Bill Protection Introduction
1. Review Decision Parameters & Principles
2. TOU Bill Protection vs. SJV Bill Protection
The IOU bill protection workshop proposals and the IOU’s Bill Protection and Affordability advice letters:

– Should incorporate monthly bill protection, and, as appropriate, annual true-up, mechanisms and must aim to avoid any monthly “bill shock” for participants;
– Should consider all pre- and post- pilot implementation energy costs (propane, wood, as feasible; and, as appropriate, natural gas and electricity costs);
– May consider a higher baseline allowance and/or a waiver of the Super User Electric Surcharge;
– Must be standardized across PG&E and SCE, who must collaborate and propose the same approach and present this in nearly identical advice letters;
– Will not require presentation of individual customer propane and/or wood bills as an eligibility criteria, but rather will be based on modeled customer costs and generalized assumptions, which may be reviewed and updated periodically to adjust the approach, as needed;
– Will be offered for an initial period of three years to each household receiving appliance upgrades, with a cost of $500 per household as a starting point; and
– Will consider likely rebound effects and comfort needs, particularly amongst the poorest households that may have severely curtailed propane usage for water and/or space heating due to high costs.
Bill Protection Comparison

**Time of Use Bill Protection**
- **Purpose:** Offered to enable customers to try a new rate design and choose the rate that works best for them
- **Duration:** Offered for 12 months
- **Frequency:** One annual True-up Credit
- **Basis:** Electric bills under two rate options

**SJV Pilot Bill Protection**
- **Purpose:** Enable customers to transition off of propane without concern of paying higher energy cost
- **Duration:** Initial period of 3 years
- **Frequency:** Monthly bill protection
- **Basis:** All energy, including propane/wood costs
  - Based on Modeled customer costs/generalized assumptions
  - Adjusted as pilot proceeds
  - Consider rebound effect & comfort needs
PG&E & SCE
Initial Bill Protection Proposal
Agenda

1. Joint IOU Guiding Principles
2. Initial Joint IOU Proposal
3. Data Elements & Examples
4. SCE Model & Assumptions
5. PG&E Pilot Cost Analysis
6. Risks & Mitigation Plan of Proposal
7. Administrative & Customer burdens
8. Open Questions
9. Appendix
Joint IOU Guiding Principles

1. Should be simple to understand, quick, and easy to implement uniformly across IOUs in a cost effective manner
2. Should be adjusted as data is collected throughout the course of the Pilot
3. Be responsive to customers in the targeted communities and advocacy groups
4. Inform subsequent rollout in Phase 3
5. Comply with Commission rules & expectations
6. Target bill protection to customers whose post electrification energy costs are higher than their pre-electrification energy costs.
1. Collect all available pre pilot non-electric energy costs
2. Make informed assumptions where necessary
3. Estimate pre-pilot energy costs for all pilot participants
4. Provide a bill protection credit to participants whose post pilot energy costs exceed pre-pilot energy costs
5. Maintain High-Usage Charge and the existing all-electric baseline allowance
6. Use the $500/household to define the budget cap for all participants, and not as a per household cap
Data Elements

<table>
<thead>
<tr>
<th></th>
<th>Pre Electrification Data</th>
<th>Post Electrification Data</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Electric</strong></td>
<td>Customer Electric bills</td>
<td>Customer Electric bills</td>
</tr>
<tr>
<td><strong>Non electric</strong></td>
<td>Propane/wood bills</td>
<td>Propane/wood bills</td>
</tr>
<tr>
<td><strong>Propane, wood</strong></td>
<td>Informed Assumptions</td>
<td>Informed Assumptions</td>
</tr>
<tr>
<td></td>
<td><strong>Informed Assumptions</strong></td>
<td><strong>Potential Residual propane/wood true-up</strong></td>
</tr>
</tbody>
</table>

\[
\sum_{\text{Post Electrification energy costs}} - \sum_{\text{Pre-Electrification energy costs}} = \Delta \text{ of Energy costs}
\]

Positive \(\Delta\) of Energy costs = Credit

**OR**

Negative \(\Delta\) of Energy costs = Savings/No Credit
### Examples of NON Electric Pre-Pilot

#### Example 1 (Expected CARE Customer)

<table>
<thead>
<tr>
<th>Current Annual Energy Services</th>
<th>Pre-Electrification Energy Cost</th>
<th>Post Electrification *Discounts included</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electric bill</td>
<td>$1,000</td>
<td>$1,300</td>
</tr>
<tr>
<td>Propane</td>
<td>$1,400</td>
<td>$0</td>
</tr>
<tr>
<td>Total Energy Cost</td>
<td>$2,400</td>
<td>$1,300</td>
</tr>
</tbody>
</table>

$1,300 - $2,400 = -$1,100 $\rightarrow$ Savings/No Credit

#### Example 2 (CARE Propane Curtailer)

<table>
<thead>
<tr>
<th>Current Annual Energy Services</th>
<th>Pre-Electrification Energy Cost</th>
<th>Post Electrification *Discounts included</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electric bill</td>
<td>$1,000</td>
<td>$1,300</td>
</tr>
<tr>
<td>Propane</td>
<td>$250</td>
<td>$0</td>
</tr>
<tr>
<td>Total Energy Cost</td>
<td>$1,250</td>
<td>$1,300</td>
</tr>
</tbody>
</table>

$1,300 - $1,250 = $50 $\rightarrow$ $50 Credit
Model

- Pull up model
• Follow same assumptions for customers that keep propane stoves
  – Require CBOs to interact with these customers to obtain monthly propane costs
• Any customer identified as a low consuming propane customer at enrollment
  – Will be flagged in the database
  – Total post-electrification energy bill will be monitored
  – May require bill protection above and beyond the $500 allocated in the Decision
PG&E Pilot Cost Analysis

- Most customers will see a net decrease in overall annual energy costs as a result of the removal of propane appliances (at minimum space & water heating)

- PG&E finds that for customers that go **ALL** Electric & are on an all Electric baseline
  - 85% will see an electric bill increase
  - 15% will see an electric bill decrease

- Electric bill increase will be offset by propane bill savings

- Propane curtailers will likely see a net increase in their energy costs
# Risks & Mitigation of Proposal

<table>
<thead>
<tr>
<th>Risk</th>
<th>Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data availability</td>
<td>Leverage CEN/CBO relationships with community to collect accurate data</td>
</tr>
<tr>
<td>Manual error</td>
<td>IOUs will establish checks &amp; balances processes to identify and correct errors</td>
</tr>
<tr>
<td>Customers in arrears</td>
<td>IOUS will work with CEN /CBO to get customers in good standing</td>
</tr>
<tr>
<td>Provision of data is voluntary</td>
<td>IOUs will make informed assumptions</td>
</tr>
<tr>
<td>Post electric usage is more than estimated</td>
<td>IOUs will leverage the Community Energy Navigators to educate customers</td>
</tr>
<tr>
<td>Runaway Energy Costs</td>
<td>Establish appropriate household cap and red flags if customers trend significantly higher than expected</td>
</tr>
</tbody>
</table>
## Administrative Burden

<table>
<thead>
<tr>
<th>Identify Administrative Burden</th>
<th>Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collection of pre-pilot energy cost data</td>
<td>IOUs will leverage CBOs and the Community Energy Navigator</td>
</tr>
<tr>
<td>Billing system IT costs</td>
<td>IOUs will explore cost effective alternative means</td>
</tr>
<tr>
<td>Manual Error</td>
<td>IOUs will implement checks &amp; balance processes to identify and correct manual errors</td>
</tr>
<tr>
<td>Defining when Bill Protection starts</td>
<td>IOUs will allow flexibility in the bill protection implementation</td>
</tr>
</tbody>
</table>
# Customer Burdens

<table>
<thead>
<tr>
<th>Identify Customer Burden</th>
<th>Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comprehension of bill protection approach</td>
<td>Customer education via Community Energy Navigator, CBOs, Outreach</td>
</tr>
<tr>
<td>Provision of pre-pilot non-electric energy cost data</td>
<td>IOUs will work with the Community Energy Navigator</td>
</tr>
<tr>
<td>Arrearages</td>
<td>IOUs will use existing programs to help eliminate customer arrearages.</td>
</tr>
<tr>
<td>Bill Protection Application lag</td>
<td>IOUs will use True-up mechanism as needed</td>
</tr>
</tbody>
</table>
Workshop Questions

Communication & Coordination

- How to explain methodology to customers?
- Should Bill protection credits be applied monthly/quarterly?
- How do PA’s approach customers in arrears?
- How should PAs approach customers who have recently purchased propane appliances?
- How should PAs approach private builders active in the community?
- Should customers that reject home heating and water heating electric appliances receive Bill protection?

Analysis Refinements

- Should the Bill Protection approach compare post pilot electric bills to 2019 pre-pilot energy bills for the entire 3 years?
- Should we account for potential changes in weather, or price of energy (electric & non electric) from year to year?
- Should we track/account for household changes (ex. # of occupants)
## Appendix: Super User Surcharge

With an all-electric baseline, very few residents would hit 400+% of baseline.

<table>
<thead>
<tr>
<th>Community</th>
<th>% of Residents with Super User Surcharge</th>
<th>Low Case (HVAC + DHW)</th>
<th>High Case (HVAC, DHW, Clothes Dryer, Oven/Range)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Post-Electrification</td>
<td>All-Electric Baseline</td>
<td>Post-Electrification</td>
</tr>
<tr>
<td>Allensworth</td>
<td>26%</td>
<td>28%</td>
<td>0%</td>
</tr>
<tr>
<td>Alpaugh</td>
<td>11%</td>
<td>12%</td>
<td>1%</td>
</tr>
<tr>
<td>Cantua Creek</td>
<td>7%</td>
<td>10%</td>
<td>0%</td>
</tr>
<tr>
<td>Fairmead</td>
<td>16%</td>
<td>19%</td>
<td>8%</td>
</tr>
<tr>
<td>La Vina</td>
<td>7%</td>
<td>8%</td>
<td>1%</td>
</tr>
<tr>
<td>Lanare</td>
<td>20%</td>
<td>22%</td>
<td>7%</td>
</tr>
<tr>
<td>Le Grand</td>
<td>9%</td>
<td>11%</td>
<td>2%</td>
</tr>
<tr>
<td>Seville</td>
<td>14%</td>
<td>15%</td>
<td>1%</td>
</tr>
<tr>
<td>Overall</td>
<td>13%</td>
<td>15%</td>
<td>3%</td>
</tr>
</tbody>
</table>
Appendix: Model

• **Decision:** “Emphasize how the approach minimizes administrative barriers and undue burden for pilot participants while providing **reliable protection against energy cost increases**” (11.2, pg. 77)

• Leverage SCE Model with dummy customer data to quantitatively define
  – “Reliable protection”
    • Customer Education
  – “Appropriate Energy cost increase”
    • What is Bill shock for customers?
    • What is a sufficient increase in energy cost?
    • Post-pilot costs ≤ Pre-pilot costs
  – “Customer Affordability”
### Appendix: Examples of NON Electric Pre-Pilot Customer Bills

#### Example 1 (Expected Customer)

<table>
<thead>
<tr>
<th>Propane Deliveries</th>
<th>Wood Delivery</th>
<th>Cost $</th>
<th>Gallons</th>
</tr>
</thead>
<tbody>
<tr>
<td>December 2018</td>
<td>None</td>
<td>$300</td>
<td>?</td>
</tr>
<tr>
<td>March 2019</td>
<td>None</td>
<td>$279</td>
<td>?</td>
</tr>
<tr>
<td>November 2019</td>
<td>None</td>
<td>$616</td>
<td>?</td>
</tr>
</tbody>
</table>

#### Example 2 (Mixed Fuel)

<table>
<thead>
<tr>
<th>Propane Delivery</th>
<th>Wood Delivery</th>
<th>Cost $</th>
<th>Gallons</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>November 10 2018</td>
<td>$150-$250</td>
<td>N/A</td>
</tr>
<tr>
<td>January 30th 2019</td>
<td>None</td>
<td>$600</td>
<td>?</td>
</tr>
</tbody>
</table>

#### Example 3 (Propane Curtailer)

<table>
<thead>
<tr>
<th>Propane Delivery</th>
<th>Wood Delivery</th>
<th>Cost $</th>
<th>Gallons</th>
</tr>
</thead>
<tbody>
<tr>
<td>December 10 2018</td>
<td>None</td>
<td>$425</td>
<td>?</td>
</tr>
</tbody>
</table>

#### Example 4 (No Data/ Usage?)

<table>
<thead>
<tr>
<th>Propane Delivery</th>
<th>Wood Delivery</th>
<th>Cost $</th>
<th>Gallons</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>None</td>
<td>$0</td>
<td>0</td>
</tr>
</tbody>
</table>