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# CPUC 2021 Energy Efficiency Potential and Goals

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# Agenda

1. Introduction to CPUC Energy Efficiency Potential and Goals
2. Goalsetting process and stakeholder activity for our 2022-beyond goals.
3. Key study updates this cycle
4. Approach to avoided cost vintages
5. Overview of proposed goals
6. Forecasted impacts on both energy efficiency savings and fuel substitution savings
7. Next Steps / Q&A

# How CPUC Adopts Energy Efficiency Goals

Every two years, CPUC's Energy Efficiency Potential and Goals Study forecasts several scenarios of cost effective, achievable savings.

CPUC then adopts annual energy savings goals -- requirements that IOUs must achieve.


**State policy:** All cost effective achievable energy efficiency

**CPUC Energy Efficiency Potential Study** produces forecasted EE portfolio

**Current**

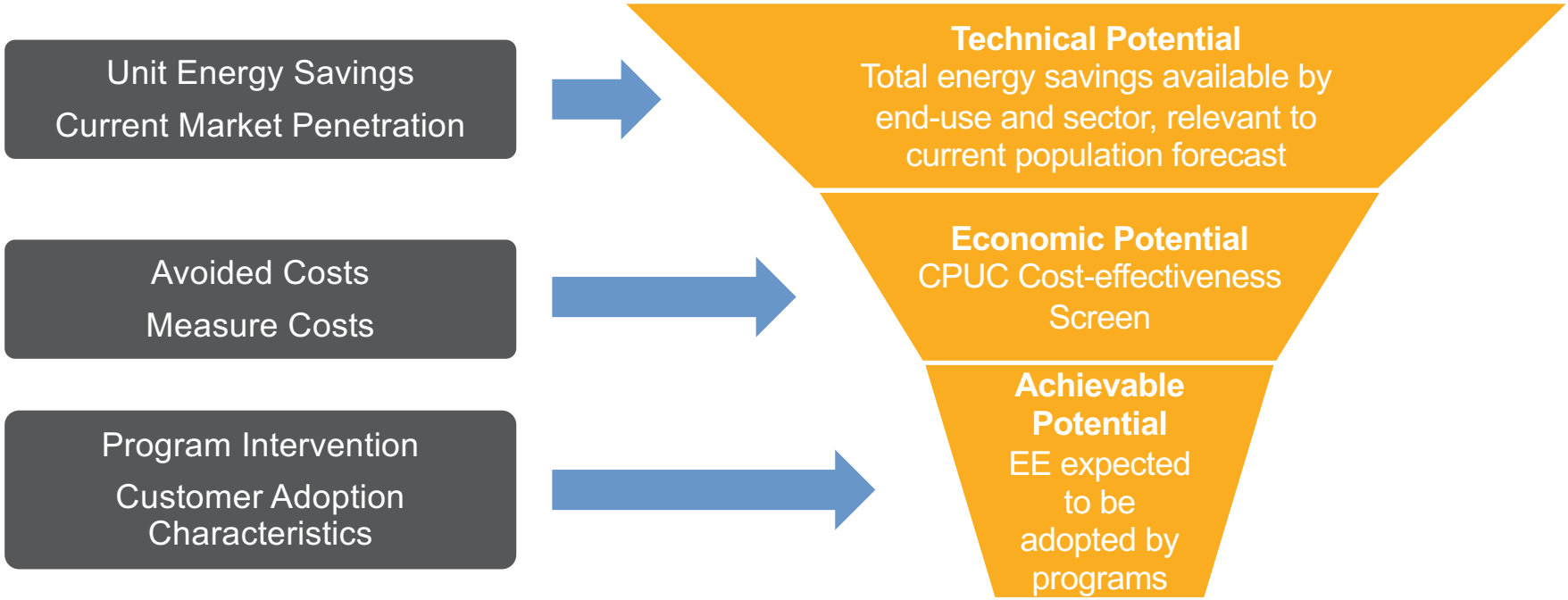
CPUC goals expressed in 1st-year kWh, kW, Therms.

**Starting in 2024**

CPUC goals expressed in **Total System Benefit ($)**

IOUs/administrators design portfolios to meet/exceed goals cost effectively

# EE Potential and Goals Study Approach




Establishes Goals & Scenarios for Forecast

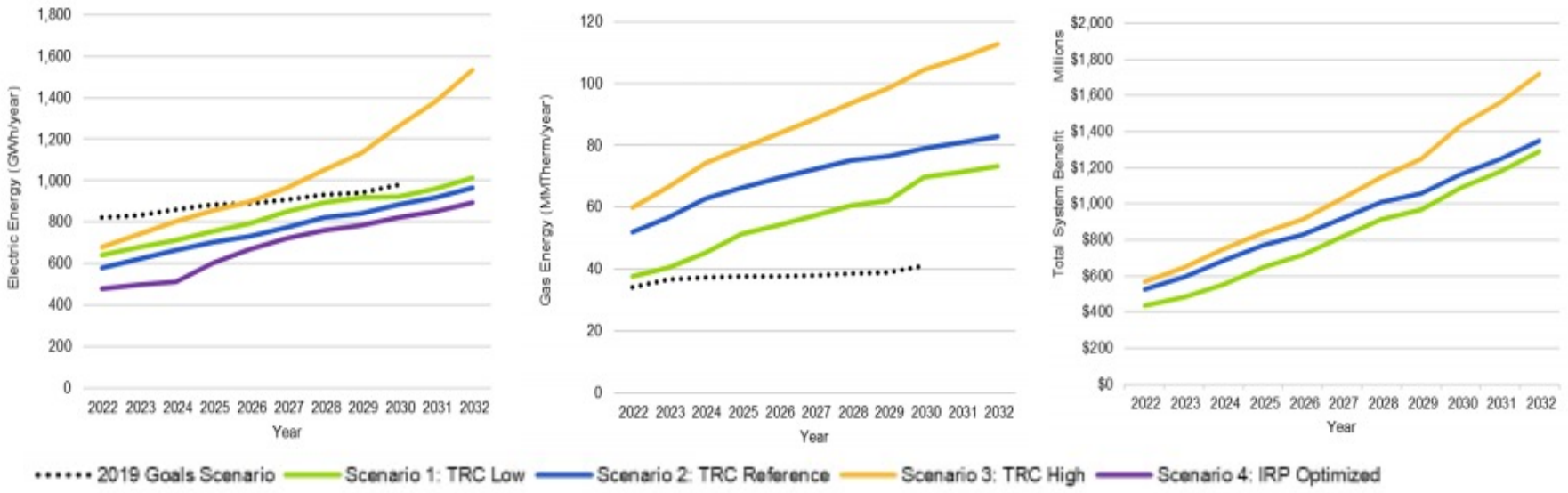
# Key Areas of Improvement This Study Cycle

- Fuel Substitution Forecasting.
- Sensitivities for Covid and EE-DR impacts (final results to be issued separately).
- EE-IRP Analysis: Use IRP to assess screen for cost effectiveness
- Market Studies:
  - Customer adoption model now based on several factors, not just economic attractiveness.
  - Industrial/ag: Better characterization potential for some subsectors.
- Total System Benefit (TSB) output metric
- Use of two Avoided Cost Calculator vintages: 2020 and 2021 ACCs.

# Approach to Avoided Cost Vintages

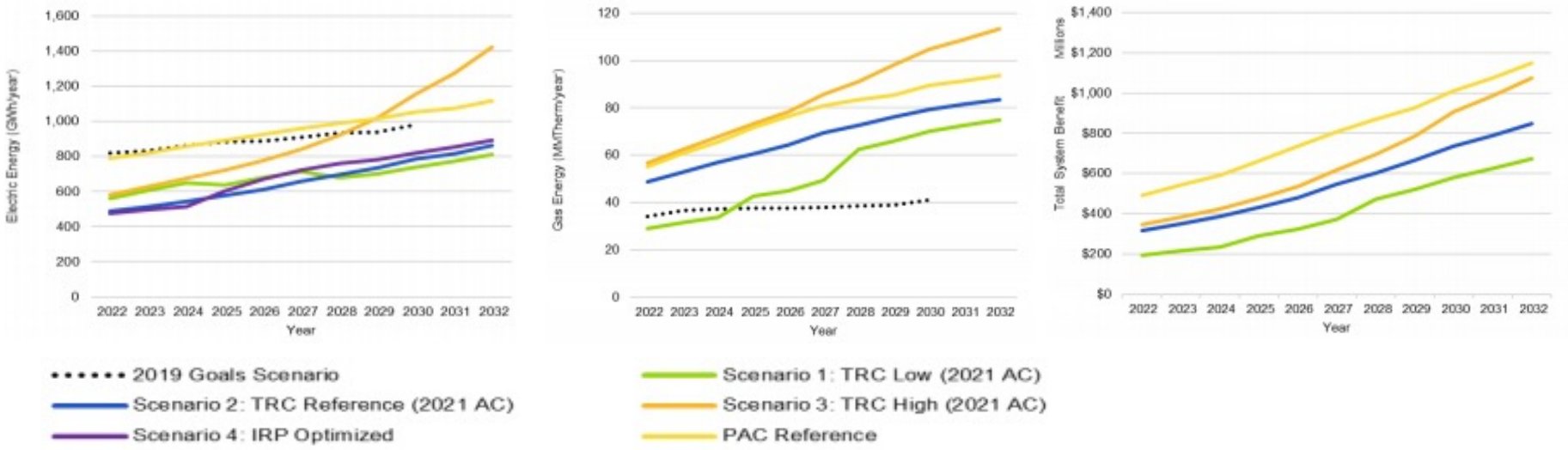
- Potential and Goals Study uses CPUC Avoided Cost Calculator (ACC) values to calculate cost effectiveness and Total System Benefit.
- D.21-05-031 instructed IOUs to use 2020 avoided costs for 2022-3 portfolio budget approvals.
- Draft Potential and Goals Study was published in April 2021, using 2020-adopted ACC values. Meanwhile, 2021 ACC was issued later in the Spring.
- Proposed 2022-32 energy efficiency goals are based on two ACC vintages:
  - 2022-3 goals: 2020 ACC values
  - 2024-beyond goals: 2021 ACC values

# Results Using 2020 ACC




- Portfolio-wide electric savings is reduced by fuel substitution (increases electric usage) and lower cost effectiveness of electric EE.
- Increase in gas savings is from fuel substitution.

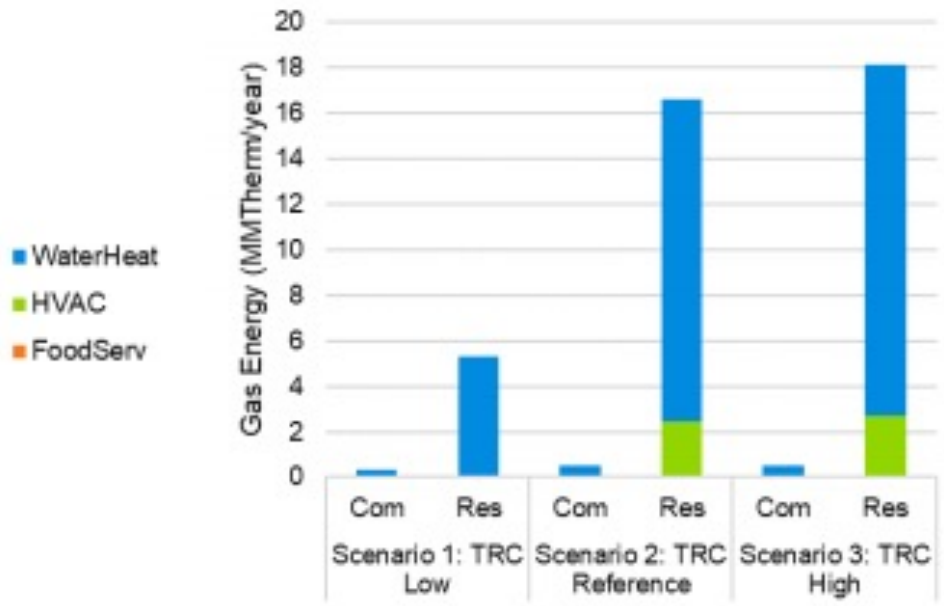
# Results Using 2021 ACC




- Significantly lower electric equipment savings (vs 2020 ACC results), moderately lower gas savings -- because of lower avoided costs.
- *Slightly* more fuel substitution under 2021 ACC.

# Fuel Substitution Savings

Fuel Substitution Electric and Gas Energy Impacts in 2022 (with 2020 Avoided Costs)




- Fuel substitution was not included in 2019 EE Potential and Goals Study
- Significant fuel savings potential found in most study scenarios – except Scenario 1.
- Water heating fuel substitution potential tends to be more cost effective than space conditioning.

| Savings Metric | Program Type | 2022 Goals – Previous Study | 2022 Goals – New Study<br>2020 ACC<br>Scenario 2: TRC Reference | 2024 Goals – New Study<br>2021 ACC<br>Scenario 2: TRC Reference |
|---|---|---|---|---|
| **Electric Energy (GWh/Year)** | Fuel Substitution | - | -127 | -151 |
| | BROs | 443 | 502 | 578 |
| | EE Equipment | 378 | 205 | 119 |
| | **Total** | **821** | **707** | **546** |
| **Converted Electric Energy (GWh/Year)** | Fuel Substitution | - | 375 | 597 |
| | BROs | 443 | 502 | 578 |
| | EE Equipment | 378 | 205 | 119 |
| | **Total** | **821** | **1,082** | **1294** |
| **Electric Demand (MW)** | Fuel Substitution | - | -12.5 | -14.9 |
| | BROs | 83.1 | 110.3 | 126.0 |
| | EE Equipment | 80.0 | 39.1 | 23.0 |
| | **Total** | **163** | **137** | **134** |
| **Gas Energy (MMTherms/ Year)** | Fuel Substitution | - | 17.1 | 20.4 |
| | BROs | 17.4 | 21.1 | 24.5 |
| | EE Equipment | 16.7 | 13.6 | 12.0 |
| | **Total** | **34.2** | **51.8** | **56.9** |
| **TSB ($ Millions)** | Fuel Substitution | - | $61 | $98 |
| | BROs | - | $103 | $89 |
| | EE Equipment | - | $363 | $199 |
| | **Total** | **-** | **$527** | **$387** |

# Next Steps

- Proposed Decision issued on 8/20/21 in R1311005 proceeding.
- Comments due 9/9/21 – must be party to the proceeding.
- Reply comments due 9/14/21.
- CPUC will then vote on final decision to adopt goals (possibly at 9/23/21 voting meeting).

# Questions?

- Email: coby.rudolph@cpuc.ca.gov
- More information on CPUC energy efficiency goals: https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/demand-side-management/energy-efficiency/energy-efficiency-potential-and-goals-studies/2021-potential-and-goals-study