PEA
Pacific Energy Advisors, Inc.

TO: Monterey Bay Community Power, Project Development Advisory Committee

FROM: Pacific Energy Advisors, Inc.

SUBJECT: Response to MRW & Associates Peer Review of the Monterey Bay Community Power Community Choice Aggregation Technical Study

DATE: April 11, 2016

On March 31, 2016, MRW & Associates, LLC ("MRW") published a report summarizing the findings of MRW's peer review of the draft Monterey Bay Community Power ("MBCP") Community Choice Aggregation Technical Study ("Technical Study"), which was authored by Pacific Energy Advisors, Inc. ("PEA") and presented to the MBCP Project Development Advisory Committee ("PDAC") on March 10, 2016. Although the MRW peer review did not find any "fatal flaws" or "major assumptions that require revision," MRW did provide certain comments and recommendations that PEA would like to address through this memorandum. In PEA's opinion, the other comments and recommendations reflected in MRW's peer review report are generally informational and do not require formal responses at this time. With regard to the points that will be addressed in this memorandum, these items include:

1. Observation that the projected contracting timeline for MBCP's potential long-term renewable generating facilities, which were included within an indicative portfolio of generating facilities that would serve the MBCP program, "may be optimistic";
2. Observation regarding the uncertainty of longer-term greenhouse gas ("GHG") allowance pricing and its impact on MBCP's projected power costs;
3. Observation that the characterization of projected economic development impacts may be misleading; and
4. Recommendation that MBCP's sensitivity results should be presented on an annual, rather than levelized, basis.

One of MRW's key findings is that the proposed long-term renewable contracting timeline for new resources "may be optimistic" and therefore, MRW recommends that PEA develop a sensitivity for a more conservative long-term renewable contracting timeline. In consideration of this comment, PEA acknowledges that MRW's observation is reasonable and agrees that the assumptions reflected in MBCP's indicative portfolio of new renewable generating are indeed optimistic but not unrealistic. Given PEA's extensive experience with renewable project contracting, PEA believes that the proposed project development/completion timeline reflected in the Technical Study remains reasonable and obtainable, so long as MBCP's actual implementation schedule does not materially differ from PEA's current assumption (that MBCP will commence customer service no sooner than May/June 2017). To the extent that MBCP's implementation schedule is delayed, it is reasonable to assume that long-term renewable contracting efforts would also be pushed back, resulting in initial energy delivery dates that extend beyond the timelines reflected in the Technical Study. Note that PEA does not believe that such a sensitivity is necessary, as MBCP could address renewable project development delays by engaging in additional shortterm renewable energy contracting efforts to cover any "gaps" between anticipated and actual renewable generator start dates. PEA has conferred with Santa Cruz County ("County") staff regarding this item, and staff agreed that it is not necessary to complete the recommended sensitivity analysis at this point in time.

Second, MRW highlights that PEA's estimates related to "very near term" GHG allowance prices are "likely reasonable;" however, MRW explains that there is much uncertainty around longer term pricing for GHG allowances. Therefore, MRW recommends that PEA develop an additional sensitivity around the potential fluctuation of future GHG allowance prices (with ranges established above and below the base case). MRW also requested additional information related to PEA's rationale for higher escalation rates (associated with GHG allowance pricing) between 2020 and 2025. In response to MRW's inquiry focused on the higher rate of escalation for GHG allowance pricing during the 2020-2025 calendar years, PEA utilized a GHG allowance price forecast published by the California Energy Commission,[1] which is reflected in the standard planning assumptions utilized by the investor owned utilities in their integrated resource planning proceedings before the California Public Utilities Commission. It is PEA's understanding that the higher escalation rate reflected in the longer term forecast reflects anticipated reductions in available GHG allowances under California's cap and trade program. PEA has relied upon the forecast published by the state's energy agencies and has not conducted an independent assessment of GHG allowance prices as part of the Technical Study scope. Regarding the additional sensitivity scenario recommended by MRW, PEA has conferred with County staff, which indicated that such a sensitivity analysis was not necessary at this point in time.

PEA also notes MRW's indication that the presentation of economic development benefits, including prospective job creation, within MBCP's Technical Study "can be misleading." In particular, MRW points out that certain elements of the narrative discussion could be misinterpreted by the reader, leading to a potentially inflated understanding of job impacts that may occur within California and throughout the region. With regard to these comments, PEA points out that all economic development impacts reflected in the Technical Study were appropriately characterized as "order of magnitude estimates" that generally lack predictive precision. Care was also taken to point out the relatively small level of local economic development impacts that were assumed to occur within the prospective MBCP service footprint: "only a relatively small portion of the total potential economic development benefits are assumed to accrue within the MBCP Communities." From a practical perspective, PEA acknowledges that the information presented within the Technical Study's economic development discussion is subject to a certain level of interpretation. For example, use of the phrase "as many as," which was highlighted by MRW as potentially misleading, is not inaccurate or inappropriate – as MRW observes, this phrase simply points to the upper end of projected ranges reflected in the economic development discussion. PEA assumes that readers of the Technical Study will understand this characterization and temper expectations in light of the top-end estimates that have been provided within the document. However, based on discussions with County staff, certain revisions were incorporated in the Technical Study narrative to avoid overstating the magnitude of expected economic benefits associated with MBCP implementation.

With regard to the economic development impacts discussion, MRW also observes that use of the term "significant", when characterizing jobs and economic development impacts within California, may be contextually inappropriate in light of the fact that, "There are 19 million workers in California and an

[1] CEC 2013 Natural Gas Issues, Trends, and Outlook, July 2014, Table E-2: Carbon Price.

annual gross state product of over $2.3 trillion." PEA agrees that the projected jobs impacts would represent a relatively small component of California's broader workforce. However, when considering such jobs impacts in light of a recently struggling economy, the prospect of job creation (as a direct result of MBCP's contracting efforts and general operation) is not insignificant, particularly to the individuals that may benefit from gainful employment. This noted, PEA discussed MRW's observation with County staff and agreed to include revisions in the Technical Study narrative that more appropriately characterize the relative impact of economic benefits that may be created through MBCP implementation.

Another noteworthy recommendation provided by MRW, and the final item addressed in this memorandum, relates to the manner in which the sensitivity analyses are presented within the Technical Study. More specifically, MRW believes that it would be "useful to see the year-by-year results for the sensitivities" in addition to the current presentation of such information on a 10-year levelized basis. MRW believes that the year-by-year results would highlight points in time when CCA costs exceed PG&E rates and therefore recommends that PEA "identify any sensitivity cases where the PG&E and CCA rate lines cross." PEA notes that Table 28, Sensitivity Analysis - Levelized Ratepayer Costs (Cents per KWh), provides summary-level insight regarding such scenarios. Within this table, PEA highlighted specific sensitivity scenarios under which MBCP's rates are expected to exceed similar rates charged by the utility. In such instances, it is reasonable to assume that MBCP's rates will exceed those of the incumbent utility at various points in time – such relationships result in the levelized MBCP rate exceeding the projected, levelized rate of PG&E. Conversely, scenarios reflecting levelized rates that are projected to be lower than similar PG&E rate projections subsume annual rate relationships in which MBCP rates are generally lower than PG&E's. Based on PEA's understanding, the MBCP Technical Study was generally intended to inform a "go/no-go" decision by the participating communities as well as provide general information regarding CCA formation within the MBCP footprint. Use of a 10-year levelized rate comparison is both effective and appropriate for this purpose. PEA has conferred with County staff regarding MRW's recommendation, and it was agreed that year-by-year sensitivity results were not necessary to include in the Technical Study.

PEA appreciates the careful and methodical peer review that was completed by MRW. To the extent that the PDAC and/or County would like to further discuss any of the items addressed in MRW's report, PEA is available to do so.