October 1997, renewed most recently effective January 1, 2009.

Powerex sells power from a portfolio of resources in the United States and Canada, including Canadian Entitlement resources made available under the Columbia River Treaty, BC Hydro system capability, and various other power resources acquired from other sellers within the United States and Canada. Powerex also buys and sells power in Canadian provinces other than British Columbia and in Mexico. Powerex has been delivering power to California since shortly after receiving its market-based rate authority.

Powerex appreciates ARB's efforts to create and implement a comprehensive GHG cap-and-trade program. In Powerex's view, the program serves to fulfill the mandate in the California Global Warming Solutions Act ("AB 32") to reduce greenhouse gas emissions in California and to combat global climate change. With the proposed amendments to the CTR, ARB is making significant progress toward achieving the goals of AB 32.

Powerex offers the following comments on the proposed modifications to the CTR with the goal of improving and refining the Program. Powerex here focuses its comments on just a handful of critical areas. Other issues are being addressed via comments submitted by the Western Power Trading Forum of which Powerex is a member. Based upon the experience with the first seven months of the Program, it is clear that important issues remain to be resolved if the GHG emissions and electricity markets are to function efficiently, incorporating economic signals one from the other.

1. The Problem of Cherry-Picking and Resource Shuffling Needs to be Addressed.

The Discussion Draft of proposed CTR amendments contains many valuable improvements, including those clarifying what activities constitute resource shuffling and what activities do not (the so-called "safe harbors"). However, ambiguity remains regarding resource shuffling, ambiguity that is allowing and even encouraging certain market activities that are distorting the wholesale electricity markets and contributing to leakage that undermines the goals of the Program.

The proposed CTR amendments regarding resource shuffling focus primarily on market activities associated with high GHG emission sources of electricity – in particular, the potential for legacy coal-powered generating units that have historically served California load to be replaced with sources that have a lower GHG emission factor ("EF"). Very little attention appears to have been given in the Discussion Draft to market activities associated with low-EF power sources from specific low emission generation facilities within the existing portfolio of load serving entities outside of California that do not otherwise participate in CARB's program.

Powerex is concerned that the Discussion Draft does nothing to address the reorganization of the portfolios of out-of-state load serving entities ("LSEs") to sell the output of specific low-EF generating facilities at the same time as they buy from the market to replace the sale. The logic is simple: they are able to purchase this relatively higher-EF power at a lower cost than what they receive when selling their generated low-EF power that is then delivered to California. Much of this activity occurs beyond the jurisdiction of ARB. These out-of-state LSEs with low-EF generating facilities do not import electricity directly to California, but instead sell their generated low-EF power to others that then import it to California as specified power. They also are not asset-controlling suppliers ("ACSs") and thus do not voluntarily provide detailed information to ARB on all sources of supply used to serve their load, thereby increasing their assessed emissions rate.

This is the practice known as "cherry-picking," and it raises serious resource shuffling concerns. In a paper published just at the time of the launch of the Cap-and-Trade Program, James Bushnell, *et al.*, concluded that there was a significant potential for increased imports to California of zero-EF power – specifically large hydroelectric and nuclear power; they further noted that this would undermine the environmental integrity of the Program by leading to

increased GHG emissions out-of-state (*i.e.*, leakage).[1] Experience during the first seven months of the Program has shown that what had been identified as a potential for cherry-picking has in fact been observed at a noticeable level within the short-term power markets. This raises resource shuffling concerns that threaten the environmental integrity of the Program as well as the proper functioning of the wholesale electricity markets. ARB should flesh-out the resource shuffling provisions in the proposed amendments to the CTR to address this threat to the integrity of the Program and the proper functioning of the electricity markets.

Powerex encourages ARB to address this issue by requiring that imports of low emission factor specified power from individual facilities demonstrate that the power is surplus to the load-serving commitments of the generating LSE in order for the importer to qualify for a resource shuffling safe harbor. Powerex believes that this approach is not appropriate for Asset Controlling Suppliers since they incorporate market activity through a higher ACS EF and already have a high level of disclosure requirements to CARB as a part of their ACS application.

There are just a few simple elements to make this approach workable and avoid any legal issues: First, define specified surplus facility power as power generated by specific facilities owned by an LSE that is surplus to its load-serving commitments. Second, provide a resource shuffling safe harbor for imports of specified power from specific generating facilities only if the importer can demonstrate that the power was specified surplus facility power. The importer could do so by providing certifications from the LSE. Because this obligation would be imposed upon the importer that has voluntarily submitted to the jurisdiction of California and not upon the out-of-state LSE, there would be no legal issue. Third, any imports of specified power that were not certified as surplus would not qualify for the safe harbor and thus would be subject to scrutiny for resource shuffling as they would have been before the "safe-harbors" were implemented. Fourth, importers could avoid any such scrutiny surrounding the low EF imports that could not be verified as surplus, by reporting them as low EF (consistent with ARB reporting regulations) but *claim* it as unspecified for the calculation of the importers compliance obligation.

This surplus facility power approach would not prevent any entity from importing low-EF power into California, nor would it prevent an entity from importing low-EF power that was not verifiably surplus and claim that import as low-EF for compliance purposes. This surplus facility power proposal simply creates an economic disincentive for importers (via resource shuffling scrutiny) that will ultimately translate through to an economic signal to out-of-state LSEs. This signal from the importer then incents out of state LSEs towards a) becoming an ACS and taking on a higher emissions factor and higher disclosure obligation, or b) limiting their market offerings of specified power from specific facilities to only that volume that is verifiably

[1] "Downstream Regulation of CO2 Emissions in California's Electricity Sector," J. Bushnell, Y. Chen, and M. Zaragoza-Watkins (January 2012), available at http://ei.haas.berkeley.edu/pdf/working_papers/WP236.pdf.

surplus. It would thereby help to prevent leakage and ensure the environmental integrity of the Program. In addition, the proposal would require only a few discrete changes to the CTR and to the Mandatory Reporting Regulation (the "MRR"). Specifically, the following provisions of the CTR and the MMR would need to be modified:

- Add a definition of "Surplus Specified Facility Power" to MRR Section 95102(a);
- Modify the safe harbor for short-term power transactions set forth in CTR Section 95852(b)(2)(A)(10) so that does not apply for power from specific generating facilities when the power is not Surplus Specified Facility Power;
- Add a provision to MRR Section 95111(a)(4) to require importers to report whether imports from specified facilities are surplus or not;
- Add a provision to MRR Section 95111(g) to allow LSEs to register facilities and volumes that are Specified Surplus Facility Power, and;
- Add a provision to MRR Section 95111(b)(5) enabling an importer to claim as unspecified power that it reports as specified if it cannot meet the requirements of the safe harbors and does not wish such power imports to be subject to scrutiny for resource shuffling.

2. Pacificorp – CAISO EIM.

Powerex is an active participant in the CAISO- Pacificorp EIM process and recently filed (July 30, 2013) the following comments related the GHG related aspects of the EIM proposal. Powerex is supportive of the CAISO's efforts to design an efficient, well-functioning market but consistent with Powerex's concerns as expressed in Section 1 of these comments. Powerex continues to be concerned about "cherry-picking" in regards to California imports. As seet forth below, in this discussion Powerex illustrates its high level concerns as well as another set of potential solutions.

CAISO's proposed EIM carbon intensity calculation is inconsistent with CARB's program design

In its previous comments in this stakeholder process, Powerex raised numerous questions associated with the CAISO's proposed treatment of carbon. Powerex understands that the pace of this stakeholder process may not have afforded the CAISO the ability to address these questions, but hopes that the CAISO will respond to Powerex's previous comments and questions in the coming weeks.

Upon greater reflection and understanding of the CAISO's EIM carbon proposal, Powerex's primary concern is centered on the unit-specific carbon intensity assigned to EIM awards that are selected by the CAISO algorithm to be deemed to be delivering EIM energy into the CAISO footprint. As stated by Dr. Bill Hogan, and referenced by the CAISO's MSC, the CAISO's EIM carbon algorithm is designed to achieve efficient resource shuffling[2].

While the CAISO's approach may be internally consistent and perhaps even drive efficient energy market outcomes, it will not send substantive price signals to EIM participants to reduce higher carbon intensity generation output and/or the development of higher carbon intensity facilities outside of California. To the contrary, the CAISO's algorithm will likely send powerful price signals to significantly increase resource shuffling not only in the EIM but in temporal markets prior to the EIM - it should be expected that EIM participants will increase the carbon intensity of their EIM base schedules in order to save low-carbon intensity generation output for the EIM. For example, a participant with significant coal and natural gas generation should be expected to increase its reliance on this generation (as well as increase its reliance on higher carbon intensity imports) to serve its obligations outside the CAISO footprint, as represented by its EIM base schedules, in order to save its lower carbon resources, such as hydro-electric output, for the EIM.

This price signal may create a strong incentive for suppliers to move their transactional activity out of the day ahead and hour ahead markets where they typically optimize their systems as coordinated systems (offering energy into the day ahead and real time market and receiving a system based rate or the unspecified rate, despite existing GHG based price signals) and into the EIM which would allow them access to a substantially more efficient method to capture the value of the low GHG supply within their portfolios. An EIM participant, through experience, may even seek to build or enter into long-term contracts for higher carbon intensity resource output to meet its load obligations outside the CAISO, so that it may "free-up" its lower intensity resources for offer into the EIM on an ongoing basis.

By deconstructing a coordinated energy system to its component individual generators in the EIM, the CAISO carbon algorithm efficiently unwinds other mechanisms CARB has put in place to address the import of system power into California, including the calculation for the carbon intensity of Asset Controlling Suppliers and a proposed CARB regulation to address high intensity system power.

[2] *See* http://www.hks.harvard.edu/fs/whogan/Hogan_CAISO_EIM_Notes_062613.pdf (reference added for ARB filing, not included in original July 30, 2013 CAISO filing).

CARB's carbon intensity calculation for Asset Controlling Suppliers is a weighted average intensity of all applicable imports and generation output of the ACS entity. This approach is in contrast to the CAISO's EIM carbon proposal, which assumes the lowest carbon intensity output is delivered to California and the higher intensity output is delivered to loads outside California. Put another way, applying the logic behind the CAISO's proposed EIM carbon algorithm to the Asset Controlling Supplier calculation would likely lead to both BPA and Powerex - the two asset controlling suppliers for 2013 - having a carbon intensity of zero, as both entities' zero carbon intensity resources would be deemed to serve California with their non-zero carbon intensity resources deemed to serve load outside California.

The outcome of applying the CAISO's EIM carbon algorithm as proposed may be viewed by some as impeding CARB's statutory requirement to minimize leakage via administratively executed efficient resource shuffling in the EIM. Powerex believes a more appropriate approach, and one that is consistent with CARB's current program design, may be to consider applying either a weighted average carbon intensity for each EIM Entity (similar to the current ACS calculation or to CARB's draft Mandatory Reporting Regulation for "System Power Imports" § 95111.b.5), or alternatively using the unspecified carbon intensity for all imports into California in the EIM. Further work would be necessary to evaluate how to apply such non-zero, non-generator specific, carbon intensities to EIM dispatches in a manner which avoids unintended outcomes in both the energy and carbon markets.

3. The RPS Adjustment.

Powerex understands the importance of the RPS Adjustment provisions as a key component of the Program as it relates to electricity markets. In Powerex's view, the focus of these provisions should be to ensure alignment with California's RPS program while maintaining accurate GHG emission accounting. Powerex is concerned that the provisions as proposed do not achieve the necessary alignment. Powerex's primary concern is specific to the proposed amendments to Section 95852(b)(4)(A) that would require the electricity importer to have title to the RECs associated with the eligible renewable resource in order to claim the RPS Adjustment. This requirement is not consistent with the rules governing the RPS program in which it is an accepted practice for the importer of the substitute electricity to import on an RPS regulated entities behalf and to not have title to these RECs. In this case, it is common for the California entity subject to the California RPS, on whose behalf the importer is importing the substitute electricity, that has title to these RECs.

Rather than proposing its own edits for the RPS Adjustment, Powerex supports those edits proposed by the Western Power Trading Forum in this regard.

Thank you for your review and consideration of these comments. Again, Powerex applauds ARB for its continued work to implement the mandate of AB 32 and, in particular, its work on market-based compliance mechanisms. If you have any questions on the enclosed comments, please contact me, at 415-262-4008 or nvanaelstyn@bdlaw.com.

Sincerely,

Nicholas W. van Aelstyn

cc: Richard W. Corey, ARB Executive Officer (*via email*) (rcorey@arb.ca.gov)
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