

October 26, 2023 | Submitted electronically

Ms. Rajinder Sahota
Deputy Executive Officer
Climate Change & Research
California Air Resources Board
1001 I Street
Sacramento, California 95812

*Re: Turlock Irrigation District Comments on CARB's October 5, 2023 California Public Workshop:
Potential Amendments to the Cap-and-Trade Regulation*

Introduction

Turlock Irrigation District (“TID”) appreciates the opportunity to comment on the California Air Resources Board’s (“CARB”) October 5, 2023 workshop concerning potential amendments to the Cap and Trade Regulation. TID was organized as the first Irrigation District in California on June 6, 1887, and is currently in its 136th year of operation. TID is also a publicly owned utility (“POU”) and one of eight Balancing Authorities (BA) in California. TID’s customer base consists of 14 communities. Eleven are classified as Disadvantaged Communities according to the Department of Water Resources (DWR), and the majority of TID’s service territory is in the top 20% of Cal EnviroScreen 3.0 impacted communities. The TID ethos is to provide stable, reliable, and affordable water and power to our customer/owners, be good stewards of our resources, and provide a high level of customer satisfaction through clear, concise communication. As a BA, TID is also tasked with balancing customer electric demand, with local generation production, energy markets purchases and sales, transmission maximization, while providing adequate reserve capacity to maintain grid reliability and meet NERC and WECC standards. The focus of TID’s comments in this letter will serve as 1.) a response to CARB’s proposals for future adjustment to electric distribution utility (“EDU”) allowance allocation, 2.) to articulate the need for CARB to carry forward the RPS adjustment, and 3.) to discuss the issue of forced consignment. TID hopes to develop solutions through close collaboration with CARB on these issues to ensure stakeholders such as TID are able to simultaneously meet California’s climate goals while continuing to provide reliable and affordable power to our customers.

EDU Allowance Allocation

I. CARB Should Consider Performance Variables When Assessing Allowance Reductions Sector-By-Sector

TID has had a strong history of supporting California’s climate goals. In 2022, more than 50 percent of TID retail load was served by carbon free resources. TID likewise, has a strong record of accurate emissions accounting and reporting. TID was recently awarded the Climate Registered Gold status by the Climate Registry due to TID’s comprehensive reporting of third-party verified greenhouse gas emissions (“GHG”) inventory for our operations. TID has also made historical investments pre-dating regulatory directives into a diverse generation portfolio, including large and small hydroelectric, solar, and wind facilities. TID’s history of proactively reducing our carbon footprint has been possible due to CARB and its sister agencies allowing utilities a degree of control over how to best reduce emissions. During the workshop CARB proposed several future scenarios for EDU allowance allocation reduction to better align with state climate policy. CARB likewise asked stakeholders to consider how CARB should update EDU allocation to reflect those policies.¹ At the CARB workshop during public comment TID staff provided a suggestion to CARB for how the agency may consider EDU allowance allocation. TID’s recommendation was for CARB to postpone making any allowance allocation changes until the 2026 - 2028 timeframe for EDUs.² TID has several reasons for CARB to take this approach for EDU allowance allocation.

Roughly 450 entities participate in CARB’s Cap and Trade Program to reduce their GHG emissions.³ These Cap and Trade participants belong to a variety of sectors each having their own strategies for reducing emissions. TID would ask CARB, when assessing changes to the Cap and Trade Program, to take into account both the present contribution of each sector to GHG emission reductions as well as the external factors that have influenced the sector’s overall ability and strategy for reducing GHG emissions. The existing barriers for electric utilities both financial and technological, directly influence TID’s recommendation to delay a decision for EDU allowance allocation until 2026-2028 timeframe. To date, analysis has shown the electricity sector has contributed the most towards greenhouse gas emission reductions. Annual emissions from the electricity sector have declined by 40 million metric tons (40 percent) over the last decade, 2010 to 2020.⁴ A critical reason for the historic success of the electricity sector’s GHG emission reduction is due to CARB’s collaboration with stakeholders including TID. This close collaboration was done through open, public cooperation upon which regulatory directives were implemented. TID believes that this process must continue for the electricity sector to achieve carbon neutrality. The electricity sector needs more time for policy, financial incentives, and nascent technologies to catch-up with California’s 2045 decarbonization goal. TID believes this

¹ https://ww2.arb.ca.gov/sites/default/files/2023-10/nc-CapTradeWorkshop_Oct052023_0.pdf slide 28

² <https://ww2.arb.ca.gov/events/california-public-workshop-potential-amendments-cap-and-trade-regulation-0>

³ https://ww2.arb.ca.gov/sites/default/files/cap-and-trade/guidance/cap_trade_overview.pdf

⁴ [Assessing California's Climate Policies - Electricity Generation](#)

development will occur over the next 5 years. Prematurely cutting allowances under a potential revised EDU allocation scenario proposed by CARB at the workshop would simultaneously force utilities to raise electric rates and slow down the pace of GHG emission reductions in this sector.

Twice now CARB staff has explained to TID staff that “things have changed since the last Cap and Trade update.” (i.e. 2018 Cap and Trade update). To be clear, TID staff is very aware of this situation and would like to list some of the more salient changes:

1. Siting and permitting transmission and distribution infrastructure has become more difficult
 - a. Sourcing components for transmission and distribution has become more expensive and less available (pandemic and supply chain factors)
 - b. Demand response and micro grid support need added infrastructure
2. Solar panel availability is challenging and prices have increased
 - a. Due to embargo on Chinese panels
 - b. And increased demand from corporate actors and other renewable goals set across governments and institutional actors
3. The CA carbon market has become more expensive
 - a. Due to an increase in speculative buying
 - b. And the assertion by CARB staff that allocations and the “oversupply” of banked allowances will be addressed through cuts in this regulatory proceeding
4. The 2022 Scoping Plan “lays out the sector-by-sector roadmap for California ... to achieve carbon neutrality by 2045 or earlier, outlining a technologically feasible, cost effective,...”⁵ Relying on immense increases in CCS, Carbon Direct Air Capture, off-shore wind generation, aggressive energy efficiency, distributed energy resources, building electrification, and massive solar and battery installations is laudable but suspect in implementation
 - a. CCS for a Natural gas combined cycle would be about \$97-\$104/tCO₂⁶
 - b. Carbon direct capture costs \$600-\$1,000/tCO₂⁷
 - c. Solar installation rates 4.3 GW/y and battery 2.5 GW/y from 2022-2035⁸

This is a short list of the challenges the EDUs face heading toward 2030 and 2045. With the uncertainty surrounding these issues CARB needs to delay any reductions in allowance allocations to the EDU sector.

⁵ Page 1 Executive Summary <https://ww2.arb.ca.gov/sites/default/files/2023-04/2022-sp-es.pdf>

⁶ Page 36 <https://gs.llnl.gov/sites/gsl/files/2023-05/ca-ccs-economic-study-report.pdf>

⁷ <https://www.iea.org/commentaries/unlocking-the-potential-of-direct-air-capture-is-scaling-up-through-carbon-markets-possible>

⁸ Slide 6 E3 presentation <https://ww2.arb.ca.gov/sites/default/files/2022-11/SP22-MODELING-RESULTS-E3-PPT.pdf>

II. The Electricity Sector Needs Policy Directives, Financial Incentives and Nascent Technologies Developing At Scale To Achieve California Climate Goals

The present suite of California climate policies overarching objective is to achieve carbon neutrality by 2045. During the workshop, CARB conveyed two potential scenarios for a revised EDU allocation. The first scenario was an Renewable Portfolio Standard (“RPS”) only change, (60% in 2030) and the second, a full update taking into account updated integrated resource planning (“IRP”) targets plus the RPS (60% in 2030) leading to an allowance reduction.⁹ TID requests CARB to maintain the current EDU allowance allocation due to updated data from IRPs, Integrated Energy Policy Report (“IEPR”), and RPS all being reliant upon policy, technology, and financial incentives that presently are not available or don’t go far enough. Technology, policy, and financial incentives are not keeping up with the pace at which the electricity sector is required to update their IRPs and achieve their RPS targets. CARB’s own Scoping Analysis has shown nascent technologies such as carbon capture and sequestration (“CCS”) will be necessary for economy-wide emissions reductions to reach 168MMT by 2035 and 65MMT by 2045.¹⁰

To date, CCS is still a nascent technology which currently lacks policy and financial incentives for utilities to leverage. For example, CARB’s own CCS Protocol has not been incorporated into the Cap and Trade program. Thus, an entity like a power plant that is covered under Cap and Trade cannot reduce its compliance obligation even if it captures and sequesters CO₂ as the CCS Protocol requires.¹¹ The viability of CCS projects actually meeting the target emission objectives CARB is forecasting is dependent upon future policy developments integrating CCS under the umbrella of the Cap and Trade Program. Decreasing EDU allocated allowances to the utilities in no way solves this issue. Until further regulatory policy is in place establishing clear guidelines around CCS, both in and out of Cap and Trade, Utilities such as TID would have to bear not only the cost burden of the nascent technology, but the entirety of the regulatory risk.

When considering potential changes to the Cap and Trade Program, TID would encourage CARB to closely consider changes that incentivize stakeholders to invest in nascent technology adoption. Cutting EDU allowance allocations without the right financial incentives do not align with California’s projected GHG reduction goals. Cost estimates associated with every aspect of CCS and other technologies should prioritize any potential update to the Cap and Trade. For instance, for a generic single-source pipeline of 60 miles in length transporting approximately 1

⁹ https://ww2.arb.ca.gov/sites/default/files/2023-10/nc-CapTradeWorkshop_Oct052023_0.pdf slide, 27

¹⁰ <https://ww2.arb.ca.gov/sites/default/files/2022-11/SP22-MODELING-RESULTS-E3-PPT.pdf> slide, 6

¹¹ [ca-ccs-economic-study-report.pdf \(llnl.gov\)](https://www.llnl.gov/publications-reports/ca-ccs-economic-study-report.pdf) page, 88

million tCO₂/y, the capital cost of pipeline transport is just over \$1 million per mile, and the operating cost just over \$1/tCO₂. Routing or siting complexities will increase this cost.¹² CCS projects in California that lack viable geologic storage on site will not be able to pencil out the economics through 45Q tax credits alone and these tax credits may not be available to Publicly Owned Utilities.¹³ CARB’s own Scoping Plan analysis has shown that CCS will need to cover 40% of operations by 2035 and all operations by 2045.¹⁴ TID’s point in highlighting these costs is to reflect CARB’s own recognition that the background behind EDU allocation was for the protection and benefit of ratepayers.¹⁵ Protection for the current EDU allowance allocation is needed now more than ever in the absence of policy and financial incentives that can adequately cover the variety of projects in California that will require CCS. Ratepayers will bear the cost burden should CARB elect to reduce the pool of allocated allowances to EDUs TID would ask for CARB to wait until the 2026-2028 timeframe to reassess EDU allocated allowances.

Forced Consignment Of Allowances

I. TID Already Includes Carbon Cost In Its Decision Making Without Forced Consignment And There Is Transparency In POU Allowance Revenue Reporting

While CARB did not discuss utility consignment of allowances at the October 5th workshop, TID would like to reiterate previous comments concerning this important issue. California Municipal Utilities Association’s comments from March 16, 2018 during the last Cap-and-Trade rulemaking concisely discuss the role of carbon pricing in decisions utilities make about how they dispatch their resources.

“A fundamental pillar of California’s Climate Change initiative is that behavior is impacted by price. This behavior certainly can occur at the consumer level, but it can also occur at a higher level in the procurement and/or distribution chain. Having a price on carbon, even it is not a direct charge to consumers, can impact (and indeed *has* impacted) the dispatch of California’s POU’s power resources. California Balancing Authorities all include a “GHG adder” in their economic resource dispatch calculations: indeed, every generating unit under POU control has such an adder.”¹⁶

¹² [ca-ccs-economic-study-report.pdf \(Inl.gov\)](#) page, 66

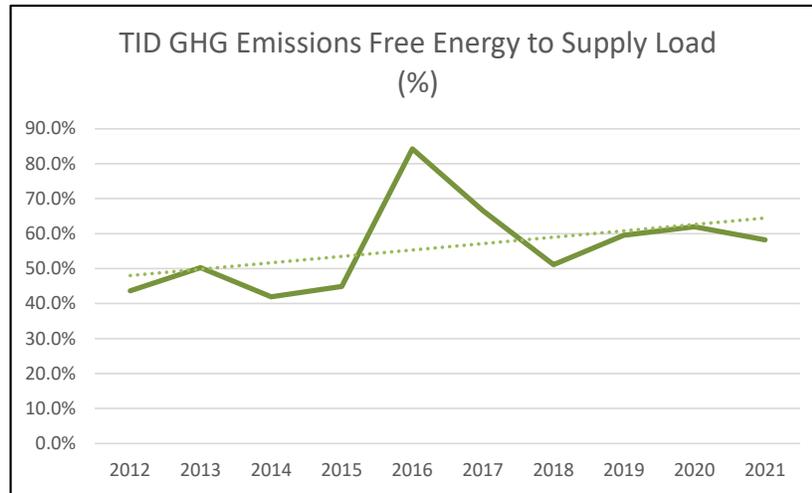
¹³ [ca-ccs-economic-study-report.pdf \(Inl.gov\)](#) page, 41

¹⁴ <https://ww2.arb.ca.gov/sites/default/files/2023-04/2022-sp.pdf> page, 77

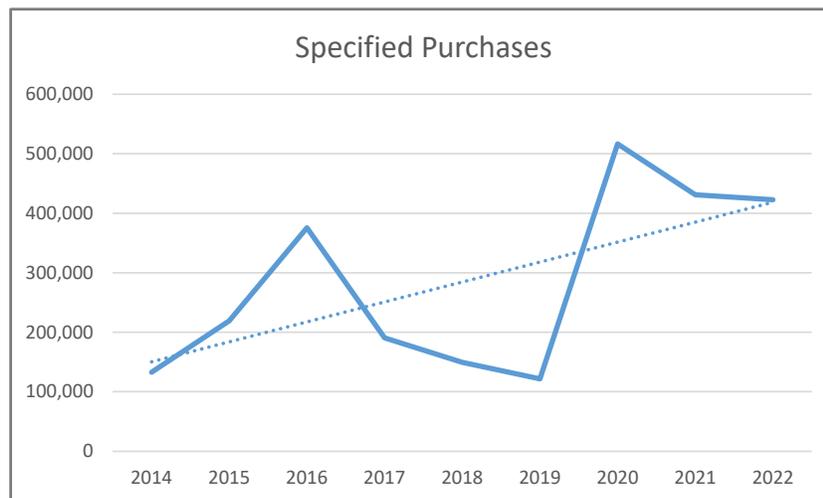
¹⁵ https://ww2.arb.ca.gov/sites/default/files/2023-10/nc-CapTradeWorkshop_Oct052023_0.pdf slide, 26

¹⁶ Available at <https://www.arb.ca.gov/lists/com-attach/13-ct-3-2-18-wkshp-ws-AnJROFQgAg4Lawhn.pdf>.

The graph below depicts the effects of TID’s decision making process for GHG emissions free economic resource dispatch, following the implementation of the Cap-and-Trade program. Due to the carbon costs included in the pricing of our fossil fuel fleet dispatch, our thermal resources load related emissions have trended downward, resulting in increased GHG-free emissions resources dispatched.



At the same time that we are dispatching cleaner resources, TID is also paying a premium for cleaner imported energy from the Pacific Northwest. The trend line in the following graph depicts the continual increase in Asset Controlling Supplier Specified Purchases to serve TID’s load.



Neither of these trends would have occurred without TID having to embed GHG costs into our resource dispatch of owned fossil fuel generation that has been largely driven by the Cap and Trade program. Requiring allowance consignment would have no effect on the carbon price signal that we incorporate today or will incorporate in the future. Instead, a change in these rules, would simply take away a financial resource TID has budgeted to help offset the costs of other investments in additional GHG reductions.

TID disagrees with the assertion that there is a lack of transparency in the use of allowance value. Annually, all emissions from our owned power plants are reported and the disposition from all energy purchases are likewise reported. This is accomplished through the use of CARB's Allowance Funds Report where all allocated allowances and all revenue from the sale of allowances is reported. These forms have been updated since the start of the program to provide additional reporting obligations and we believe this is an important tool to ensure that POU's meet CARB's high standards for transparency.

RPS Adjustment

III. The RPS Adjustment Should Not Be Phased Out By CARB At This Time

TID holds *ownership* over the Tuolumne Wind Project ("TWP") which consists of a total of 62 turbines and has total generating capacity of 136.6 megawatts ("MW"). TWP represents 16.1 percent of TID's renewable portfolio standard ("RPS"). The ownership of this wind farm went into effect prior to the policy initiatives of CARB's Cap and Trade and Mandatory Reporting Regulation ("MRR"). Historically, contracts or ownership agreements executed before June 1, 2010 were counted as being PCC 0. The role of PCC 0 renewables such as TID's ownership of TWP was to acknowledge early climate action. The RPS adjustment allowed early adopter utilities such as TID to recognize that out-of-state intermittent renewables would be credited as carbon free resources as well as renewable. The purpose of the "adjustment" was based on having the power firmed and shaped so utilities could take the power at a time that didn't cause reliability issues and was more economic. The RPS adjustment also took into consideration real world transmission constraints.

To reiterate comments submitted by TID from the July 27, 2023 Cap and Trade workshop, the intent of a utility's investment in the RPS program is to advance renewable energy development. The direction of the Cap and Trade Program is to reduce GHG emissions in California. The RPS Adjustment is a bridge between these two programs that ensures that utilities keep costs down for investments in carbon free energy.¹⁷ The "bridge" function the RPS Adjustment serves is

¹⁷ TID comments July 27, 2023 Cap and Trade Workshop

critical for utilities such as TID to help stabilize costs as the utility seeks to integrate nascent technologies into its renewable portfolio for serving load. An elimination of the RPS Adjustment combined with an EDU allowance allocation reduction would force utilities to raise rates for all customers in their service territories. Disadvantaged communities would be at risk should the RPS Adjustment be eliminated. Furthermore, an elimination of the RPS Adjustment would leave TWP as a stranded asset for TID. TID's actions towards investing in TWP prior to the Cap and Trade Program and Mandatory Regulatory Reporting program represents a large financial commitment before regulatory directive to do so. This investment made by TID represents the very hope for action of agencies such as CARB for those they regulate.

Conclusion

Should CARB decide to implement multiple changes to their Cap and Trade Program including consignment of allowances to auction, reducing EDU allocated allowances, and eliminating the RPS Adjustment ratepayers across the state will suffer. The stacking of these three changes to the Cap and Trade Program in the absence of clear policy, financial incentives and proven technology will lead to higher electricity rates. TID would ask CARB to consider revisiting changes to allowance allocation in the Cap and Trade Program in 2028. This wait will give California policymakers time to assess the impacts of the many noted uncertainties and to craft sound policy and financial incentives for nascent technologies utilities will be integrating into their infrastructure and portfolios to serve load. TID appreciates the opportunity to submit comments on potential changes to CARB's Cap and Trade Program. The importance of CARB's current EDU allowance allocation, not consigning all EDU allowances to auction, and preserving the RPS Adjustment is paramount for the electricity sector to meet California's climate policy objectives. TID looks forward to further collaboration with CARB and sister agencies as CARB considers amendments to the Cap and Trade Program.

Respectfully,

Ken Nold
Utility Analyst

Ken Nold

Austin Avery
Regulatory Analyst

Austin Avery