



Energy Storage Report

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Outline: 2020 Energy Storage Report

1. Why storage?
2. Key takeaways
 - Interpreting results
3. What next?
4. Recommended motion

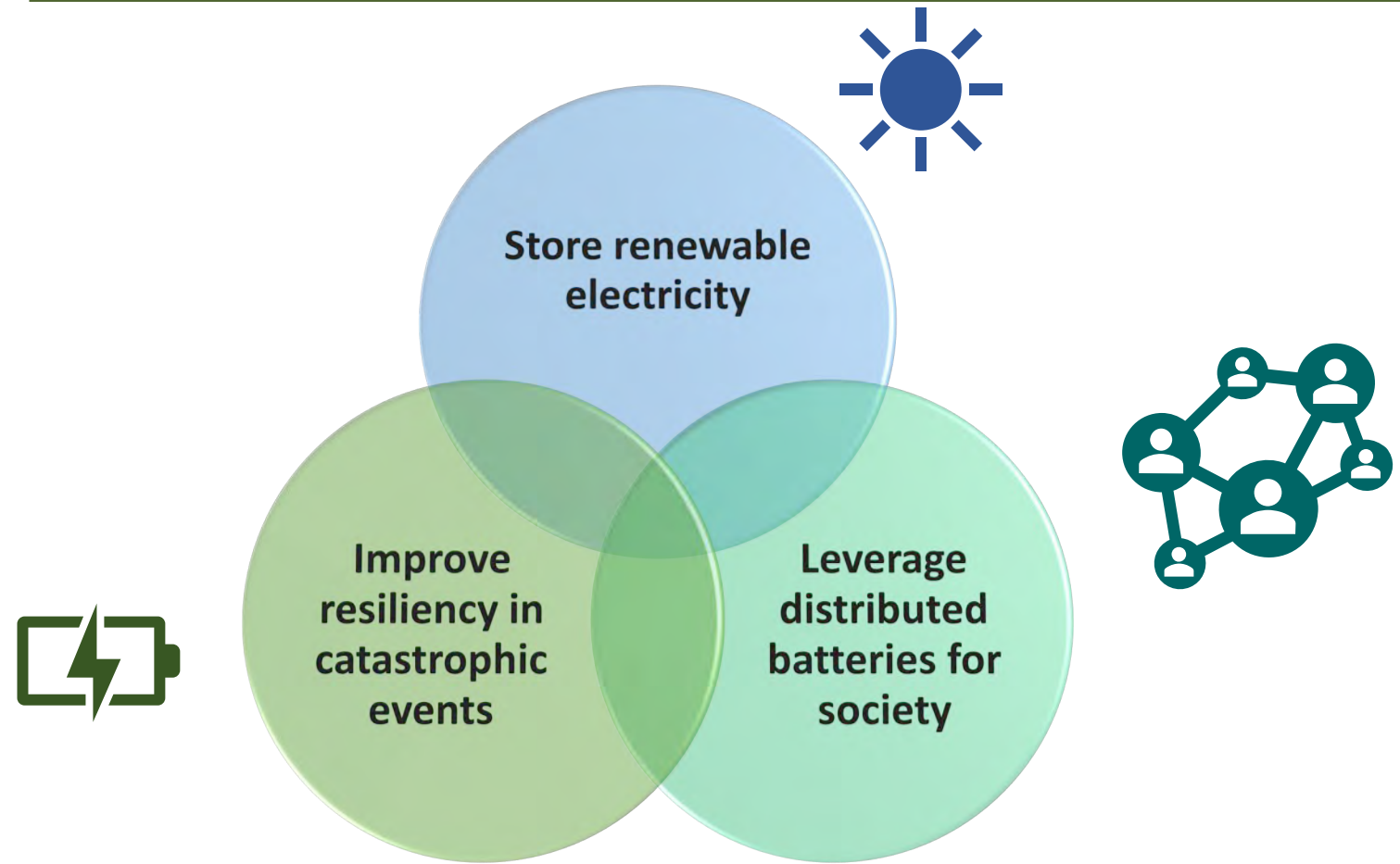


Batteries surging & can lower CO₂ emissions

1. Battery installations surging & costs decreasing
2. CPAU required to investigate energy storage
3. CPAU did not set energy storage targets in 2011, 2014, or 2017
4. 2020 CPAU & SEPA analyses showed energy storage not yet cost effective, therefore:
 - CPAU will not set energy storage targets in 2020, but will continue to look for opportunities & align incentives

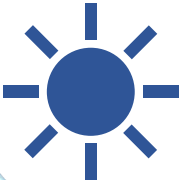


Want to lower CO₂ & empower consumers

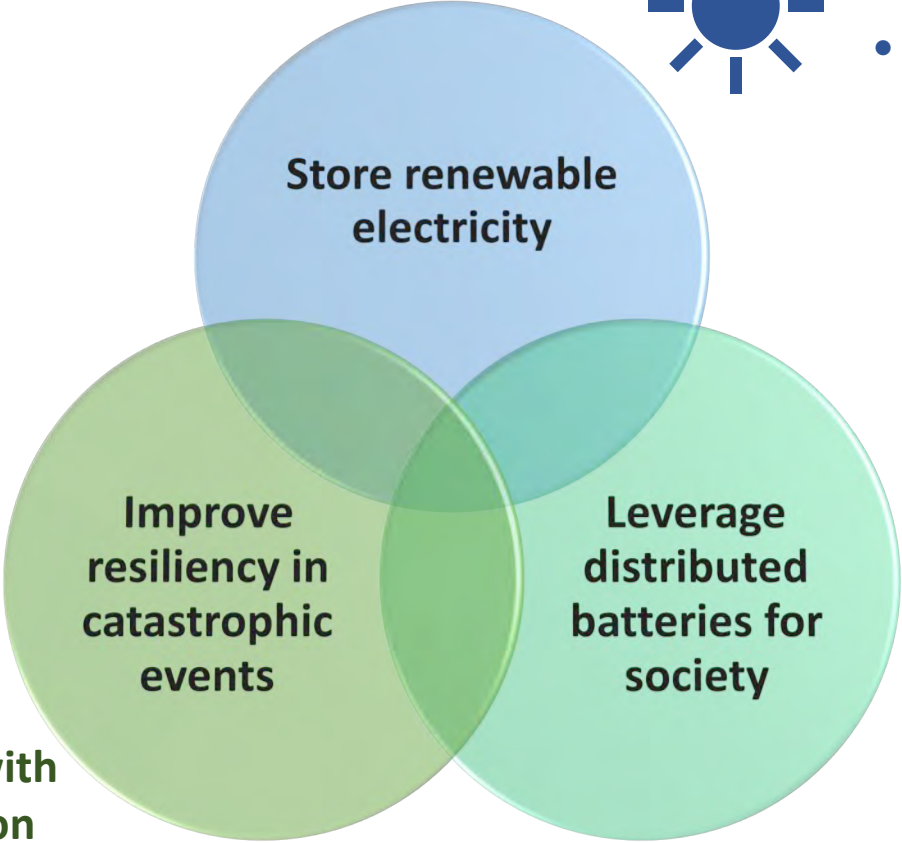




But... batteries still costly & uses cases compete



- Curtailment is less costly
- Carbon price is too low



Could work with critical location

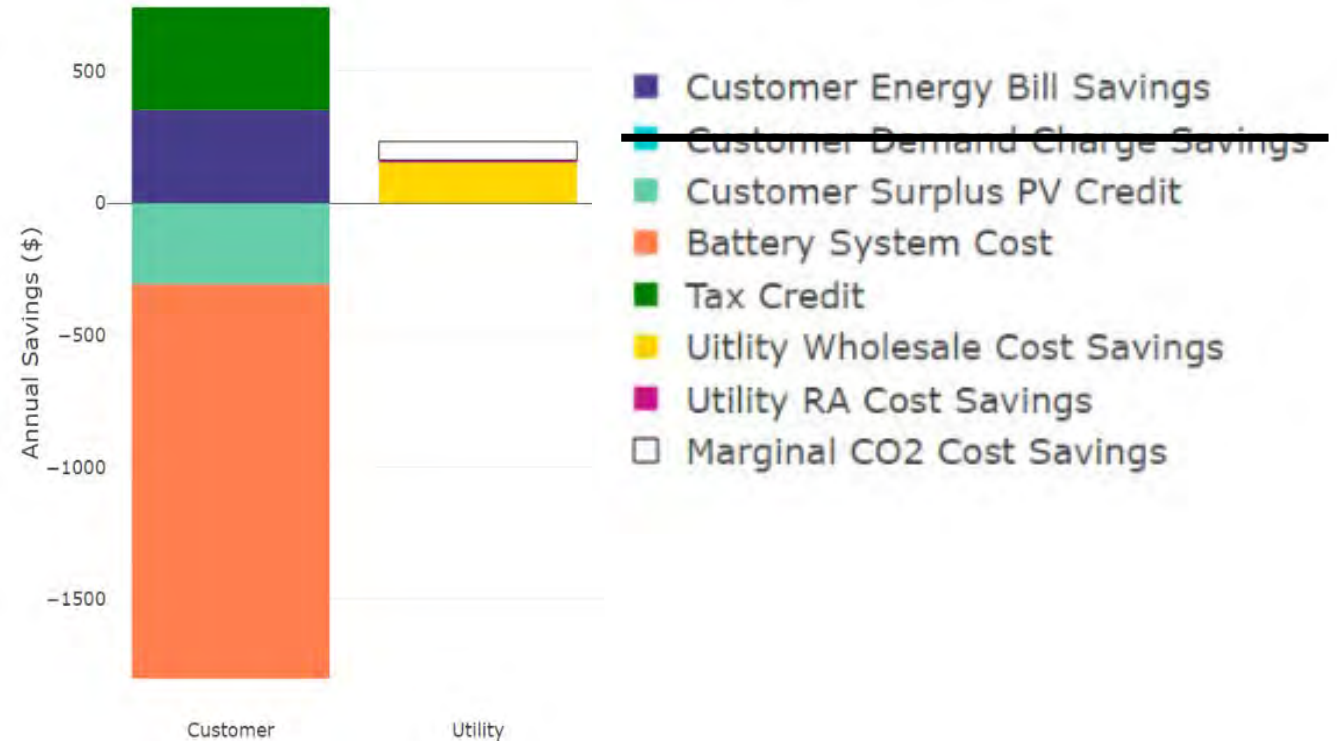
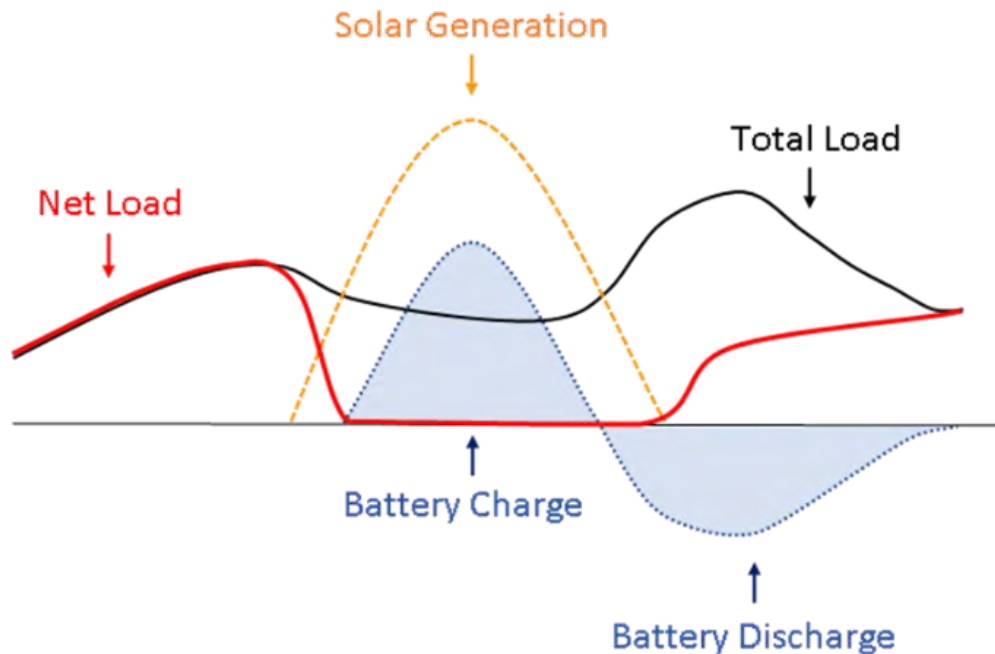


- Must align incentives
- Use cases currently compete



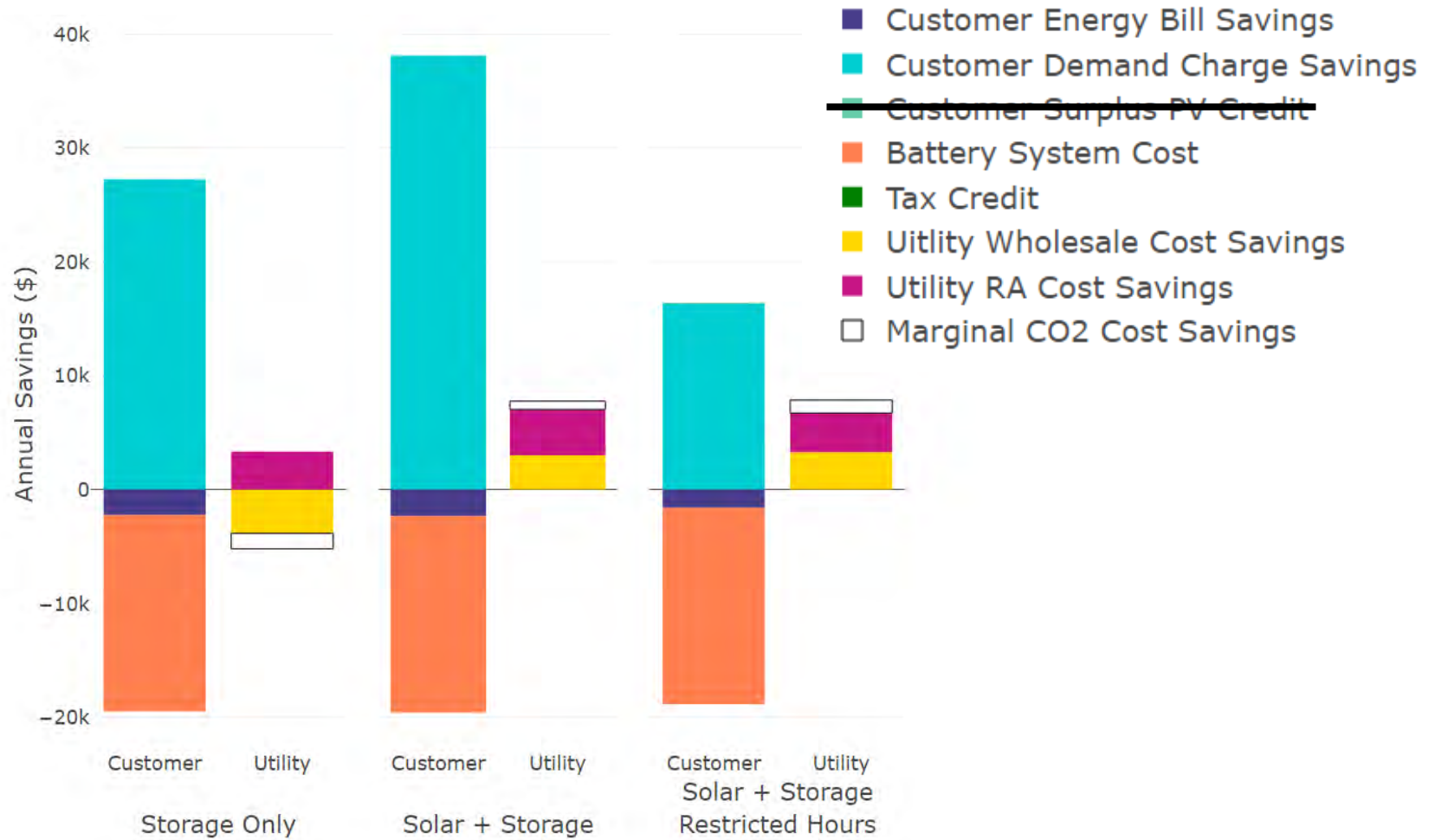
Interpreting modeling results for Residential battery

- Batteries don't save money for homeowner with solar (excluding resiliency benefits)
- Batteries are still an expensive way to save small amount of carbon



Interpreting modeling results for Commercial battery

- Comm. customers peak earlier than the City or CA grid
 - » Lowering comm. peak doesn't help grid
- Could consider revised TOU or other tools to align incentives





Next Steps

1. Submit Staff report to CEC
2. Investigate more specific cases for resiliency
3. Work to align incentives as storage prices decrease
4. Consider pilot of smart electric heat-pumps and smart charging for EVs



Recommended Motion

Staff, the UAC, and the Finance Committee recommend that Council decline to adopt energy storage system targets under California Assembly Bill (AB) 2514 at this time, and that Council receive the 2020 City of Palo Alto Utilities Energy Storage Report. The [CPAU 2020 Energy Storage Report](#)¹ was also submitted to the California Energy Commission (CEC) in December of 2020.

¹<https://efiling.energy.ca.gov/GetDocument.aspx?tn=236202-1&DocumentContentId=69171>

End of Presentation

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