



July 15, 2022

Dear Sir or Madam,

We are pleased to share the accompanying comments to the Washington State Department of Ecology on the proposed rule for the Climate Commitment Act Program, WAC Chapter 173-446.

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The views expressed by Dr. Shobe are his own and do not necessarily represent the position of the Rector and Board of Visitors of the University of Virginia.

If you have any questions or would like additional information, please contact us at the email addresses below. Any references cited are available from the authors.

Sincerely,

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Comments on the proposed WAC 173-446: Climate Commitment Act Program Rule

Dallas Burtraw, Resources for the Future

William Shobe, University of Virginia

July 15, 2022

We appreciate the opportunity to provide comments on the proposed rule on the Climate Commitment Act Program, WAC Chapter 173-446. Our comments will focus primarily on the implementation of the emission containment reserve (ECR) as discussed in sections 220, 300, 340, 357, 370 and 375.

In its standard implementation, an ECR is a mechanism for automatically adjusting the supply of emission allowances under conditions where the price of allowances is below that anticipated at the program's outset. Hence, the ECR acts to accelerate emissions reductions when the market price signals that it is inexpensive to do so.

A properly designed ECR offers a rule-based approach to adjusting allowance supply in response to market signals about allowance scarcity. This reduces uncertainty for both compliance entities and lowers administrative costs for regulators. In contrast, administrative adjustments to supply can propagate regulatory uncertainty and the expectation that one administrative intervention may foreshadow other additional program interventions.

Establishing a functional ECR at the initial implementation of the program sets market expectations for the long run and helps ensure the durability of the program. Long experience in many regulatory settings demonstrates that from an administrative perspective it is easier to establish program features at the outset of a program that anticipate potential future concerns than to adjust program design in response to concerns that may arise in the moment. Implementing the ECR in Washington before the rest of the WCI does not harm Washington's interests. It does have the potential to push the WCI towards a better market design with Washington as first mover.

Further, the ECR design in the current rule can be improved to maximize its benefits. A simpler approach than exists in the current regulation would implement the ECR as a reserve price in the primary auction, and any reserved allowances could be retired or, alternatively, placed in equal shares in the APCR tiers. This design would strengthen the ability of the ECR to reduce excess price volatility (and market uncertainty), improve price discovery, and simplify program administration.

We make three main points about the ECR proposal in the proposed rule:

- A. We strongly encourage the agency to include ECR provisions in the rule and set an ECR trigger price. This should occur whether other revisions to the proposed regulation are adopted or not.

- B. The proposed design of the ECR treats the ECR as a separate account holding a stock of allowances for re-allocation back into the market by grant or by supplemental auction. The proposed design could be greatly enhanced if it were implemented in a hybridized way by designating a portion of allowances in the ECR for distribution to allocation to energy intensive trade exposed (EITE) entities and new entrants as required by statute, and distributing the remainder of the allowances within the quarterly auction framework.
- C. Implementing the ECR through a reserve (trigger) price in the quarterly auction would simplify administration and embody best practice and deliver the maximum benefits.

The remainder of these comments provide rationale for these suggestions.

A) Washington should include an ECR and set an ECR trigger price at the beginning of the program.

An important evolution in the design of emissions markets is the move away from specifically fixed emissions allowance caps to allowance supply schedules that respond to the equilibrium price identified in an allowance auction. This reform helps to remedy the interaction of carbon pricing with other regulatory programs while retaining the virtue of price discovery and cost effectiveness associated with carbon markets.

A concern of many stakeholders is uncertainty about allowance prices, and that prices may be higher than anticipated, which is understandable given unfamiliarity with the program. The cost containment elements of the program are designed to ameliorate this concern. Very high prices can be prevented by making some additional number of allowances available at price trigger points. In the proposed rule, this is accomplished by the Allowance Price Containment Reserve (APCR) and the price containment units, both of which increase the allowance supply if the market is tighter than expected. In sum, the implementation of the ECR has little relevance to stakeholder concerns initially, because those concerns are about very high prices.

However, the ECR has important value in shaping price expectations for the long run. In every important market for atmosphere resources (sulfur dioxide, nitrogen oxides and carbon dioxide) in North America and Europe, after initial price volatility representing uncertainty and hedging activities, prices have fallen to below expectations and often fallen in real terms.¹ Perhaps surprisingly, these periods of low prices rather than high prices have constituted the major challenge to the durability of these programs. In the long run, the interaction of the carbon market with other regulatory programs becomes important as compliance entities make investments that anticipate the state's long-term climate goals, and which are informed by the current and anticipated future carbon price. The ECR provides a guardrail against unexpected price declines, including potential price effects that may result from interactions of the carbon market with companion regulatory policies.

¹ "Recognizing Gravity as a Strong Force in Atmosphere Emissions Markets," 2018 (Dallas Burtraw and Amelia Keyes), *Agricultural and Resource Economics Review*, 47(2): 201-219.

To guard against extreme price declines, it has become usual practice to have a reserve price in the allowance auction, which provides a price floor in the auction.² This means that the total number of allowances available responds to the market demand for allowances, just as one observes in commodity markets. The ECR adds a second reserve price, set at a level above the auction price floor, that applies to 10 percent of the allowances available for sale. Importantly, the ECR lowers price volatility by making automatic adjustments to the long-run allowance supply. This adjustment helps stabilize auction proceeds for program-related investments.

The performance of an ECR has been shown theoretically to improve emission market performance, and these results have been borne out in simulations, experiments, and actual practice.³ The ECR is a design element of the Regional Greenhouse Gas Initiative (RGGI) program beginning in 2021 and has been identified by observers and researchers as a meaningful reform elsewhere.⁴

We believe the time to implement an ECR is when it is not expected to be immediately relevant, which based on experience in other programs is likely to be at the outset of the program. Hence, we believe the ECR trigger price should be set in Section 340 rather than suspended as in the proposed rule. The implementation of the ECR trigger price does not generate any disadvantages for Washington, but rather protects Washington's emission market against unexpectedly low emission prices such as has occurred during later stages in a number of previous emission markets.

Washington's ECR would set an important precedent for other states potentially joining in a regional emissions market. If at some point, suspension of the ECR trigger price is required to enable program linkage, then action could be taken at that time. In the meantime, the presence of an ECR sets expectations for discussions across jurisdictions and provides a positive example that could propagate to other jurisdictions and strengthen climate policy generally.

Summary: Given the strong evidence in favor of using an ECR, we believe that it is very important that this feature be included in the proposed rule. WAC 173-446-340 should be changed so that it instates a trigger price from the outset.

² The EU Emissions Trading System has implemented a different mechanism called the Market Stability Reserve to accomplish similar goals.

³ See: "[Price-Responsive Allowance Supply in Emissions Markets](#)," 2022 (Dallas Burtraw, Charles Holt, Karen Palmer, and William Shobe). *Journal of the Association of Environmental and Resource Economics*, 9 (5): 851–884, <https://doi.org/10.7910/DVN/DHU5PM> , and Roberts, M.J., and M. Spence. 1976. "Effluent Charges and Licenses Under Uncertainty." *Journal of Public Economics*, 5 (3-4): 193-208.

⁴ [2021 IEMAC Annual Report | CalEPA](#)

B) Adjustments to the ECR design can greatly improve its performance by integrating its operation within the quarterly auction framework, and separating out other functions including allocation to EITE entities and new entrants

The purpose of the ECR is to accelerate emissions reductions when it is inexpensive to do so, and to reduce unnecessary market uncertainty (price volatility). Maintaining price stability will enhance the availability of auction proceeds directed at investments under the program. But in markets for commodities like emission allowances, the price is a reflection of expectations about the long-run balance between supply and demand. Shifting the availability between periods or among market participants will not have significant effects on those expectations of scarcity, and hence will not have a significant or any effect on price volatility. To be most effective at reducing market uncertainty, the ECR must be designed to adjust long-run supply.

Unfortunately, the ECR implementation in the proposed rule does little or nothing to address long-run imbalances between supply and demand. Even if a low market price clearly signals low-cost emissions reduction opportunities and an excess supply of allowances, the proposed ECR does not appreciably change the number of allowances allocated. This is because many, if not all, of the allowances sequestered in the ECR account are promptly recycled back into the allowance supply through supplemental auctions. Because the long-run supply doesn't change, any effect on current prices will be smaller than what is needed, indeed if there is any effect at all.

We offer a detailed description of the proposed regulation and examples of potential outcomes. Section 375 of the proposed rule specifies two avenues for the distribution of allowances held in the ECR: (1) free distribution to EITE facilities and (2) an auction to covered entities and opt-in entities whenever a new covered or opt-in entity enters the program. Figure 1 depicts the various flows into and out of the ECR. The first problem with this language is that there is no ordering or priority given to these two purposes, which may conflict. The second problem, and the one most relevant for the effectiveness of the ECR is that these allowances are simply recycled from the primary auction to a secondary auction. This mechanism does not reliably reduce the excess supply of emissions. These provisions should have no effect on the market price.

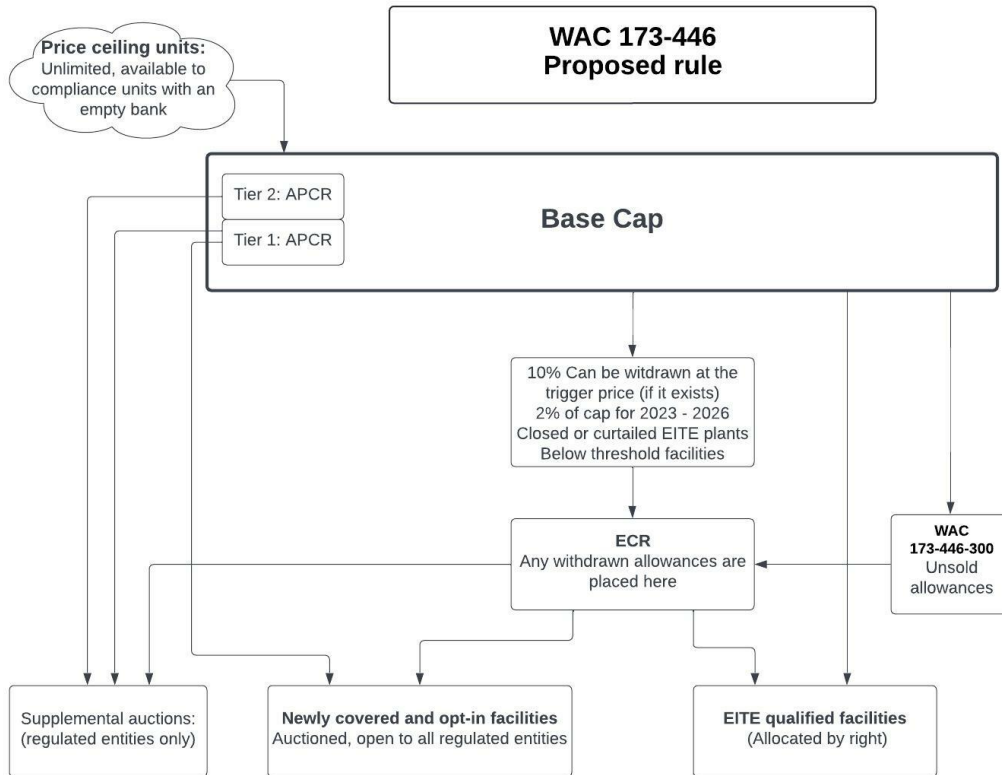


Figure 1: Allowance allocation in the proposed rule

A specific example may help clarify this issue. Suppose a quarterly auction closes at or below a \$25 ECR trigger price, resulting in 10 allowances not being sold and being placed into the ECR. Suppose that a EITE distribution of 20 allowances is required. That distribution will draw down the ECR by 10 and subsequently it will draw down the next auction amount by 10. Had the ECR not been triggered withholding the sale of the 10 allowances in the first auction, the next auction would be reduced by 20. In either case, there has been a net transfer of 20 allowances from the available stock to the EITE facility. The scarcity of allowances has not changed. No effect on price should be observed due to the presence or absence of the ECR.

Alternatively, suppose that there is no call for distributions to EITE facilities, but a new or opt-in facility triggers the auctioning of the ECR stock of 10 allowances. The same compliance entities that bid in the quarterly auction will bid in this auction. The 10 allowances removed earlier in the primary auction would be brought into the market. Although the regulatory language appears ambiguous, it appears that because all auctions use the same structure including an ECR trigger price applied to ten percent of the allowances for sale in that auction.⁵ Consequently, in the secondary auction, if market fundamentals have not changed, 90 percent

⁵ See WAC 173-446-357. Note that, even if the trigger reserve applied to all ECR allowances sold in the supplemental auctions, the proposed mechanism would not achieve the intended result because the ECR mechanism would not adjust the long-run supply of allowances.

of the ECR stock will re-enter the market and only 10 percent of the ECR stock will remain in the ECR. The ECR allowances will be sold at a market price below the trigger price. In the worst case, anticipation of this possible outcome could influence the behavior of market participants. The potential for mischief is great. One immediate (if incomplete) fix to this possible outcome is to apply the ECR trigger price to all allowances sold in the supplemental auction.

Alternatively, if the new source is large enough to drive the market price above the ECR trigger price, the new auction closing price will rise above the trigger. Either way, the presence or absence of the ECR has had little or no effect on the stock of allowances in the market. Thus, we cannot expect the market price to be influenced in a meaningful way due to the presence of the ECR.

The situation in which a new source triggers a withdrawal from the ECR may be a somewhat rare occurrence, but the ECR stock must still be considered to be part of the long-run supply of allowances, and its presence will put downward pressure on the market price. The entire ECR stock (or at least 90% of it) could reenter the market in a single auction triggered by a single new entrant, potentially at a price below the ECR trigger price.

The sequence of auctions provided for in the current draft rule may create an opportunity to benefit from strategic behavior, affecting the likelihood these situations are observed. The fundamental problem with the current ECR proposal is that it is implemented as a temporary separate account where allowances sit for a short time before reentering the market, and the allowances directed to the benefit of EITE and new facilities are comingled with other allowances in the ECR. Consequently, it is possible that allowances flow into the ECR if demand is slack but then flow right back out into the same slack market. The anticipation of the future return of ECR allowances to the market must lower the current market price.

The proliferation of auctions with different allowed participation may contribute to unnecessary price volatility. Various auctions in the proposed rule with different numbers of participants and different rules about how many allowances parties may purchase can be expected to result in different prices in different auctions, differences that have little to do with underlying market expectations about allowance scarcity. It may also create incentives for market participants to manipulate their bids in ways that are very hard to predict in advance. The better option is to reduce the number and variety of auctions.

Summary: The current design of the ECR treats the ECR as a separate account holding a stock of allowances for re-allocation back into the market by grant or by supplemental auction. If withdrawals are triggered to benefit EITE or new facilities, the design has very little chance of reducing price volatility.

- C) A simple adjustment to the proposed rule can distinguish the distribution of allowances to benefit EITE and new entrants from other (general) allowances in the ECR. The ECR allowances not used for EITE facilities and new entrants would be sold in the normal quarterly auction but with the trigger price as the reserve price for those allowances, as currently provided in Section 357. This would embody best practice and deliver maximum benefits**

The function of the ECR in the proposed rule can be made consistent with best practice design with a small change in the proposal. Instead of defining the ECR as a separate account into which allowances are placed for later sale at auction, the ECR can be defined as the 10 percent of allowances that can be removed from any allowance auction at the ECR trigger price. (This is equivalent to applying an ECR reserve price to the 10 percent of allowances.) Before the auction, the number of allowances subject to this trigger reserve price would be reduced by any *required distribution to EITE facilities*. If legislation requires new and opt-in facilities to have preferential access to the ECR, they could be offered ECR allowances at the trigger price, which guarantees they will receive the allowances. We should emphasize that the best approach both for climate and for supporting good market function would be to separate ECR auction design from the EITE distribution and the distribution to new sources.

Any auctioned ECR allowances not meeting the (trigger) reserve price would be retired. Another, somewhat less preferred, option would be to add unsold allowances to the APCR. Retirement is preferred because it better advances climate action and better fulfills the intended purpose of an ECR by adjusting the allowance supply. Retiring allowances that do not meet a reserve price is equivalent to adding them to the stock of price containment units, what we might think of as Tier 3 of the ACPR. Allowances not sold at the regular auction reserve price would be reallocated in the same way. Figure 2 shows the allowance flows in this suggested approach to the ECR.

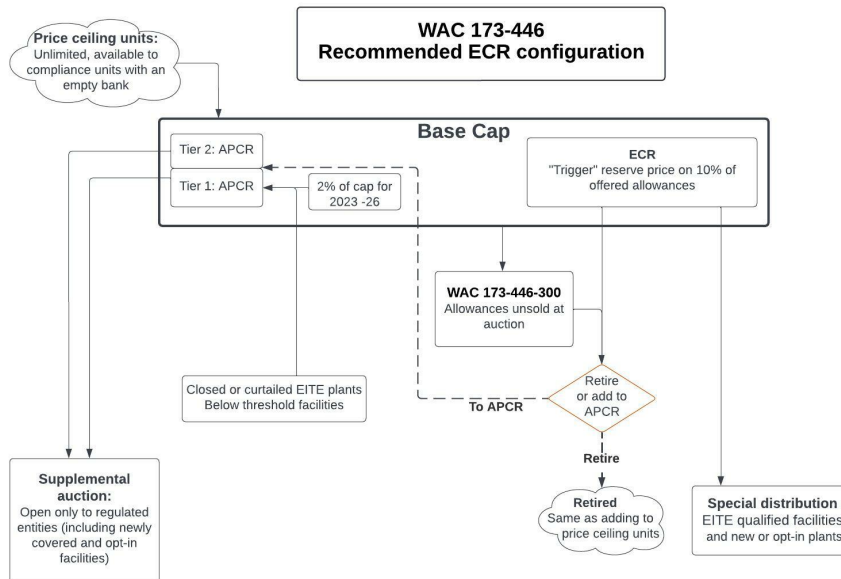


Figure 2: Recommended ECR configuration

This mechanism responds to the slack allowance market by taking the ECR allowances and making them available only if the market becomes tight enough that the price rises high enough to make it worth purchasing them at the higher prices in the APCR or price ceiling. The key feature of the ECR design is to add steps to the allowance supply so that, as the market becomes over-supplied, the supply automatically shrinks. The portion of supply removed is then made available in the eventuality of high future scarcity. If companion regulatory policies are effective enough in reducing emissions so that the price never reaches the price at which more allowances are released, it is conceivable that these allowances would never be needed, but they serve as valuable insurance against potential shocks resulting in unexpectedly high prices

This is how the ECR is implemented in RGGI; the RGGI ECR is implemented as a reserve price in the primary auction and if the auction clearing price is at or below the ECR trigger (reserve) price then some portion or all of the ECR allowances are not sold. This design has the considerable advantage of reducing the complexity of the auction provisions in this proposal. The only auctions needed in this revised ECR are the regular periodic auctions and any sales of allowances from the APCR and price containment units.

EITE facilities receive their allowances by right from the total available amount to be auctioned (or possibly from the ECR portion of the allowances at auction), so these allowances would not be available at auction. New, expanded and opt-in facilities would also receive their allocation from the total auction quantity (or, if necessary, from the ECR portion), offered at the trigger

price. Administration would be simplified and competition improved by reducing the number of supplementary auctions.

Further, we suggest the proposed rule should minimize the instances where participation in an auction or market activity is limited to compliance entities. Such rules invite costly activities on the part of brokers, investors, and compliance entities to circumvent them and are very difficult to enforce. Moreover, emission markets are generally quite liquid, hence the market price of allowances and the price of allowances at auction will be quite close, so there is little to no effect resulting from restricting participation in the auction even if it can be effectively enforced. However, doing so may convey a disadvantage to smaller compliance entities with less in-house market expertise because brokers often provide valuable services to compliance entities. The participation of brokers and investors in auctions generally should be encouraged.

Summary: A small modification to the proposed rule can greatly strengthen the ECR provisions. In Section 375, remove the reference to the ECR being a separate account. The rule can simply provide that allowances that are not sold be retired. No supplemental auctions relating to implementation of the ECR, such as those in Paragraph 2, need be mentioned. This small change will greatly enhance the function of the ECR provisions in this proposed rule.