

ALLOWANCE BANKING AND CARBON OFFSETS

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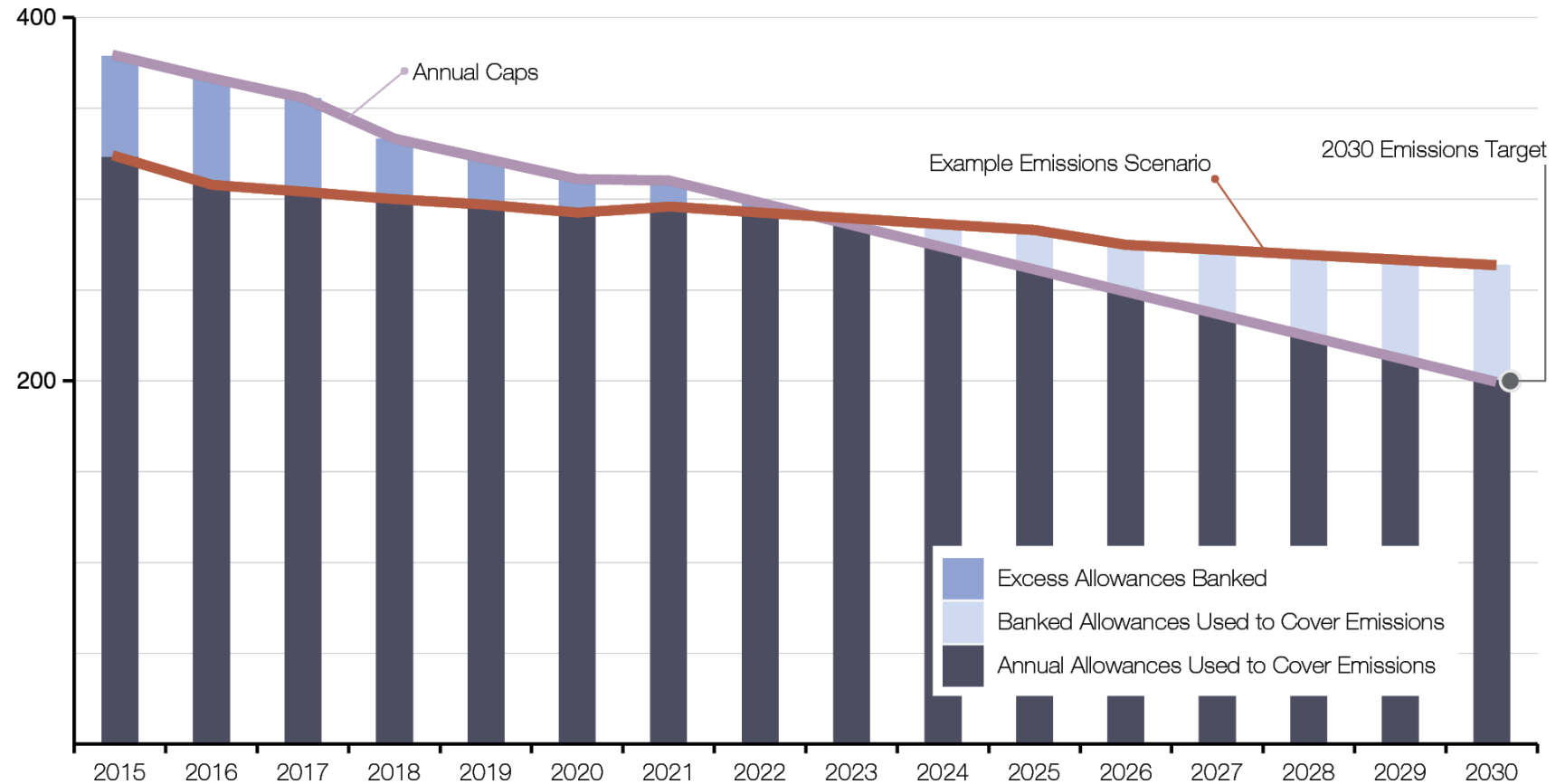
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Note: Only official written IEMAC documents represent the Committee's views.
This presentation is not an official IEMAC document, though it is primarily based on those documents.
Please consult the primary sources referenced here for official IEMAC positions.

Figure 3

Large Number of Banked Allowances Increases Risk of Exceeding GHG Target

Million Metric Tons



GHG = green house gas.



HOW TO MANAGE ALLOWANCE BANKING

- 1. Estimate banking levels consistent with program goals**
(e.g., as was debated in the 2018 rulemaking implementing AB 398)
- 2. Measure outcomes with banking metrics**
(e.g., as leading cap-and-trade programs around the world do, and as CARB already does in the Advanced Clean Cars program and the Low Carbon Fuel Standard)
- 3. Revise program design if and as needed**
(e.g., increase or decrease future allowance supplies)

MEASUREMENT

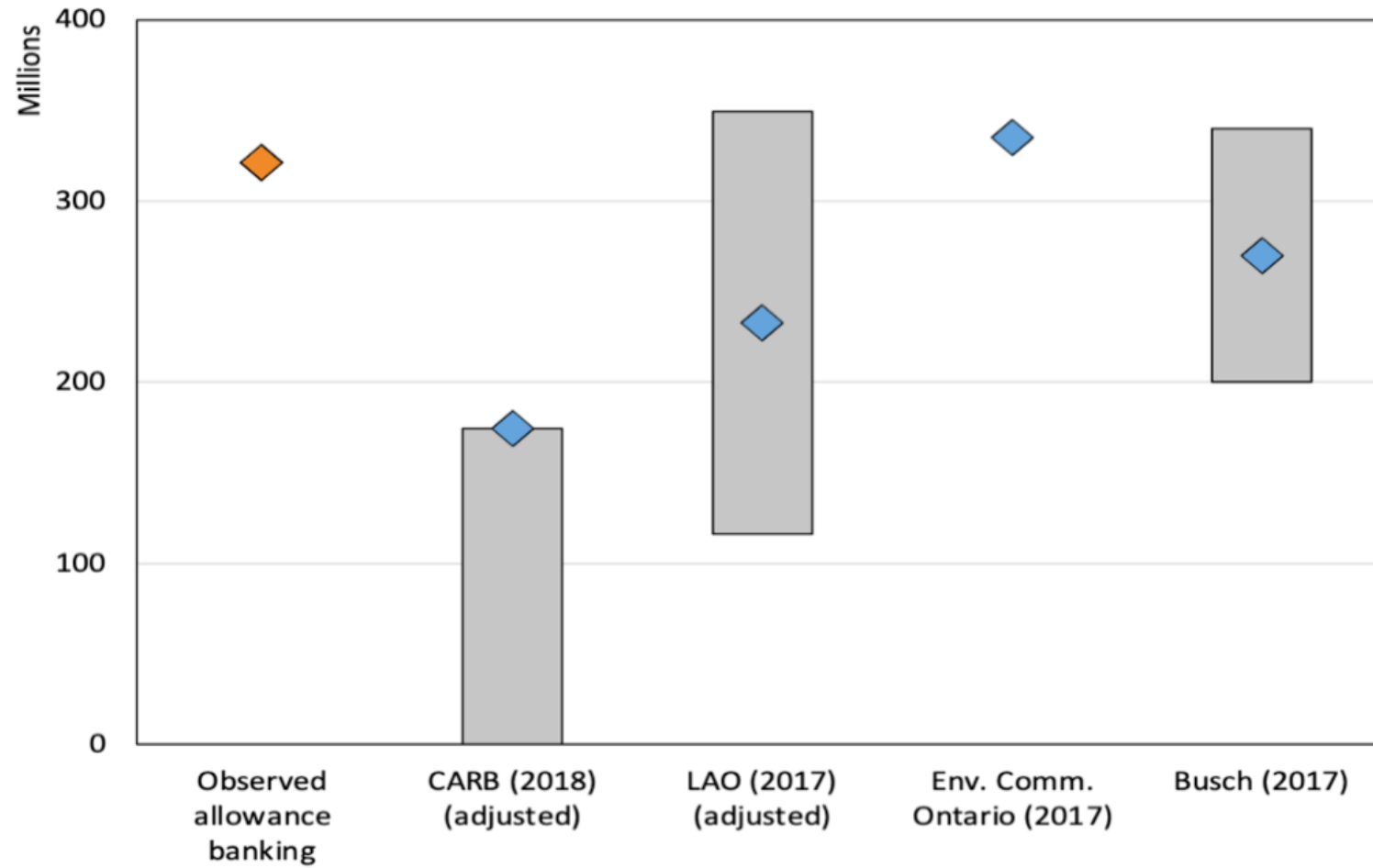
IEMAC recommendation: track allowance banking outcomes

- 2018 IEMAC Report (pp. 54-55);
2019 IEMAC Report (pp. 21-25);
2021 IEMAC Report (p. 12)
- Senator Ben Allen, Assemblymember Laura Friedman et al. public letter
(published as Appendix A in the 2019 IEMAC Report)

Options for implementing banking metrics

- 2019 IEMAC Report (pp. 43-47); Cullenward et al. (2019)

OBSERVATION



EVALUATE THE NEED FOR REFORM

“Public program data indicate that private market participants have banked about 321 million allowances from the Western Climate Initiative cap-and-trade program’s first three compliance periods (2013–2020) to its post-2020 phase (2021–2030). Observed allowance banking is consistent with projections from analysts who expressed concern about the stringency of program caps, and directly related to the use of nearly 159 million carbon offsets for compliance purposes. It is also larger than the total reductions CARB projected the cap-and-trade program would deliver over the coming decade in its 2017 Scoping Plan. Although a complete analysis of allowance banking outcomes is beyond the scope of this chapter, as we do not make any projections about the demand side of the market, **these findings indicate a need for policymakers to evaluate whether current program caps are consistent with California’s 2030 emissions limit.**”

CARBON OFFSETS

Although program regulations limit offset usage, total offset usage has been large

- Nearly 139 million offsets surrendered 2013-2020
- Over 208 million credits issued to date (excluding buffer pool credits)
- Compare to 236 million tCO₂e in total C&T reductions expected 2021-2030

Multiple “protocols” are in use, though most credits are from forest projects

- Six protocols developed by CARB, two from Québec
- California’s forest offsets protocol supplies about 80% of the total market

FOREST CARBON OFFSETS

Concerns with non-additional crediting

- Projects earn credits based on “common practice” averages that have been criticized as ecologically inaccurate.
- Carbon sequestration does not appear to improve and may reflect non-additional recovery on heavily harvested lands.
- Investigative journalists report multiple instances where landowners were unlikely to engage in in claimed harvests.

Concerns with non-permanence

- Forest carbon is supposed to be secured for at least 100 years, with a common “buffer pool” used as a self-insurance program.
- Wildfires in 2020 and 2021 have likely depleted the fire-related protections set aside for the next 100 years.
- The remainder of the “buffer pool” also appears to be inadequate to address the risk of drought, disease, and bankruptcy.

CONCLUSIONS

Substantial allowance banking puts the 2030 target at risk.

- Over 300 million allowances were banked, or about twice what CARB's 2018 rulemaking anticipated and more than the total expected reductions from C&T from 2021 through 2030.
- No cap-and-trade program review has occurred since a 2018 rulemaking.

New scientific evidence raises questions about the carbon offsets program's performance.

- Multiple peer-reviewed studies find significant problems with the number of credits awarded to forest offset projects, as well as the permanence of carbon stored in forests.
- No forest carbon offset program review has occurred since a 2015 rulemaking.

REFERENCES — IEMAC AND LAO REPORTS

IEMAC Reports

- [2018 IEMAC Report](#)
- [2019 IEMAC Report](#)
- [2020 IEMAC Report](#)
- [2021 IEMAC Report](#)

IEMAC Comment Letter

- [2022 IEMAC comment letter to CARB re: draft 2022 Scoping Plan](#)

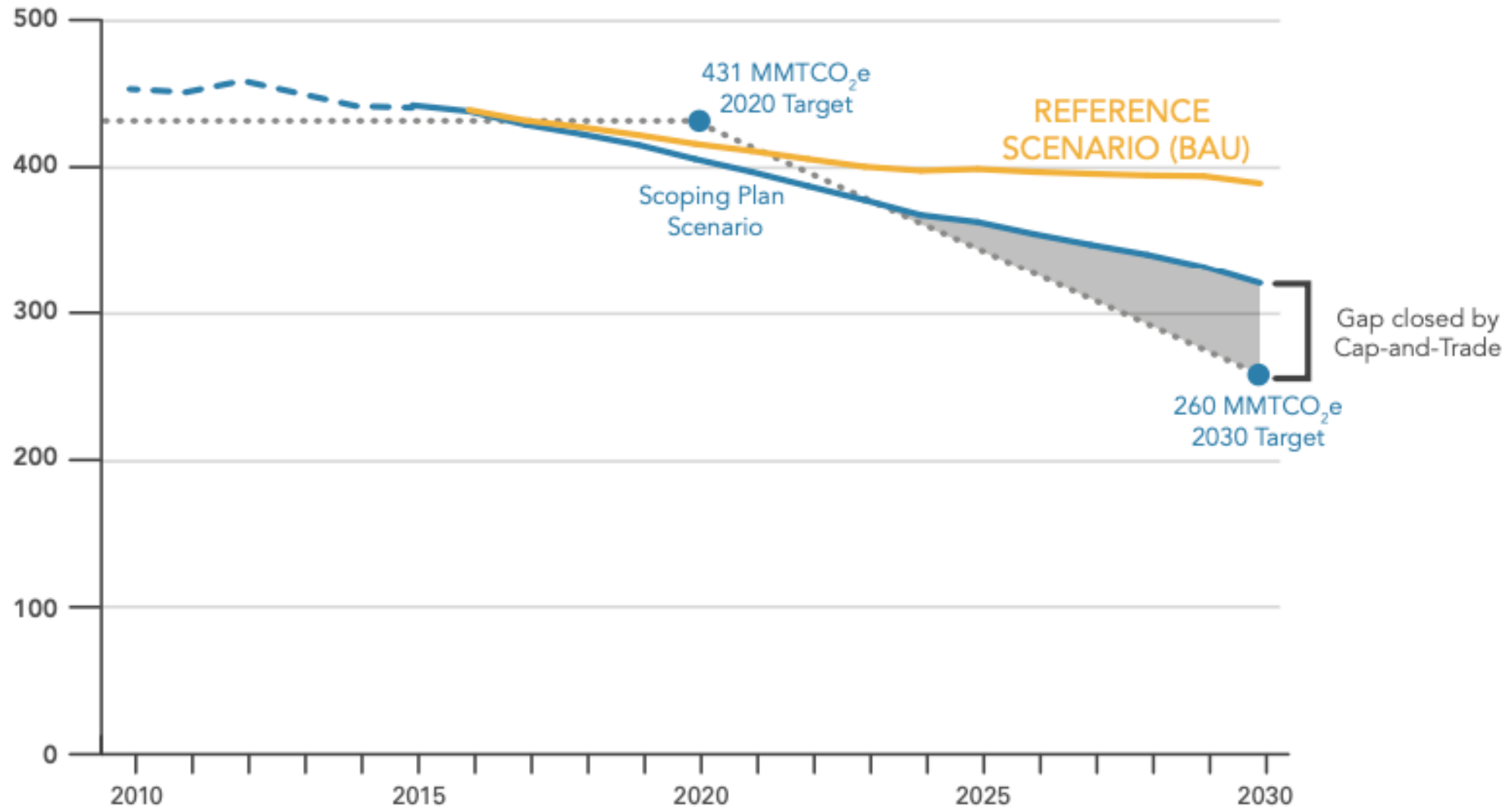
LAO Report

- LAO (2017), [Cap-and-Trade Extension: Issues for Legislative Oversight](#)

REFERENCES — PEER-REVIEWED PUBLICATIONS

- Anderson-Teixeira and Belair (2022), [Effective forest-based climate change mitigation requires our best science](#), *Global Change Biology* 28(4): 1200-03
- Badgley et al. (2022a), [Systematic over-crediting in California's forest carbon offsets program](#), *Global Change Biology* 28(4): 1433-1445
- Badgley et al. (2022b), [California's forest carbon offsets buffer pool is severely undercapitalized](#), *Frontiers in Forests and Global Change* 5: 930426
- Coffield et al. (in press), [Using remote sensing to quantify the additional climate benefits of California forest carbon offset projects](#), *Global Change Biology*
- Cullenward et al. (2019), [Tracking banking the Western Climate Initiative cap-and-trade program](#), *Environmental Research Letters* 14: 124037
- Inman et al. (2020), [An open-source model of the Western Climate Initiative cap-and-trade programme with supply-demand scenarios to 2030](#), *Climate Policy* 20(5): 626-40

FIGURE 9: SCOPING PLAN SCENARIO GHG REDUCTIONS



SCOPING PLAN CONSIDERATIONS

“We urge CARB to provide a detailed explanation of its new reference scenario that addresses, with reasonable supporting technical information, why the final reference scenario might be different from projections made in the 2017 Scoping Plan.

If the reference scenario continues to exhibit any significant discrepancies with the state’s official inventory data, either on an aggregate or sectoral basis, then CARB should also explain the likely cause(s) and possible implications of such a discrepancy with respect to its forward-looking projections for the reference scenario. ”

SCOPING PLAN CONSIDERATIONS

“ CARB should begin a rulemaking process to evaluate the cap- and-trade program design and consider whether any changes might be necessary to achieve the 2030 emissions limit while promoting cost-effective climate mitigation. In order to provide adequate time for involved stakeholder engagement, this process should begin in the first quarter of 2023. ”