### DOCKETED

<table>
<thead>
<tr>
<th>Docket Number:</th>
<th>21-IEPR-06</th>
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<tbody>
<tr>
<td>Project Title:</td>
<td>Building Decarbonization and Energy Efficiency</td>
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<tr>
<td>TN #:</td>
<td>239441</td>
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<tr>
<td>Document Title:</td>
<td>Presentation - Energy Efficiency is Critical for a Decarbonized Future</td>
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<tr>
<td>Description:</td>
<td>S1.2 Ken Rider, CEC_ADA.</td>
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<td>Filer:</td>
<td>Raquel Kravitz</td>
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<td>Organization:</td>
<td>California Energy Commission</td>
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<td>Submitter Role:</td>
<td>Commission Staff</td>
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<tr>
<td>Submission Date:</td>
<td>8/23/2021 5:00:41 PM</td>
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<td>Docketed Date:</td>
<td>8/24/2021</td>
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California Energy Commission

Title: The Role of Energy Efficiency in a Decarbonized Future

Presenters: Ken Rider, Chief Policy Advisor to Chair Hochschild

Date: 8/24/21
Energy Efficiency is Critical for a Decarbonized Future

Source: E3 PATHWAYS Model
Path Dependency of Efficiency

Starting Point

First

Second

First

100 Percent Clean Electricity

Large capital savings from Smaller Grid

Second

Demand Reduction (Energy Efficiency)

Delayed capital savings, possible curtailment
Path Dependency of Efficiency

Starting Point

Decarbonized HVAC System

First

Second

Efficient Building Envelope

First

Second

Smaller sized HVAC system leading to cost savings.

Larger HVAC system leading to increased cost and GHGs from refrigerant.
Effects of electrification with the most efficient technology versus standard technology

**Consumer Savings**

- Reduce Electricity Generation Needed by 19%
- 2.2 Billion Reduction in Annual Utility Bill Costs

**Electricity Generation Needed**

- Standard Technologies: 47.6 TWh Needed
- Most Efficient Technologies: 38.6 TWh Needed

*In 2020 dollars

Note: “Standard Technologies” and “Most Efficient Technologies” represent a comparison of the “aggressive electrification” and “efficient aggressive electrification” scenarios examined by CEC staff.
Thank You!
Discussion/Questions