

# PENINSULA CLEAN ENERGY CCA RISK ANALYSIS SUMMARY TABLE

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Prepared by Pacific Energy Advisors, Inc.

## **Peninsula Clean Energy Risk and Mitigation Summary**

The Peninsula Clean Energy CCA Technical Study prepared by Pacific Energy Advisors, Inc. (“PEA”) examined the potential benefits and liabilities associated with forming a Community Choice Aggregation program, which would provide electric generation service to residential and business customers located within (i) the twenty (20) municipalities in the County of San Mateo, and (ii) the unincorporated areas of the County. The Study evaluated projected operations of such a CCA program, which has been named Peninsula Clean Energy (“PCE”), over a ten-year planning horizon, drawing from best available market intelligence and PEA’s direct experience with each of California’s operating CCA programs. This information was used to generate a set of anticipated base case assumptions for PCE operations as well as a variety of sensitivities, which were used to demonstrate how certain changes in the base case assumptions would influence anticipated operating results.

The Study concluded that based on current market prices and various other operating assumptions, PCE would be viable under a broad range of market conditions, demonstrating the potential for customer cost savings and significant GHG reductions. The Study contains a detailed discussion of various risks and uncertainties inherent in operating a CCA program. The following table categorizes the various risks and describes the impacts of each as well as relevant mitigation and adaptation techniques. Risks are categorized as high, medium or low based on the impacts to customers and JPA members in the event that the adverse outcome is realized as well as the likelihood of occurrence in consideration of anticipated mitigation approaches.

**PENINSULA CLEAN ENERGY RISKS AND MITIGATIONS**

| No. | Risk                             | Description   | Impact(s)  | Mitigation and Adaptation  | Likelihood | Impact | Level of Risk/Impact |
|-----|----------------------------------|---|--|--|------------|--------|----------------------|
| 1   | <b>PG&amp;E Rate Uncertainty</b> | <ul style="list-style-type: none"> <li>• Year to year changes in PG&amp;E rates are uncertain;</li> <li>• Generation rates could decline or exit fees could increase.</li> </ul>  | <ul style="list-style-type: none"> <li>• PCE rates could exceed PG&amp;E's rates leading to customer dissatisfaction and attrition.</li> </ul>       | <ul style="list-style-type: none"> <li>• Utilize short term markets for a portion of power purchases so that PCE rates trend with PG&amp;E's;</li> <li>• Manage costs to maintain competitive rates;</li> <li>• Marketing/communications strategy to emphasize PCE value beyond simple rate comparisons;</li> <li>• Develop a balanced set of internal performance metrics, including the consideration of both environmental and rate-related factors.</li> </ul> | High       | Medium | High                 |
| 2   | <b>Regulatory/ Legislative</b>   | <ul style="list-style-type: none"> <li>• Adverse regulatory or legislative developments could increase program costs, reduce opportunities for differentiation and value addition, or impose other limits on program operations.</li> </ul> | <ul style="list-style-type: none"> <li>• Potential for higher costs or reduced ability to differentiate PCE relative to PG&amp;E service.</li> </ul> | <ul style="list-style-type: none"> <li>• Invest in regulatory and legislative personnel and contractors;</li> <li>• Coordinate with other CCE programs and advocates to maximize influence.</li> </ul>   | High       | Medium | High                 |

|   |  |  |   |   |        |        |        |
|---|--|--|---|---|--------|--------|--------|
| 3 | <b>Non-Competitive Rates at Time of Launch/Failure to Launch</b> | <ul style="list-style-type: none"> <li>Results of power supply RFP yield costs that would result in rates above PG&amp;E.</li> </ul>         | <ul style="list-style-type: none"> <li>Program does not launch as planned;</li> <li>County fails to recover past expenditures estimated at \$1.5 million.</li> </ul>        | <ul style="list-style-type: none"> <li>Terminate any ongoing program expenditures;</li> <li>Hold project pending improved market conditions;</li> <li>Terminate program development;</li> <li>Reduce overall project administration costs.</li> </ul>                                 | Low    | Medium | Medium |
| 4 | <b>Power Market Volatility</b>                                   | <ul style="list-style-type: none"> <li>Power prices spike unexpectedly.</li> </ul>   | <ul style="list-style-type: none"> <li>Power supply costs exceed projections and impose need to increase rates;</li> <li>Potential for rates to exceed PG&amp;E.</li> </ul> | <ul style="list-style-type: none"> <li>Multi-year power purchase agreements reduce exposure to price increases;</li> <li>Rate stabilization reserve fund can absorb cost increases without impacting rates;</li> <li>PG&amp;E rates also impacted by power cost increases.</li> </ul> | Medium | Medium | Medium |
| 5 | <b>Liquidity</b>   | <ul style="list-style-type: none"> <li>Lack of adequate liquid assets available to manage system failures or other contingencies.</li> </ul> | <ul style="list-style-type: none"> <li>Inadequate funds could result in delayed vendor payments and ultimately default.</li> </ul>  | <ul style="list-style-type: none"> <li>Establish reserve fund;</li> <li>Maintain undrawn credit line;</li> <li>Phase in program to manage cash flow and build adequate reserves.</li> </ul>   | Low    | High   | Medium |

|   |                         |  |   |  |        |      |        |
|---|-------------------------|--|---|--|--------|------|--------|
| 6 | <b>Supplier Default</b> | <ul style="list-style-type: none"> <li>• One or more key suppliers default on its obligation to provide energy or related services.</li> </ul>           | <ul style="list-style-type: none"> <li>• Replacement power or services could come at higher cost;</li> <li>• Lack of timely resource availability could jeopardize regulatory compliance;</li> <li>• Replacement could require upfront deposit.</li> </ul>  | <ul style="list-style-type: none"> <li>• Restrict contracting of key services to highly qualified organizations;</li> <li>• Impose strict credit standards in selection of power suppliers;</li> <li>• Impose collateral requirements on suppliers to mitigate exposure to default;</li> <li>• Diversify suppliers and contracts;</li> <li>• Monitor supplier credit and project development status to provide early awareness and potential default.</li> </ul> | Low    | High | Medium |
| 7 | <b>JPA Credit</b>       | <ul style="list-style-type: none"> <li>• Limited access to capital (and/or ability for credit rating) inhibits long term contracting ability.</li> </ul> | <ul style="list-style-type: none"> <li>• Pace of new generation infrastructure slower than anticipated;</li> <li>• Reduced economic development benefits;</li> <li>• Potential risk of not meeting long-term contracting requirements under SB 350;</li> <li>• Potential for exposure to short term market fluctuations.</li> </ul> | <ul style="list-style-type: none"> <li>• Utilize deposit account for customer payments (lockbox structure) as security for power purchase agreements;</li> <li>• Build reserves and credit strength over time;</li> <li>• Stage long-term contracting in conjunction with increases in PCE credit capacity.</li> </ul>   | Medium | Low  | Low    |

|   |                                |   |  |   |     |     |     |
|---|--------------------------------|---|--|---|-----|-----|-----|
| 8 | <b>JPA Participation Scale</b> | <ul style="list-style-type: none"> <li>Insufficient interest in forming JPA leads to loss of scale.</li> </ul>  | <ul style="list-style-type: none"> <li>Smaller program would result in proportionately reduced benefits for region;</li> <li>Rates competitiveness challenged if JPA membership covers less than 15% of potential load.</li> </ul> | <ul style="list-style-type: none"> <li>Initial participation known in Q1 2016;</li> <li>JPA could abandon program implementation if critical mass not attained;</li> <li>Phase in plan allows for communities to join at later date;</li> <li>Robust outreach and education efforts to city councils and staff.</li> </ul>  | Low | Low | Low |
| 9 | <b>Customer Opt-Outs</b>       | <ul style="list-style-type: none"> <li>Customers opt-out in greater numbers (greater than 15%) than anticipated during initial opt-out period.</li> </ul> | <ul style="list-style-type: none"> <li>Excess purchased power potentially sold at a loss;</li> <li>Lower than anticipated retail margins.</li> </ul>   | <ul style="list-style-type: none"> <li>Using best available data from existing programs to estimate participation rates should minimize forecast error;</li> <li>Customer phase in allows for service to be offered to additional customers to make up shortfall;</li> <li>Excess power can be liquidated in wholesale market;</li> <li>Portion of supply portfolio can be comprised of short term contracts so that surplus is short-lived;</li> <li>Sensitivity analysis demonstrates that reasonable opt-out ranges do not threaten rate competitiveness;</li> </ul> | Low | Low | Low |

|           |                            |   |  |  |     |      |     |
|-----------|----------------------------|---|--|--|-----|------|-----|
|           |                            |   |  | <ul style="list-style-type: none"> <li>• Reduce administration/operating costs;</li> <li>• Default provider role and opt-out structure imposes practical limits on potential customer attrition;</li> <li>• Robust community marketing and outreach campaign to PCE customers.</li> </ul>  |     |      |     |
| <b>10</b> | <b>JPA Program Failure</b> | <ul style="list-style-type: none"> <li>• Program terminates due to massive customer attrition or financial insolvency.</li> </ul> | <ul style="list-style-type: none"> <li>• Default on power supply contracts and loan obligations by JPA could lead to dissolution (non-recourse to members);</li> <li>• Remaining customers involuntarily returned to PG&amp;E service; Loss of initial bond posting and security deposit (\$115,000).</li> </ul> | <ul style="list-style-type: none"> <li>• Establish policy for rate competitiveness;</li> <li>• Establish policy for revenue sufficiency of adopted rates;</li> <li>• Manage enterprise with qualified staff and contractors;</li> <li>• Ensure all vendor contracts specify that obligations are non-recourse to JPA members.</li> </ul> | Low | High | Low |

|    |                         |  |  |   |     |        |     |
|----|-------------------------|--|--|---|-----|--------|-----|
| 11 | <b>Supply Shortages</b> | <ul style="list-style-type: none"> <li>• Lack of available energy supplies prevents renewable energy and GHG emissions goals from being achieved.</li> </ul>   | <ul style="list-style-type: none"> <li>• Lack of hydro-electric or other carbon neutral energy supply could result in higher GHG emissions rate for PCE portfolio;</li> <li>• Alternatively supply shortages could push up costs beyond expected levels and cause higher rates.</li> </ul> | <ul style="list-style-type: none"> <li>• Primary GHG free energy supply is projected to be sourced from robust renewable energy market that has shown ability to rapidly increase supply (e.g., solar PV);</li> <li>• Secure adequate supplies through multi-year forward purchase contracts;</li> <li>• Can procure from multiple sources of GHG free power including various renewable energy technologies and hydro-electric power.</li> </ul> | Low | Medium | Low |
| 12 | <b>Technology</b>       | <ul style="list-style-type: none"> <li>• Improvements in technology could make program investments obsolete or comparatively costly;</li> <li>• End use generation and efficiency could reduce program sales.</li> </ul> | <ul style="list-style-type: none"> <li>• Potential for higher costs relative to other market players utilizing new technology;</li> <li>• Potential for reduced sales leading to higher rates for remaining customers.</li> </ul>  | <ul style="list-style-type: none"> <li>• Engage in regular long term resource planning integrating supply and demand side resources;</li> <li>• Assemble diverse portfolio of resources in regards to technology as well as commitment terms (e.g., mix of short, mid and long term commitments);</li> <li>• Caution with developing JPA-owned assets.</li> </ul>   | Low | Low    | Low |