BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Application of Pacific Gas and Electric Company (U39E) for Approval of Demand Response Programs, Pilots and Budgets for 2012-2014.

Application 11-03-001
(Filed March 1, 2011)

And Related Matters.

Application 11-03-002
Application 11-03-003

NOTICE OF EX PARTE COMMUNICATION OF THE CALIFORNIA ENERGY STORAGE ALLIANCE

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Counsel for the CALIFORNIA ENERGY STORAGE ALLIANCE

April 14, 2014
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OF THE STATE OF CALIFORNIA

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Pursuant to Rule 8.3 of the California Public Utilities Commission (“Commission”) Rules of Practice and Procedure, the California Energy Storage Alliance (“CESA”)\(^1\) hereby gives notice of the following verbal and written *ex parte* communications initiated by CESA in the above-referenced proceeding.

On April 11, 2014, from approximately 11:30 a.m. to approximately 11:45 a.m., Janice Lin, Executive Director of the CESA, and Don Liddell, of Douglass & Liddell, counsel for

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CESA, discussed the status of the Petition for Modification that was filed by CESA in August 2013, in a telephone call with Scott Murtishaw, Energy Advisor to Commission President, Michael Peevey. The telephone discussion was followed at approximately 4:50 p.m. by the attached self-explanatory email message and attachment sent from Ms. Lin, to Mr. Murtishaw, with copies to Mr. Liddell and Greg Miller, Executive Vice President, Market Development, of Ice Energy, Inc.

To receive a copy of the 
*ex parte* notice please contact Michelle Dangott at 818.961.3003 or mdangott@energyattorney.com.

Respectfully submitted,

Donald C. Liddell
DOUGLASS & LIDDELL
Email: liddell@energyattorney.com

Counsel for the
CALIFORNIA ENERGY STORAGE ALLIANCE

April 14, 2014
Hi Scott

Thanks again for your time on the phone this morning. The market penetration statistics for small thermal storage are as we expected:

The current market adoption rate for small TES equates to a 0.0221% level, and 0.0065% for

behind the meter end customer projects. See Chart 3 in the attached document for more background.

Given this clear statement of market immaturity, we would very much appreciate President Peevey's assistance in issuing an Alternate PD. If you have any questions about the attached market research regarding thermal storage for refrigerant based air conditioning units equal to or less than 20 tons, please don't hesitate to contact Greg Miller directly (contact info can be found below)

Please also of course feel free to call me/Don if you'd like to discuss further. Also, FYI Don will be issuing an ex parte on Monday on this topic

Kind regards
Janice

GREG MILLER

Executive Vice President, Market Development

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Follow Ice Energy on Twitter: twitter.com/IceENRG
California Market Report on Thermal Energy Storage in Relationship to Refrigerant Based Direct Expansion Air Conditioning Equipment ≤ 20 tons

Report Created by Greg Miller, Ice Energy EVP, Market Development, April 11, 2014

Market Opportunity for Small TES:
The purpose of this report is to document the current market installed capacity of small Thermal Energy Storage (TES) in relationship to market installed capacity of Direct Expansion Refrigerant Based Air Conditioning equipment ≤ 20 tons in order to determine market penetration level of Small TES.

Ice Energy in cooperation with three Municipal Owned Utilities conducted city wide HVAC load surveys canvassing 98% of all commercial and industrial businesses in the following three utility service territories: Burbank Water and Power, Glendale Water and Power, and Redding Electric Utility. HVAC survey data was then compared with utility summer peak capacities in order to evaluate the market potential for small TES in the State of California. See Chart 1 below.

<table>
<thead>
<tr>
<th>HVAC Market Assessments</th>
<th>MOU City Wide Surveys</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BWP</td>
</tr>
<tr>
<td>Utility Peak Load (MW)</td>
<td></td>
</tr>
<tr>
<td>C&amp;I Utility End Customers Surveyed</td>
<td>300</td>
</tr>
<tr>
<td>Total # of HVAC units identified during survey</td>
<td>6,340</td>
</tr>
<tr>
<td>Total HVAC Peak Load Surveyed (MW)</td>
<td>16,340</td>
</tr>
<tr>
<td>HVAC Load as a % of Utility Peak (MW)</td>
<td>30%</td>
</tr>
<tr>
<td>TES (Ice Bears) Systems Per Customer</td>
<td>3.6</td>
</tr>
<tr>
<td>TES Market Opportunity @ 10% Penetration (MW)</td>
<td>9.0</td>
</tr>
</tbody>
</table>

Chart 1: HVAC Load Survey Results

Based on the applicability of small TES in the three utility service territories, it was confirmed small TES can significantly contribute to the States’ energy storage and peak reduction objectives permanently eliminating an average 30% of all commercial and industrial on-peak air conditioning load.

Following completion of this three surveys, Ice Energy then applied the 30% market opportunity average across all Municipal Owned Utilities, Investor Owned Utilities, and Water Irrigation Districts using published 2009 utility integrated resource planning on-peak requirements to calculate the total state-wide opportunity for small TES. See Chart 2 below.
### Chart 2: HVAC Load per Utility Service Territory

The report concludes the target HVAC market for small TES is 18,593 GW. As of April 2014, Ice Energy has installed a total of 4.1 MW under utility funded projects and has completed 1.2 MW of end customer funded projects. The current market adoption rate for small TES equates to a 0.0221% level, and 0.0065% for behind the meter end customer projects. See Chart 3 Below.

### Total California Market for Small TES (includes all IOU's, Electric Utility Water Districts, and Municipal Owned Utilities)

<table>
<thead>
<tr>
<th>Peak Load (MW)</th>
<th>Addressable AC Peak Load (MW)</th>
<th>Economic Development Opportunity for the State</th>
</tr>
</thead>
<tbody>
<tr>
<td>61,978</td>
<td>18,593</td>
<td>$37,186,800,000</td>
</tr>
</tbody>
</table>

### Current Small TES Market Penetration Level on installed Peak Capacity

<table>
<thead>
<tr>
<th></th>
<th>Current Small TES Market Penetration Level on installed Peak Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ice Energy TES system applied to ≤20 tons HVAC equipment</td>
<td></td>
</tr>
<tr>
<td>Small TES installed base with CA Utility as of April 2014 (MW)</td>
<td>4.1</td>
</tr>
<tr>
<td>Current Market Adoption % for CA Market as of April 2014</td>
<td>0.0221%</td>
</tr>
<tr>
<td>Small TES installed base with CA end Users April 2014 (MW)</td>
<td>1.2</td>
</tr>
<tr>
<td>Current Market Adoption % for CA Market as of April 2014</td>
<td>0.0065%</td>
</tr>
</tbody>
</table>

### Chart 3: HVAC Market Opportunity and Small TES Penetration