



January 26, 2022

Mr. Cooper Garbe  
300 Desmond Drive SE,  
Lacey, WA 98503  
[cooper.garbe@ecy.wa.gov](mailto:cooper.garbe@ecy.wa.gov)

*Submitted via Department of Ecology's Public Comment Form*

**RE: Environmental Defense Fund comments relating to the draft rule for the Climate Commitment Act Program, Chapter 173-446 WAC**

Dear Mr. Garbe,

Environmental Defense Fund (EDF) appreciates the opportunity to submit the following informal comments on the Department of Ecology's (Ecology) draft rules for the Climate Commitment Act Program, Chapter 173-446 WAC. EDF is a non-profit, non-governmental, and non-partisan organization that links science, economics, and law to create innovative, equitable, and cost-effective solutions to urgent environmental problems. EDF has over two million members across the country, including many in Washington state. EDF brings deep expertise to climate policy design, particularly market-based solutions, and has long pursued initiatives at the state and national level designed to reduce emissions of climate-altering and health-harming air pollutants.

The passage of the Climate Commitment Act (CCA) last year solidified Washington state as a national climate leader, making Washington only the second state after California to place a binding, declining greenhouse gas (GHG) emissions limit across all major sectors of its economy. By enacting the CCA, Washington successfully translated its climate goals—which are the most ambitious statutory targets in the nation—into an enforceable policy framework designed to slash GHG emissions at the pace and scale necessary to meet the urgency of the climate crisis while also providing new tools to address local air pollution in overburdened communities.

The rules for the CCA's cap-and-invest program will determine how Washington's regulated facilities can comply with the program; effective program design will be critical for making the CCA's climate commitment a reality as well as Washington's ability to partner with other jurisdictions. Well-designed program rules are also essential to ensuring the state meets its 2030, 2040 and 2050 greenhouse gas emission reduction goals. EDF deeply appreciates Ecology's effort to both develop draft rules and gather input from stakeholders during this informal comment period.

As an overarching consideration, EDF recommends seeking alignment with the Western Climate Initiative, California and Quebec's linked emissions trading system, where possible, in order to better facilitate a potential linkage in the future. Larger, linked markets offer more stability by increasing liquidity, thus decreasing price fluctuations and insulating the market from price shocks. Linkage also reduces abatement costs for participating entities and expands each jurisdiction's base of emission reduction opportunities. This enables increased program ambition, which is beneficial to the climate, without increasing costs. To maintain the possibility for smooth linkage in the future, Washington should

consider alignment with the California-Quebec system throughout its program rules—with particular emphasis given to program ambition, alignment on allowance auctions, enforcement, price containment, and the environmental integrity of program requirements and allowance budgets.

### **General Requirements**

EDF supports Ecology’s general approach to applicability and covered emissions, and the important inclusion of Ecology’s ability to adjust covered emissions for any emissions year based on new reported information or to compensate for a change in methodology. The overall registration process appears to be appropriate, and EDF appreciates that any reporter reporting at least 25,000 MT of covered emissions per year from 2015 onwards that meet the applicability conditions is automatically registered.

The CCA’s approach to applicability and covered emissions, as with many aspects of the Act, anticipates the potential for linkage with the California-Quebec system. While linkage will not happen immediately upon program implementation, it will be important for rulemakings like this one to align with the California-Quebec system to the extent possible. We appreciate the effort that Ecology has made to align both this specific section and the broader draft program rules with California’s program rules.

### **Program Account Requirements**

The program account requirements included in the draft rules create a strong foundation to support effective program function, and the requirements as drafted are appropriately aligned with California’s program account requirements.

### **Allowance Budgets and Distribution of Allowances**

#### ***Total program baseline and total program allowance budget***

Ecology’s proposed approach to updating the total program baseline and setting the total program allowance budgets appears to be an effective methodology for setting allowance budgets to achieve covered sources’ proportionate share of the state’s emission reduction targets in 2030, 2040 and 2050.

2027 and 2031 are the first year of the second and third compliance periods, respectively. In those years, the total program baseline is updated to reflect expanded program coverage for waste to energy facilities utilized by a county and city solid waste management program in the second compliance period, and for railroad companies and landfills utilized by a county and city solid waste management program in the third compliance period. In 2027 and 2031, Ecology has proposed to calculate the total program allowance budget differently than in other years in order to incorporate the updated program baseline; in 2027 and 2031, the total program allowance budget is the previous year’s total program allowance budget plus the adjustment to the total program baseline, reduced by an additional 7% and 1.9% respectively. This is different from the methodology in other years, wherein the total program allowance budget is the previous year’s budget reduced by a consistent percentage of the total program baseline.

EDF performed an analysis of Ecology’s proposed methodology to explore the potential for adjustments in 2027 and 2031 to undermine cap integrity and to determine whether the methodology would ensure that the program met its proportionate share of Washington’s statewide emissions reduction targets. Using Ecology’s estimate of 71 MMT CO<sub>2</sub>e as the total program baseline starting in 2023, EDF found that Ecology’s proposed approach would keep the program on track to achieve its proportionate share of Washington’s climate targets as long as emissions from newly covered rail and waste facilities do not exceed approximately 8 MMT CO<sub>2</sub>e.

The total emissions from rail and waste management in Washington were approximately 3.21 MMT CO<sub>2</sub>e in 2018 according to Washington’s most recent greenhouse gas inventory.<sup>1</sup> This is well below the threshold at which Ecology’s proposed methodology would be at risk of not achieving the proportionate share of the state’s emission reduction targets; even if emissions from these sources were to double, the cap would still be set at a level that would achieve the necessary emission reductions. Therefore, we support Ecology’s proposed approach to updating the total program baselines and setting the total program allowance budget.

### *Distribution of allowances to emissions-intensive and trade-exposed entities*

Initial draft rules on the designation of EITEs have not used a true intensity-based measure, and have instead used an absolute measure of emissions in units of emissions per year. Conversely, EDF appreciates that these cap-and-invest program rules do use a true measure of emissions intensity derived by dividing 2015-2019 average emissions by 2015-2019 average total annual product data, which yields a measure of emissions intensity in units of emissions per unit output. It is essential that a true measure of emissions intensity is used consistently across all rules and legislation related to allocations to EITE facilities.

EDF is concerned that the methodology for calculating an EITE entity’s direct allocation of allowances will not properly align incentives to minimize leakage risk and decrease emissions intensity at a rate consistent with the CCA’s ambition. We recommend that Washington instead adopt an allocation methodology that mirrors California’s output-based allocation (OBA) approach. Washington could achieve this by using industry-wide product efficiency benchmarks instead of the facility-specific carbon intensity baselines that are utilized in the proposed approach.

OBA ensures that facilities are rewarded based on two key metrics: 1) how much they produce in state, and 2) how efficiently they produce compared to similar industrial facilities. Facilities that increase their in-state production while reducing their emissions receive relatively more allowances than facilities that are not increasing production or not reducing their emissions.

A key component of this approach is the greenhouse gas benchmark, a metric for comparing emissions performance across similar industrial facilities. Product-based benchmarking establishes an emissions performance standard for each product, which is used to reward more efficient facilities on a comparative basis. Benchmarks are developed on a product-by-product basis and are developed to reflect the emissions intensity of “highly-efficient, low-emitting facilities within each sector.”<sup>2</sup> The California Air Resources Board (CARB)—the state agency responsible for implementing California’s cap-and-trade program—targeted a level of stringency created by evaluating each industrial sector’s production-weighted average emissions intensity during a historical base period, and targeting the benchmark to allocate 90 percent of this level per unit produced.<sup>3</sup> In developing and evaluating benchmarks, CARB discovered that this stringency approach, “worked for many sectors but, in some cases, would set the benchmark at a level that was more stringent than the current emissions intensity of any existing Californian facility. For the sectors for which this occurred, staff selected a benchmark based on the “best-in-class” value (i.e., the emissions intensity of the most GHG-efficient California facility).”<sup>4</sup> Washington could take a similar approach that leverages the work that California has already done to develop product benchmarks; Washington could use California’s benchmarks as a starting point, and make this manual “best-in-class” adjustment based on Washington’s facilities on an as-needed basis, particularly for sectors where there may not be multiple producers of a product.

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<sup>1</sup> Washington State Department of Ecology Air Quality Program. Washington State Greenhouse Gas Emissions Inventory: 1990 - 2018. January 2021. Available at <https://apps.ecology.wa.gov/publications/documents/2002020.pdf>

<sup>2</sup> CARB. Cap-and-trade regulation Appendix B: Development of Product Benchmarks for Allowance Allocation. Available at: <https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2010/capandtrade10/candtappb.pdf>

<sup>3</sup> Ibid.

<sup>4</sup> Ibid.

A methodology that uses industry-wide, product-specific benchmarks rewards facilities that have taken early action to increase their efficiency; a methodology based on facility-specific emissions intensity baselines does not because it compares against a facility's past performance rather than comparing against other facilities in the industry. Product benchmarks also create a stronger incentive for continued improvement by comparing between similar facilities on an ongoing basis, whereas facility-specific baselines can reinforce the status quo – as long as a facility's efficiency doesn't get worse over time, that facility will be rewarded with all of the allowances they need (adjusted only by the cap decline factor, which all facilities face equally regardless of emissions performance).

Prior to the 2018 rulemaking, California's cap-and-trade program regulation calculated allowance allocations for OBA utilizing an assistance factor that reflected the leakage risk faced by various industrial sectors. Facilities with a higher risk of leakage would receive a relatively higher allocation than facilities with lower leakage risk. We recommend that Washington adopt this approach, including leakage risk as a factor in the calculation of an EITE entity's allocation so that allocations can address this risk more directly.

Additional information about output-based allocation and EDF's recommended approach to allowance allocation for EITE facilities can be found in our comments to Representative Joe Fitzgibbon on HB 1682, which can be found in Appendix A.

WAC 173-446-220 (2)(d)(ii) states that prior to the beginning of a compliance period, Ecology may make an upward adjustment in the next compliance period's reduction schedule for an EITE facility based on the facility's demonstration to Ecology that additional reductions in carbon intensity or mass emissions are not technically or economically feasible. EDF believes that providing entities with such an upward adjustment is unnecessary when stacked on top of an approach that is already extremely generous, particularly during the first three compliance periods.

Furthermore, as we articulated in our comments to Representative Joe Fitzgibbon on HB 1682, which are attached as Appendix A, any approach based on the installation of best available technology (BAT)—such as the upward adjustment Ecology has proposed in these draft rules, and the proposals put forward by some stakeholders—will need to have strong guardrails to ensure that EITE facilities face the proper incentives to improve efficiency and maintain or increase in-state production. It is critical that any upward adjustments to a facility's direct allocation still be under the overall program cap—upward adjustments cannot result in the exemption of any covered emissions, any increase in the annual allowance budget, or any slowing of the year-over-year reductions in annual allowance budgets. BAT must not serve as a compliance “off ramp” of any kind. Additionally, the upward adjustment provision lacks sufficient requirements needed to ensure that the evaluation of BAT is based on a rigorous, up-to-date, comprehensive audit that maintains cap integrity and considers impacts on neighboring communities, particularly overburdened communities. While not our preferred approach, if Ecology decides to pursue a BAT methodology we strongly recommend the addition of greater detail to ensure the efficacy and environmental integrity of such an approach.

### ***Adjustments to allowance budget***

Ecology's ability to make adjustments to the allowance budget to ensure consistency with proportional GHG emission limits, as described in WAC 173-445-250 (5), is essential to ensure Washington always remains on track to meet statutory greenhouse gas reduction targets. Regular analysis of Washington's progress toward GHG limits—and critically, the ability to take action if analysis shows insufficient progress—is an important part of program success and is a statutory requirement in the CCA. EDF supports the language tying these adjustments to the allowance budget to the progress reports required by RCW 70A.45.020 (2) and RCW 70A.65.060 (5). However, we would also note that the CCA states that nothing in subsection RCW 70A.65.070 (3) precludes the Department from making additional adjustments as necessary to ensure successful achievement of the proportionate emission reduction limits by covered entities. We support Ecology's ability to utilize its discretion to ensure that the required

emissions are achieved in line with state goals. We recommend that Ecology specify that in addition to adjustments in response to the progress reports required by RCW 70A.45.020 (2) and RCW 70A.65.060 (5), Ecology may adjust the allowance budget for this purpose whenever it deems necessary. In both cases, we recommend that Ecology establish and make public the methodology they will use to determine if additional adjustments are necessary.

The methodology for adjusting the program budget to account for the use of offsets is novel for a cap-and-invest type program, and EDF believes that Ecology's proposal will be an effective approach. Reducing the overall program cap to account for offset use effectively moves offsets under the cap, increasing the certainty of emissions reductions from offsets and accelerating progress towards meeting Washington's statewide climate targets.

The methods that Ecology has included for reducing allowances from the allowance budget are generally appropriate. The draft rules indicate that Ecology will utilize those methods in the order listed in WAC 173-446-250 (2) (a-c) . It is important that—as Ecology has proposed—removing and retiring allowances from being offered for sale at a subsequent auction should be the last resort; retiring unsold allowances and reducing the number of allowances from the next year's planned budget are both preferable for market stability and planning for full program compliance. For clarity, EDF would recommend changing “in the following order” in this section to “in order of precedence.”

### **Allowance Auctions**

We support the use of WCI, Inc. as the auction administrator and Ecology's use of WCI, Inc.'s web-based Compliance Instrument Tracking System Service (CITSS) and auction platform. WCI, Inc.'s tracking system and auction platform have proven highly effective for administering the California-Quebec program auctions. Using WCI, Inc.'s infrastructure will set Washington up for success while helping to further align Washington's program with the California-Quebec system in the event of a future linkage.

During Ecology's stakeholder meeting on January 11, 2022, Ecology staff indicated that they will be engaging a consultant to conduct an analysis of the appropriate levels for the floor, ceiling, and reserve trigger and tier prices, and that those prices will be written into the proposed rules. Below are some high-level considerations for determining the auction floor price and auction ceiling price, as well as the emissions containment reserve (ECR) trigger price and allowance price containment reserve (APCR) tier prices.

- In the event of program linkage, it will be crucial for Washington to coordinate with linked jurisdictions in setting the floor price and ceiling price, as well as trigger prices for various tiers of the ECR and APCR. In a linked market, these values will need to be aligned for effective market function. We recommend evaluating potential price points for the ceiling, floor and reserve tiers and triggers with the potential for linkage in mind and would encourage the use of California's prices as a point of reference.
- The draft rules propose that the floor price, ceiling price, ECR trigger price, and APCR tier prices be increased annually by 5% plus the rate of inflation. This is aligned with California's approach, wherein the floor price, ceiling price, and reserve tier prices are also increased annually by 5% plus the rate of inflation. In setting a long-term trajectory for these prices, is it important to avoid any narrowing of the gap between the floor price, ceiling price, ECR trigger price, and APCR tier prices; a narrowing of the range could impede proper market function and could jeopardize cap integrity, particularly if the APCR tier prices and ceiling price do not increase quickly enough.

### ***Price Ceiling Units and Price Ceiling Unit Sales***

A critical component of the price ceiling is the requirement that if the price ceiling is met—and therefore price ceiling units are sold above the cap—Ecology is required to use the resulting revenue to secure

GHG emission reductions on at least a ton-for-ton basis. This is an essential safeguard for maintaining the environmental integrity of the program in the event that allowance prices reach the price ceiling. Any analysis of the appropriate ceiling price must reflect two of the CCA's statutory requirements for the ceiling price: (1) that funds raised from the sale of price ceiling units must be expended to achieve emissions reductions on at least a ton for ton basis, and (2) that the ceiling must be set at a level sufficient to facilitate investments to achieve further emission reductions beyond those enabled by the price ceiling, with the intent that investments accelerate the state's achievement of its GHG limits.

The price ceiling must be set at a level high enough to protect the environmental integrity of the program cap. A high price ceiling offers a range of benefits that should be considered in setting the ceiling price, including:

- A higher price ceiling makes it less likely that allowances will be released from the price containment tier—and therefore less likely that allowances from above the cap will be utilized.
- A higher price ceiling provides more market flexibility to allow the market to set the appropriate price for incentivizing abatement.
- A higher price ceiling means more revenue will be available to secure high-quality reductions outside the cap, making it more likely that the state will be able to achieve (or even exceed) the critical ton-for-ton requirement in statute.
- A higher price ceiling could also encourage more emission reductions even if the price does not reach the price ceiling. Companies will plan their reduction investments based on the price certainty they get from the price ceiling. A higher price ceiling could cause businesses to invest in more emissions reductions in order to protect themselves from the risk of higher prices. This activity could contribute to lower emissions overall, making it even less likely that the price ever reaches the ceiling.
- The price ceiling should be significantly higher than the price tiers included in the APCR, which creates a soft price ceiling.

Ecology should also consider the social cost of carbon (SCC) as a helpful reference point in setting the price ceiling. A carbon price should be focused on reaching specified emissions reductions goals, and should not necessarily be directly pegged to the SCC—but estimates of the SCC provide an important set of data points that can inform policy, investments, and decision-making, and should be used to inform the level of the price ceiling.

WAC 173-446-385(4) specifies that in a request for a price ceiling unit sale, the covered entity or opt-in entity must demonstrate to Ecology's satisfaction that it tried, but was unable to acquire sufficient compliance instruments to meet its compliance obligations for the immediately upcoming compliance deadline. It is unclear why this demonstration is necessary, but if Ecology proceeds with this approach the Department should clearly list the factors or criteria that will be used in determining whether an entity has or has not demonstrated this requirement to Ecology's satisfaction. Maintaining consistency is important to ongoing market functioning and confidence. We also note that if the price ceiling is sufficiently high then such a demonstration will likely be unnecessary and note that California's cap-and-trade program does not include a similar demonstration requirement for price ceiling unit sales.

### ***Allowance Price Containment Reserve Account***

During Ecology's stakeholder meeting on January 11, 2022, Ecology staff indicated that Ecology will distribute allowances from the APCR by auction when the auction settlement price at the previous auction is at or higher than the Tier 1 APCR price, or when new covered entities and opt-in entities join the program, or once a year after the final regular auction of the year and before the compliance deadline. Ecology staff also indicated that the draft rule language that has been shared does not include language

regarding the APCR auctions that can be held yearly between the final regular auction and before the compliance deadline, but that this language will be included in the proposed rules. In developing this language, we recommend that Ecology adopt a similar structure and approach to the design of California's APCR auctions; as Washington is planning to do, California offers the opportunity for a yearly reserve auction prior to the compliance obligation instrument surrender deadline. If designed effectively, this approach can allow covered entities to access allowances at set prices as a hedge against higher costs.

It is critical that the APCR tier prices are set at a level high enough to ensure that the APCR functions as intended, as a soft price ceiling. In setting the APCR tier prices and the ceiling price, Ecology's key priority should be ensuring that the ceiling and APCR will function in concert to provide cost containment while protecting the integrity of the cap.

### **Compliance Instrument Transactions**

We appreciate that the system for compliance instrument transactions laid out in the draft program rules is broadly aligned with the system used by California's cap-and-trade program, and at this stage we have no specific suggestions for improvement on the rules in this section. The fact that these draft rules are already in general accordance with California's system will allow Washington to more easily facilitate a potential linkage in the future.

### **Offsets**

Offsets play a specific and important role in the cap-and-invest program by fulfilling an important cost containment function and by providing investment for emissions reductions in uncapped sectors, such as the natural and working lands sectors. For offsets to fulfill that role effectively, offset provisions must include rigorous environmental integrity provisions and processes to ensure that emissions reductions from offsets are monitored, tracked, and verified.

EDF supports close alignment between the offset provisions in California's program and Washington's program, because that alignment will be important in the event of program linkage. Ecology's proposed rules on compliance offsets meet this need and are highly aligned with California's offset requirements, including for initial protocols, general requirements, crediting, tracking, verification, and the definition of direct environmental benefits. Existing CARB compliance offset protocols provide a strong foundation for initial implementation of Washington's program.

We support the two-stage approach described in Ecology's December 16th stakeholder meeting, in which Ecology will mirror rules from California's offset program in the near-term, and in the long-term maintain consistency with California's rules while also making updates and developing offset protocols specific to Washington.

We note that the CCA requires Ecology to encourage opportunities for the development of offset projects by adopting protocols that may utilize aggregation or other mechanisms to reduce transaction costs. The CCA also requires Ecology to make use of aggregation or other mechanisms to increase the development of offset projects by landowners across the broadest possible variety of types and sizes of lands, including lands owned by small forestland owners. We encourage Ecology to explore strategies to promote strong levels of participation by a range of diverse landowner types, including by small landowners and Tribal Nations. Ecology should update the proposed rules to include measures that can help meet these important statutory requirements and support a range of diverse landowners in developing environmentally-rigorous offset projects.

### **Compliance and Enforcement**

It is useful to have the requirements for compliance obligations clearly spelled out in this section. We appreciate the clear statement that all covered entities and opt-in entities must comply with all requirements for monitoring, reporting, participating in auctions, and holding and transferring compliance instruments. It is also critical to maintain the language stating that Ecology may reduce offset usage limits for specific entities if Ecology determines that the entities have or are likely to contribute substantively to cumulative air pollution burden in an overburdened community or violate any permits required by a federal, state, or local air pollution control agency where the violation may result in any increase in emissions. Ecology must work closely with the Environmental Justice Council to develop guidance for how these adjustments will be applied.

In WAC 173-446-600(6)(d-e), it's not clear whether the additional offsets that can be utilized from federally recognized tribal lands also need to provide direct environmental benefits (DEBs) in Washington State or in a linked jurisdiction. Given that the CCA states that offset projects must provide DEBs to the state or be located in a jurisdiction with which Washington has a linkage agreement, we recommend clarifying.

The draft regulation also states that for the first compliance period, Ecology may reduce the amount of the penalty by adjusting the monetary amount or the number of penalty allowances. While we understand that some flexibility may be warranted in the first compliance period—and the CCA specifically provides this flexibility during the first years of the program—there is the potential for a reduction in the number of penalty allowances to undermine the integrity of the cap if the penalty were reduced to less than one allowance for every ton of emissions in violation. We recommend that Ecology specify that in the event that penalty allowances are reduced during the first compliance period, facilities will still be required to submit more than one allowance for every ton of covered emissions that is out of compliance.

## **Conclusion**

Thank you for the opportunity to provide feedback during the informal comment period. We appreciate the work that Ecology is doing to build an effective cap-and-invest program that will keep Washington on track to achieve its climate goals and we look forward to continued engagement.

Respectfully submitted,

Kjellen Belcher  
**Senior Analyst, U.S. Climate**

Caroline Jones  
**Analyst, U.S. Climate**

Katelyn Roedner Sutter  
**Senior Manager, U.S. Climate**





## Appendix A: EDF Comments to Rep. Fitzgibbon on HB 1682

January 19, 2022

Rep. Fitzgibbon  
JLOB 320  
PO Box 40600  
Olympia, WA  
98504-0600

*Submitted via email*

### RE: Environmental Defense Fund comments relating to HB 1682

Dear Rep. Fitzgibbon,

Environmental Defense Fund (EDF) appreciates the opportunity to submit the following comments on HB 1682, the proposal for agency-request legislation on emissions-intensive, trade-exposed (EITE) industries. EDF is a non-profit, non-governmental, and non-partisan organization that links science, economics, and law to create innovative, equitable, and cost-effective solutions to urgent environmental problems. EDF has over two million members across the country, including many in Washington. EDF brings deep expertise to climate policy design, particularly market-based solutions, and has long pursued initiatives at the state and national level designed to reduce emissions of climate-altering and health-harming air pollutants.

In considering the direct allocation of allowances to EITE facilities, EDF's core goals are to maintain the environmental integrity of the emissions cap while creating a system that will cut pollution in line with Washington's science-based greenhouse gas (GHG) reduction targets, minimize leakage risk, encourage early investment in more efficient technologies to drive near-term emission reductions, and uphold the environmental justice and air quality commitments that are a fundamental part of the Climate Commitment Act (CCA). HB 1682 largely achieves these goals, but EDF believes it could be further improved. EDF makes the following recommendations in order to strengthen the bill's approach.

- **Direct allocation of allowances to EITEs should decline at a level consistent with the cap from the beginning of cap-and-invest program implementation.** The pre-2035 allocation to EITEs in the proposal is extremely generous, and by declining free allocation in proportion with the cap for the duration of the program Washington could encourage earlier reductions in greenhouse gas emissions.
- **Washington should adopt an allocation methodology that mirrors California's output-based allocation approach by using industry-wide product efficiency benchmarks instead of a facility-specific carbon intensity baseline** to calculate the number of allowances that an EITE facility should receive for free. This approach ensures that facilities are rewarded based on two key metrics: 1) how much they produce, and 2) how efficiently they produce **compared to similar industrial facilities.**

- **We support the definition of carbon intensity in the bill**, and it is critical that across EITE proposals in legislation and regulation that carbon intensity and emissions intensity be consistently measured as a unit of emissions per unit production. Initial draft rules on EITE treatment have not used a true intensity-based measure and have instead used an absolute measure of emissions in units of emissions per year.
- While not our preferred approach, any potential methodology based on best available technology must:
  - **Maintain the integrity of the CCA’s cap on emissions.** Any allocation approach that exempts emissions that are covered by the CCA would significantly undermine the environmental integrity of the program. In HB 1682, it is critical to maintain the provision that states that any upward adjustment based on BAT may not increase the annual allowance budget, reduce the progressively equivalent reductions year over year in annual allowance budgets, or prevent the achievement of the state’s emissions limits.
  - **Use a comprehensive approach to evaluating emission reduction strategies at the facility level.** BAT evaluations should cover 100% of emissions from a facility and address all the potential ways to reduce emissions (including energy efficiency, fuel switching, and process-oriented measures) using an integrated approach.
  - **Include a rigorous facility-specific audit to determine BAT at each facility.** The audit protocols and process determine the ultimate effectiveness of any BAT-based approach. Audits must be robust, transparent, and fair. Ecology should select auditors or play an oversight role in the selection of auditors, and there should be a rigorous agency review process for audit results.
  - **Consider benefits to local air quality in overburdened communities in the evaluation and prioritization of BAT measures.** Benefits and impacts to local air quality in overburdened communities should be analyzed in the audit and Ecology should be directed to prioritize measures that maximize conventional co-pollutant reductions (particularly in overburdened communities) alongside reductions in greenhouse gas emissions.
  - **Maintain an incentive for ongoing improvements in emissions intensity.** In order to maintain an incentive for ongoing improvements in emissions intensity, EITE facilities should receive fewer free allowances than needed to cover their total compliance obligation.

Appendix A includes additional detail for each of these recommendations.

We appreciate the opportunity to provide comments on HB 1682, and we look forward to continued work with the Legislature to deliver an approach that cuts emissions, protects Washington’s jobs, and maintains the environmental integrity of the CCA’s cap on climate pollution.

Respectfully submitted,

Kjellen Belcher  
**Senior Analyst, U.S. Climate**

Caroline Jones  
**Analyst, U.S. Climate**

Katelyn Roedner Sutter  
**Senior Manager, U.S. Climate**

## Appendix A: Additional detail to support EDF recommendations on HB 1682

### **Direct allocation of allowances to EITEs should decline at a level consistent with the cap from the beginning of program implementation.**

The Legislature should adopt a more stringent allocation trajectory for EITEs, ideally reducing the free allocation of allowances to EITEs so that allocation declines proportionately with the cap for the entire duration of the program, including from 2023-2034. This would accomplish multiple goals:

- Aligning the emissions reduction trajectory for EITEs with the trajectory for other covered entities.
- Ensuring that EITEs achieve their proportionate share of Washington’s emission reduction limits.
- Incentivizing EITEs to reduce emissions and invest in efficient technologies in the near term.
- Encouraging earlier reductions in greenhouse gas emissions by reducing allocation steadily and predictably over time, rather than waiting until 2035 for a steep reduction in allocation and potentially delaying emissions abatement into the next decade.

HB 1682 is designed to align free allocation to EITEs with Washington’s 2040 and 2050 climate targets. **However, the integrity of the state’s 2030 target is also essential.** This decade is a critical time for Washington, and the world, to dramatically slash GHG emissions. The Intergovernmental Panel on Climate Change (IPCC) has released a special climate report detailing threatening realities: that human activities have already caused approximately 1.0°C of warming above pre-industrial levels and that the world could reach 1.5°C of warming as early as 2030.<sup>1</sup> Thus, the IPCC calls for “rapid and far-reaching transitions” across all sectors in order to reduce cumulative emissions and limit global warming to 1.5°C, to minimize the risks and harmful impacts of climate change on current and future generations. Washington’s policies must be designed to deliver swift emissions cuts before 2030, and a key way to ensure that EITEs have an incentive to reduce emissions and invest in more efficient technology **in the near-term** is by declining direct allocation at a level that matches the decline of the cap from the beginning of program implementation.

Some EITE stakeholders have expressed concern about the relatively steeper decline in free allowance allocation after 2034—it is important to note that this more rapid decline is only necessary because of an extremely generous allocation to EITEs during the first three compliance periods. It is also important to note that the generous allocation to EITEs during the first three compliance periods comes at the expense of other regulated entities, who may have to reduce emissions more than their “proportionate share of the state’s emissions reduction limits through 2050” in these early years to compensate for EITEs that reduce their emission less than their proportionate share. Between now and 2035, EITEs will not be required to reduce their emissions as swiftly as non-EITE entities, and the ability to bank allowances means that EITEs would have ample time to prepare for the relatively steeper drop in free allocation that begins in 2035.

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<sup>1</sup> Intergovernmental Panel on Climate Change (IPCC), 2018, Global warming of 1.5°C: An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty, pp. 6, 17, [https://www.ipcc.ch/site/assets/uploads/sites/2/2018/07/SR15\\_SPM\\_version\\_stand\\_alone\\_LR.pdf](https://www.ipcc.ch/site/assets/uploads/sites/2/2018/07/SR15_SPM_version_stand_alone_LR.pdf).

**We recommend that Washington adopt an allocation methodology that mirrors California’s output-based allocation approach and uses industry-wide product efficiency benchmarks.**

EDF recommends that the Legislature update the methodology for calculating an EITE facility’s free allowance allocation—**ideally for the entire duration of the program, from 2023 onwards**—in order to better align the law with the goals of minimizing leakage risk while also incentivizing increases in efficiency.

Specifically, we recommend that the Legislature adopt an allocation methodology that closely mirrors the output-based allocation method that is used in California’s cap-and-trade system. Output-based allocation (also known as product-based allocation) determines a facility’s allocation based on four variables:

- Assistance factor, which reflects GHG emissions leakage risk.
- GHG benchmark, or representative GHG emissions per unit of product.
- Cap adjustment factor, which decreases each year in proportion to the overall annual allowance cap.
- Output, a facility’s annual production.

This approach ensures that facilities are rewarded based on two key metrics: 1) how much they produce, and 2) how efficiently they produce **compared to similar industrial facilities**. Facilities that increase their in-state production while reducing their emissions receive relatively more allowances than facilities that are not increasing production or not reducing their emissions.

A key component of this approach is the **greenhouse gas benchmark**, a metric for comparing emissions performance across similar industrial facilities. **Product-based benchmarking establishes an emissions performance standard for each sector, which can be used to reward more efficient facilities.**

Benchmarks are developed on a product-by-product basis and are developed to reflect the emissions intensity of “highly-efficient, low-emitting facilities within each sector.”<sup>2</sup> The California Air Resources Board (CARB)—the state agency responsible for implementing California’s cap-and-trade program—targeted a level of stringency created by evaluating each industrial sector’s production-weighted average emissions intensity during a historical base period, and targeting the benchmark to allocate 90 percent of this level per unit produced.<sup>3</sup> In developing and evaluating benchmarks, CARB discovered that this stringency approach, “worked for many sectors but, in some cases, would set the benchmark at a level that was more stringent than the current emissions intensity of any existing Californian facility. For the sectors for which this occurred, staff selected a benchmark based on the “best-in-class” value (i.e., the emissions intensity of the most GHG-efficient California facility).”<sup>4</sup> Washington could take a similar approach that leverages the work that California has already done to develop product benchmarks; Washington could use California’s benchmarks as a starting point, and make this manual “best-in-class” adjustment based on Washington’s facilities on an as-needed basis.

This approach of output-based allocation rewards facilities who take early action to reduce emissions, and also ensures that industries have a strong incentive to produce products in the most greenhouse gas-efficient way possible. CARB staff found that under this approach, assuming no other adjustments in the allocation formula, “a facility that is more efficient than the benchmark will receive excess allowances relative to their emissions levels. Conversely, a facility that is less efficient than the benchmark will have

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<sup>2</sup> CARB. Cap-and-trade regulation Appendix B: Development of Product Benchmarks for Allowance Allocation. Available at: <https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2010/capandtrade10/candtappb.pdf>

<sup>3</sup> CARB. Cap-and-trade regulation Appendix B: Development of Product Benchmarks for Allowance Allocation. Available at: <https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2010/capandtrade10/candtappb.pdf>

<sup>4</sup> Ibid.

to acquire additional allowances beyond those that are freely allocated—either at auction or on the secondary market.”<sup>5</sup>

A methodology that uses industry-wide, product-specific benchmarks rewards facilities that have taken early action to increase their efficiency, while a methodology based on facility-specific emissions intensity baselines does not because it compares against a facility’s past performance rather than comparing against other similar facilities in the industry. Product benchmarks also create a stronger incentive for continued improvement by **comparing between similar facilities on an ongoing basis**, whereas facility-specific baselines can reinforce the status quo – as long as a facility’s efficiency **doesn’t get worse over time**, that facility will be rewarded with all of the allowances they need (adjusted only by the cap decline factor, which all facilities face equally regardless of emissions performance).

Evidence suggests that output-based allocation has been effective at preventing leakage while cutting emissions in California, where the carbon intensity of the state’s economy has decreased while overall GDP has increased.<sup>6</sup> Pollution is down while productivity is up and under California’s cap-and-trade program, manufacturing industries are more efficient, cutting emissions while expanding output. The carbon intensity of California’s economy decreased by 45% from 2000 to 2019; during that same time period, California’s GDP increased by 63%.<sup>7</sup> In 2019 alone, California’s GDP grew by 2.6% while emissions per GDP declined by 4.1% compared with 2018.<sup>8</sup>

Through effective program design, Washington can realize these same outcomes within its industrial sector and cut climate pollution while protecting productivity and jobs – while also creating a strong model that can be replicated in other states and while creating additional harmonization with California’s program, which could help facilitate potential linkage.

For detailed information about how California’s system of output-based allocation works, please see CARB’s webpage on [Allowance Allocation to Industrial Facilities](#).<sup>9</sup> For a small number of sectors where output-based allocation cannot be used, CARB uses an energy-based allocation method as a fallback method for determining what level of direct allocation industrial facilities should receive. **However, output-based allocation is the preferred method and is feasible for the vast majority of industrial emissions; for vintage 2020 allowance allocation, less than two percent of industrial allocation was calculated by the energy-based method.**<sup>10</sup> Energy-based allocation still declines with the overall emissions cap. Washington could take a similar approach where output-based allocation using product benchmarks is the default approach for industrial allocation, with a facility-specific baseline approach being used on an as-needed basis in the small number of circumstances where output-based allocation is not feasible.

### **It is essential that carbon intensity be defined as a measure of emissions per unit of output.**

EDF supports the definition of carbon intensity included in HB 1682, which defines carbon intensity as the amount of carbon dioxide equivalent emissions from a facility **divided by the facility specific**

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<sup>5</sup> ISOR Appendix J: Allowance Allocation. Page J-21. Available at:

<https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2010/capandtrade10/capv4appj.pdf>

<sup>6</sup> CARB. California Greenhouse Gas Emissions for 2000 to 2019: Trends of Emissions and Other Indicators. July 28, 2021.

Available at: [https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000\\_2019/ghg\\_inventory\\_trends\\_00-19.pdf](https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2019/ghg_inventory_trends_00-19.pdf)

<sup>7</sup> Ibid.

<sup>8</sup> Ibid.

<sup>9</sup> CARB. Allowance Allocation to Industrial Facilities. Available at: <https://ww2.arb.ca.gov/our-work/programs/cap-and-trade-program/allowance-allocation/allowance-allocation-industrial>

<sup>10</sup> Ibid.

**measure of production.** While there are various ways to measure carbon intensity, Washington’s approach must include a true measure of carbon intensity as a measure of emissions per unit of output or value added. A correct definition on a per output basis is an essential building block for an allowance allocation methodology for EITEs that rewards increases in in-state production alongside increases in efficiency.

We recommend referencing the approach used in California Air Resources Board’s (CARB) Leakage Analysis,<sup>11</sup> which includes an analysis of the implications of using various metrics to determine emissions intensity. CARB considered a number of methodologies for calculating emissions intensity, and ultimately chose an approach based on the methodology used by Australia’s Carbon Pollution Reduction Scheme (CPRS). CPRS calculates emissions intensity based on output, in units of CO<sub>2</sub>e per million dollars of value added.

**If the legislature chooses to implement an approach based on BAT, the following key principles should be considered and implemented.**

**First and foremost, any BAT-based approach must maintain the integrity of the CCA’s emissions cap.** Any allocation approach that exempts emissions that are covered by the CCA would significantly undermine the environmental integrity of the program. This includes any approach that would allow installation of BAT to serve as a form of alternative compliance or as an “off ramp” for compliance. Furthermore, Each facility must still be required to turn in one allowance for every ton of covered emissions, and all allowances that are directly allocated must come from under the cap. Any BAT-based approach must still ensure that aggregate emissions from EITEs are declining at a pace that is consistent with Washington achieving its statewide climate goals.

In HB 1682, it is critical to maintain the provision that states that any upward adjustment based on BAT may not increase the annual allowance budget, reduce the progressively equivalent reductions year over year in annual allowance budgets, or prevent the achievement of the state’s emissions limits.

**Secondly, any BAT-based approach must use a comprehensive approach to evaluating emission reduction strategies at the facility level.** BAT evaluations should cover 100% of emissions from a facility and address all the potential ways to reduce emissions using an integrated approach that combines energy efficiency, fuel switching, and process-oriented measures to meet performance-based targets determined through benchmarking against other industrial facilities in the same manufacturing sector. Such an approach would be consistent with the definition of BAT in the CCA, which defines BAT as “a technology or technologies that will achieve the greatest reduction in greenhouse gas emissions, *taking into account the fuels, processes, and equipment used by facilities.*”

**Third, any BAT-based approach must include a rigorous facility-specific audit to determine BAT at each facility.** The audit protocols and process determine the ultimate environmental effectiveness of any BAT-based approach. Audits must be robust, transparent, and fair. Reevaluation of BAT must occur frequently enough to ensure that abatement opportunities are not missed. Ecology should select auditors or play an oversight role in the selection of auditors, and there should be a rigorous agency review process for audit results, including both recommended measures and rejected measures. Ecology should also

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<sup>11</sup> CARB. 2010 Regulation, Appendix K to the Initial Statement of Reasons. Available at: <https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2010/capandtrade10/capv4appk.pdf>

retain the authority to override the EITE and/or audit team's determination that a measure should not be selected as BAT. In addition, impacted communities and third-party experts should have the ability to participate in the process of evaluating and determining BAT, and should have the ability to petition for BAT revisions as new technologies, processes, and other options for reducing emissions emerge.

**Fourth, benefits to local air quality in overburdened communities should be considered in the evaluation and prioritization of BAT measures.** Benefits and impacts to local air quality in overburdened communities should be analyzed in the audit—every technology, process, efficiency measure, or fuel switch should be evaluated for an impact on local air pollution, and those impacts should be included in the evaluation of and prioritization of BAT measures. Ecology should be directed to prioritize measures that maximize conventional co-pollutant reductions (particularly in overburdened communities) alongside reductions in greenhouse gas emissions. In addition, improvements in local air quality associated with BAT should be treated as requirements that must be met, regardless of whether the facility engages in allowance trading or the purchase of additional allowances.

**Lastly, a BAT-based approach must maintain an incentive for *ongoing* improvements in emissions intensity.** In order to maintain an incentive for ongoing improvements in emissions intensity, EITE facilities should receive fewer free allowances than needed to cover their total compliance obligation. For example, under Colorado's regulations EITE entities that install BAT receive a direct allocation that covers 95% of their emissions, which creates an additional incentive to reduce emissions over time. In addition, reevaluation of BAT must happen frequently enough to ensure that abatement opportunities are not missed, and to make sure that facilities are not rewarded for installing technologies or processes that are no longer "best available."