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Power Content Procurement Floor

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Power Content Comparison

Overview

To date, EBCE has compared the portfolio carbon-free content to PG&E based on renewables and large hydro/ACS – the two shared categories of carbon-free energy. With the introduction of the Carbon-Free Allocation Mechanism, EBCE's large hydro portfolio content is expected to be in line with PG&E's. Therefore, renewables have now become the more pertinent focus within PG&E's portfolio. As such, **staff proposes establishing a comparison methodology that looks at renewables content as the benchmark to compete against PG&E on a forward-looking basis.**

Additionally, staff proposes this methodology also as a prudent financial management approach in light of rising customer costs and other risks associated with the PCIA and now the COVID-19 pandemic. Reducing procurement costs, while continuing to offer a cleaner energy mix than PG&E, is one of the primary strategies available to EBCE to mitigate the effects of both the PCIA and COVID-19.

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Policy Recommendation

Current Policy:

EBCE currently procures renewables for Bright Choice to a minimum of RPS compliance + 5%, as directed by the Board. For 2020, this translates to 38% renewables.

EBCE also procures to a target Bright Choice portfolio mix that is 85% carbon-free (renewables and large hydro/ACS). This current target provides EBCE with a substantial buffer to be cleaner than PG&E when comparing like-for-like carbon-free sources (i.e. not counting PG&E nuclear in the PG&E total carbon-free %).

Proposed Policy:

Amend the Bright Choice product power content guidelines to instill the following clean energy procurement floor starting in 2020:

1. **PG&E Bundled RPS Energy Sale Solicitation filing forecast $_{(Year - 1)}$ + 5%**
    a. This procurement floor is based on PG&E's prior year renewable energy power content forecast, plus an additional 5% renewables to ensure adequate buffer for uncertainty. For 2020, the floor would be the PG&E 2019 Bundled RPS Energy Sale Solicitation filing forecast + 5%.
    b. This procurement floor requires only renewables purchases and will not include any incremental procurement of non-renewable carbon-free energy.
        i. Any non-renewable carbon-free energy will come from the allocations of EBCE's pro-rata share of PG&E's carbon-free portfolio, should the Board vote to accept either or both of the allocation offers (action on allocations to be taken in separate Board Item).
    c. In the context of budget, staff will seek to procure to surpass the procurement floor and the EBCE Board will review these guidelines annually. Any procurement budget surplus from a given year will be brought to the Board for direction.
    d. This floor applies only to Bright Choice. No changes will be made to Brilliant 100 or Renewable 100 power content guidelines.

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Impacts and Implications

Financial Impacts:

- ~$11.3MM of avoided Bright Choice procurement costs, relative to procurement costs for current Bright Choice power content guidelines.
  - Annual procurement cost savings come from no longer procuring incremental large hydro and instead utilizing the PG&E allocation, which is effectively paid for through the PCIA.

RPS Compliance:

- This is consistent with the current EBCE procurement guidelines (i.e. RPS +5%) and therefore remains in compliance with RPS requirements.

Power Content:

- Renewables:
  - At a minimum, EBCE's renewables content will be both 5% greater than the RPS compliance requirement and 5% greater than PG&E forecast renewables content.
  - It is very likely, that this policy will result in a greater renewables percentage for Bright Choice than the current policy.
  - While the 5% buffer is included as a good faith effort mechanism to keep EBCE ahead of PG&E, it is possible that in a given year EBCE's renewables percentage may be less than PG&E's if PG&Es actuals renewables are 5% greater than their forecast.
- Carbon-Free (Large Hydro and Nuclear):
  - The large hydro percentage should match PG&E's and the nuclear percentage will either match PG&E's or be 0.
- Portfolio:
  - The Bright Choice carbon-free percentage will decrease relative to previous years, but EBCE's like-for-like portfolio percentage should still be cleaner than PG&E. (Logic: more renewables + same carbon-free = cleaner than PG&E)
    - In other words, from the day EBCE receives allocation deliveries, we will be cleaner than PG&E.

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Illustrative Bright Choice Power Content Comparison Under New Power Content Guidelines

Illustrative Full Year Quantities	PG&E 2020 Projection*	EBCE Bright Choice New Guidelines 2020 Projection	EBCE Bright Choice Status Quo C-Free Content 2020 Projection – w/ nuclear	EBCE Bright Choice Status Quo C-Free Content 2020 Projection – no nuclear
Renewables	34.5%*	39.5%	38%	38%
Large Hydro	10.8%** If all allocations are taken	10.8%*** If allocation is accepted	23.7%*** Allocation plus incremental procurement	47%*** Allocation plus incremental procurement
Nuclear	23.3%** If all allocations are taken	23.3%*** If allocation is accepted	23.3%*** If allocation is accepted	-
Carbon-Free % with nuclear	**68.6%**	**73.6%**	**85%**	**-**
Carbon-Free % without nuclear	**45.3%**	**50.3%**	**-**	**85%**
Expected Annual Bright Choice Procurement Savings		**$11,300,000**	**$8,600,000**	**$2,700,000**

* PG&E 2019 Renewable Net Short Forecast (from Advice Letter 5554-E Filing) used for 2020 benchmark, on top of which to apply the 5% buffer for Bright Choice renewables.

** Large Hydro and Nuclear % based on 5-year average (2013-2017, pre-CCA major load departure) to reflect expected generation levels after allocations. See Appendix A.

*** Uses full-year allocation volumes spread to Bright Choice proportionately (i.e. relative to Bright Choice share of total EBCE portfolio) to demonstrate the portfolio level equivalence of the pro rata share of PG&E carbon-free resources in a standard year. The remainder of the allocation volume would go to Brilliant 100 under this representation.

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Recommended Scenario: New Procurement Floor

Illustrative Full Year Quantities	**PG&E** 2020 Projection*	**EBCE Bright Choice** New Guidelines 2020 Projection	**EBCE Bright Choice** Status Quo C-Free Content 2020 Projection – w/ nuclear	**EBCE Bright Choice** Status Quo C-Free Content 2020 Projection – no nuclear
Renewables	34.5%*	39.5%	38%	38%
Large Hydro	10.8%** If all allocations are taken	10.8%*** If allocation is accepted	23.7%*** Allocation plus incremental procurement	47%*** Allocation plus incremental procurement
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Expected Annual Bright Choice Procurement Savings		**$11,300,000**	**$8,600,000**	**$2,700,000**

This scenario employs the new procurement floor and illustrates the carbon-free content projections depending on whether or not EBCE accepts the nuclear allocation in addition to the hydro allocation or not. The projected savings result from EBCE purchasing only renewables, with carbon-free energy coming only from the PG&E allocation. **The savings are the same regardless of the allocation decision, only the carbon-free percentage differs.**

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Scenario Description: Status Quo C-Free w/ Nuclear

Illustrative Full Year Quantities	**PG&E** 2020 Projection*	**EBCE Bright Choice** New Guidelines 2020 Projection	**EBCE Bright Choice** Status Quo C-Free Content 2020 Projection – w/ nuclear	**EBCE Bright Choice** Status Quo C-Free Content 2020 Projection – no nuclear
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Carbon-Free % with nuclear	**68.6%**	**73.6%**	**85%**	**-**
Carbon-Free % without nuclear	**45.3%**	**50.3%**	**-**	**85%**
Expected Annual Bright Choice Procurement Savings		**$11,300,000**	**$8,600,000**	**$2,700,000**

This scenario maintains both the current renewables procurement policy of RPS + 5%, and the carbon-free Bright Choice portfolio target of 85%. Of the 47% carbon-free energy required to achieve the 85% target, **this scenario includes accepting both the large hydro and the nuclear allocations from PG&E, with the remaining 12.9% large hydro being purchased in the market**. 10.8% hydro allocation + 12.9% hydro purchase = 23.7% large hydro

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Scenario Description: Status Quo C-Free, No Nuclear

Illustrative Full Year Quantities	**PG&E** 2020 Projection*	**EBCE Bright Choice** New Guidelines 2020 Projection	**EBCE Bright Choice** Status Quo C-Free Content 2020 Projection – w/ nuclear	**EBCE Bright Choice** Status Quo C-Free Content 2020 Projection – no nuclear
Renewables	34.5%*	39.5%	38%	38%
Large Hydro	10.8%** If all allocations are taken	10.8%*** If allocation is accepted	23.7%*** Allocation plus incremental procurement	47%*** Allocation plus incremental procurement
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Carbon-Free % with nuclear	**68.6%**	**73.6%**	**85%**	**-**
Carbon-Free % without nuclear	**45.3%**	**50.3%**	**-**	**85%**
Expected Annual Bright Choice Procurement Savings		**$11,300,000**	**$8,600,000**	**$2,700,000**

This scenario maintains both the current renewables procurement policy of RPS + 5%, and the carbon-free Bright Choice portfolio target of 85%. Of the 47% carbon-free energy required to achieve the 85% target, **this scenario includes accepting only the large hydro allocation from PG&E (10.8%), with the remaining 36.2% large hydro being purchased in the market**. The lower savings number relative to the previous scenario comes from having to purchase additional large hydro equivalent to the nuclear allocation volume foregone.

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Source Material

PG&E Renewables

Every year PG&E files a Bundled RPS Energy Sale Solicitation filing in which they report their Renewable Net Short Calculation table. The table reports Actuals for all years prior to the reporting year, and Forecasts for all years from the reporting year out to 2036. The latest filing is from July 2019.

With much of the near-term projections redacted starting in 2020, the best and latest information available to project PG&E's renewables content is the Renewable Net Short Forecast from the year of the report.*

- *Advice Letter 5554-E "2019 Bundled RPS Energy Sale Solicitation; Power Purchase and Sale Agreements Between Pacific Gas and Electric Company and Multiple Buyers"; Renewable Net Short Table: Table C.
- 2019 Renewable Net Short Calculation: 34.5%

PG&E Carbon-Free

To derive projected large hydro and nuclear percentages for PG&E's 2020 Power Content Label, staff averaged the 2013-2017 PG&E volumes for the respective resources. The 2013-2017 period is the best proxy for 2020 given that the carbon-free allocations are on a pro rata basis, meaning PG&E's carbon-free resource percentages should respectively revert to similar levels of pre-CCA major load departure.

See Appendix A slide for calculations.

APPENDIX A.

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PG&E Power Mix, 2013-2018

PG&E Power Content	2013 Power Mix (Actual)	2014 Power Mix (Actual)	2015 Power Mix (Actual)	2016 Power Mix (Actual)	2017 Power Mix (Actual)	2018 Power Mix (Actual)	2013-17 Average
Eligible Renewable	**22%**	**27%**	**30%**	**33%**	**33%**	**39%**	**29.0%**
-- Biomass & waste	4%	5%	4%	4%	4%	4%	4.3%
-- Geothermal	5%	5%	5%	5%	5%	4%	5.0%
-- Small hydroelectric	2%	1%	1%	3%	3%	3%	2.0%
-- Solar	5%	9%	11%	13%	13%	18%	10.2%
-- Wind	6%	7%	8%	8%	8%	10%	7.5%
Coal	0%	0%	0%	0%	0%	0%	0%
Large Hydroelectric	10%	8%	6%	12%	18%	13%	**10.8%**
Natural Gas	28%	24%	25%	17%	20%	15%	22.8%
Nuclear	22%	21%	23%	24%	27%	34%	**23.3%**
Other	0%	0%	0%	0%	0%	0%	0%
Unspecified	18%	20%	17%	14%	2%	0%	14.2%
CO2-free (w Nuclear)	**53%**	**56%**	**59%**	**69%**	**78%**	**86%**	**63.1%**
CO2-free (w/o Nuclear)	**32%**	**35%**	**36%**	**45%**	**51%**	**52%**	**39.8%**

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