

International Emissions Trading Association

Dear Ecology,

Please find attached IETA's comment letter pertaining to carbon offsets and a linkage analysis pertaining to potential linkage with California.

Sincerely,

Katie Sullivan
Managing Director
IETA



COMMENTS ON WASHINGTON’S CAP-AND-INVEST RULEMAKING

The International Emissions Trading Association (IETA) congratulates Washington on its embrace of carbon pricing. IETA welcomes this opportunity to submit comments to Ecology’s cap-and-invest rulemaking. IETA’s comments on Ecology’s cap-and-invest rulemaking focus on two topics: (1) carbon offsets, and (2) linkage with California’s cap-and-trade program. We fully address carbon offsets in this letter. We briefly summarize our positions on linkage in this letter, attaching an IETA analysis that provides a deeper explanation for our stances in **Appendix 1 below**.

As the leading international business voice on climate markets and finance, IETA's non-profit organization represents over 190 companies, including many facing climate risks and opportunities across the West Coast, including Washington. IETA's market expertise is regularly called upon to inform market-based policies that deliver measurable greenhouse gas reductions and removals, address economic competitiveness concerns, and balance economic efficiencies with social equity and co-benefits. Our mission is to support broad and functional carbon markets, guided by the principles of efficient, low-cost, measurable climate outcomes while ensuring environmental integrity.

1. Carbon Offsets

Carbon offsets play an important role in cap-and-trade programs by minimizing compliance costs and encouraging greenhouse gas emission (GHG) reductions in unregulated sectors. High quality protocols ensure that each credit reduces at least one ton of GHG emissions. This past year was a banner year for the voluntary carbon market with a record number of issuances and retirements, leading to important innovations as represented by new protocols. Unfortunately, Ecology has only stated that it will approve three protocols from California’s cap-and-trade system including Urban Forestry (which has yet to issue credits) and Livestock Methane (many projects under which have shifted out of the carbon offsets market).¹ Therefore, the supply of future offsets into Washington is looking dangerously thin.

Ecology should consider a wide range of high-quality protocols to approve for compliance use in its cap-and-invest program. Previous cap-and-trade programs approve a relatively limited number of protocols from the voluntary market as compliance grade, without many revisions or updates in recent years. Given recent innovations in the voluntary market, Ecology is uniquely positioned to approve innovative voluntary protocols as compliance grade. These protocols could comprehensively incentivize the avoidance, sequestration, and removal of GHG emissions while engaging hard-to-abate sectors within Washington’s economy. IETA stands ready to assist Ecology identify high-quality protocols that achieve the state’s objectives, leveraging the power of our membership including three major registries: American Carbon Registry, Climate Action Reserve, and Verra.

¹ The Climate Trust. 2022. “The Bottom Line: Impact on Offset Demand from Washington State’s Climate Commitment Act”.



2. Linkage with California

Linkage plays a central role in cap-and-trade programs by showcasing climate leadership, minimizing compliance costs, and improving market functioning. Since its inception, IETA has supported efforts to link carbon markets. More recently, IETA has contributed to the academic literature on linkage.² Continuing in this tradition, IETA has performed an initial analysis of linking Washington’s and California’s carbon pricing programs, which is attached to this comment. This initial analysis makes the case for linkage, while highlighting certain areas where Washington would benefit from adopting California’s design. Researchers have identified this approach of “incrementally aligning” as a promising strategy to make progress toward linking programs and toward ensuring that the long-term stability of linkage.³ **IETA recommends that Ecology consider further aligning its design to that of California’s carbon pricing program including in relation to noncompliance penalties, price ceilings, and cap setting.**

² Edmonds et al. 2021. “How Much Could Article 6 Enhance Nationally Determined Contribution Ambition Toward Paris Agreement Goals Through Economic Efficiency?”. *Climate Change Economics* 12(02).

³ Burtraw, Dallas, Palmer, Karen, Munnings, Clayton, Weber, Paige and Matt Woerman. 2013. “Linking by Degrees: Incremental Alignment of Cap-and-Trade Markets”. Resources for the Future Discussion Paper 13-04.



APPENDIX 1

A Roadmap for Linkage Aligning California and Washington's Carbon Prices

1. Background on Carbon Pricing in California and Washington

Carbon pricing is an effective approach for reducing greenhouse gas (GHG) emissions that fuel climate change. Carbon prices are usually implemented through a carbon trading or carbon taxation program. Regulators around the world are increasingly deploying carbon pricing to complement their existing policy approaches.⁴ Currently, more than 65 carbon prices regulate nearly 22 percent of global emissions, a steep increase from previous years.⁵ These programs collectively raised over 48 billion USD worth of revenue in 2019,⁶ much of which is reinvested into communities that bear the brunt of the adverse impacts caused by our changing climate. Moreover, recent studies provide evidence that these programs also substantially reduce GHG emissions, even when carbon price levels are relatively low.⁷

California and Washington are among the jurisdictions that have chosen to place price carbon. California's cap-and-trade program started in 2013 and is one of the largest carbon markets in the world with a cap of 334 million metric tons of GHG emissions in 2020. The program covers the electricity, transportation, and industrial sectors. The program has raised over 13 billion USD for the State,⁸ 57 percent of which has been reinvested into disadvantaged and low-income communities.⁹ Moreover, in addition to reducing GHG emissions, the program has substantially reduced local air pollution in disadvantaged communities.¹⁰

The California program has taken on a gradually more prominent role in the state's climate policy mix. In its initial iteration, regulators designed the program to achieve roughly 10 percent of the state's 2020 climate target.¹¹ In this context, the role of the program was primarily to serve as a backstop, dynamically

⁴ Carhart, Mark, Litterman, Bob, Munnings, Clayton and Olivia Vitali. 2021. "Measuring Comprehensive Carbon Prices of National Policies". *Climate Policy*.

⁵ World Bank Group. 2021. Carbon Pricing Dashboard.

⁶ Institute for Climate Economics. 2020. Global Carbon Accounts 2020.

⁷ Bayer, Patrick and Michael Aklin. 2020. "The European Union Emissions Trading System Reduce CO2 Emissions Despite Low Prices". *Proceedings of the National Academies of Sciences* 117(16): 8804-8812; Murray, Brian and Peter Maniloff. 2015. "Why Have Greenhouse Gas Emissions in RGGI States Declined? An Econometric Attribution to Economic, Energy Market, and Policy Factors". *Energy Economics* 51: 581-589.

⁸ California Climate Investments. 2021. 2021 Mid-Year Update Report.

⁹ Breslow, Marc and Ruby Wincele. 2020. "Cap-and-Trade in California: Health & Climate Benefits Greatly Outweigh Costs". ClimateXChange Report.

¹⁰ Hernandez-Cortes, Dane and Kyle Meng. 2020. "Do Environmental Markets Cause Environmental Injustice? Evidence from California's Carbon Market". NBER Working Paper.

¹¹ California Air Resources Board. 2008. Climate Change Scoping Plan: A Framework for Change.



ramping up abatement if any of California’s numerous other climate emission reduction policies, which were slated to do the heavy lifting, failed to achieve their intended reduction targets.¹² The initial program iteration served this role admirably, contributing to the achievement of California’s 2020 statewide climate target in 2017, three years ahead of schedule.¹³

Subsequently, regulators carved out a more vital role by designing the program to achieve roughly 40 percent of the state’s more stringent 2030 climate target.¹⁴ Compliance entities are now responding by drawing down their allowance banks and ramping up demand, resulting in recent carbon prices just under 30 USD per ton. Under these new circumstances, California’s Legislative Analyst’s Office predicts that the program could raise up to three billion USD during the next fiscal year.¹⁵

Washington’s nascent cap-and-invest program originates from the passage of the Climate Commitment Act (CCA) in April 2021, resulting from compromise legislation signed by Governor Inslee arising from collaboration between local regulated businesses, environmental nonprofit organizations, and environmental justice communities. The legislation resembles California’s cap-and-trade program but also includes novel features and approaches to price management, carbon offsetting, and environmental justice. The state regulator (the Department of Ecology, hereafter referred to as “Ecology”) must expeditiously promulgate the program by January 2023. As such, Ecology immediately started several rulemakings to flesh out the details of the program.

These rulemakings are governed through the Washington Administrative Procedure Act, which contains specific requirements that are important to understand since Ecology must satisfy these requirements as it promulgates rules to implement the CCA. There are three major phases in a typical rulemaking process: (1) the Announcement Phase, (2) the Proposal Phase, and (3) the Adoption Phase. The Announcement and Proposal phases are collectively referred to as the “rule development phase.” The Announcement Phase is initiated once the Pre-Proposal Statement of Inquiry (CR-101) form has been filed with the Washington State Code Reviser’s Office for publishing in the Washington State Register. Informal comments (not part of the official record) may be submitted during this phase.

The Proposal Phase (CR-102 form) involves officially proposing draft rule language and inviting the public to comment. The CR-102 form also contains the intended adoption date of the rule. Formal public comment (which becomes part of the official record) may be submitted in writing by the deadline specified under CR-102 and/or orally during a scheduled hearing. A rule is officially adopted through the filing of CR-103 form and becomes effective 31 days after the form is filed. The APA allows a rule to be adopted as soon as 28 days, but no more than 180 days, after the CR-102 form is published in the

¹² Katelyn Roedner-Sutter. 2017. “California Adopts Climate Game Plan for 2030”. Blog Published by Environmental Defense Fund.

¹³ Barboza, Tony and Julian Lange. 2018. “California Hit Its Climate Goal Early—But its Biggest Source of Pollution Keeps Rising”. Article Published by the Los Angeles Times.

¹⁴ California Air Resources Board. 2017. California’s 2017 Climate Change Scoping Plan: The Strategy for Achieving California’s 2030 Greenhouse Gas Target.

¹⁵ Legislative Analyst’s Office. 2021. Cap-and-Trade Auction Update and Greenhouse Gas Reduction Fund Projections.



Washington State Register. No rule can be adopted before the intended adoption date given on the CR-102 form.

Ecology announced three proposed rules to implement the CCA shortly after its passage, in response to the short implementation dates outlined by the Legislature, signaling a swift move towards program launch. The rule development phase relating to two of the three rules (concerning eligibility of EITE industries for no cost allowances and concerning various administrative and reporting rules) concluded as of October 2021. The third rule, involving “elements to support the operation and function of the cap-and-invest program” (which includes program registration requirements, allowance allocation and budget for the first compliance period, auction floor price, emissions containment reserve, procedures and protocols for establishing offset projects, enforcement provisions, and sale of allowances and recognition of compliance instruments) closes for comment on January 26, 2022.

2. Formal Linkage and Incremental Alignment

As California’s program continues its evolution to address new state carbon neutrality goals, while Washington’s program takes its first steps, it is critical that these jurisdictions explore ways to learn from one another and expand their collaboration. One approach is to formally link carbon pricing programs by allowing companies in each jurisdiction to buy and retire allowances from the other jurisdiction to satisfy compliance requirements.¹⁶ This is the approach originally conceived of by the Western Climate Initiative—to which California and Washington are both parties—and it is the approach California chose to take with Quebec when they formally linked their programs in 2014.

Economists have carefully studied the benefits of formal linkage. Fundamentally, formal linkage leads to a single allowance price across all linked jurisdictions, thereby reducing total costs to final consumers without sacrificing environmental benefits.¹⁷ In turn, these cost reductions make it easier for regulators to achieve more ambitious climate targets and lower overall cap levels.¹⁸ One study shows that if cost savings from a formally linked international carbon price were reinvested into enhanced ambition, then countries could double their emissions reductions by 2030.¹⁹ Formal linkage also eliminates competitiveness impacts across jurisdictions, thereby reducing concerns over emissions leakage between linked jurisdictions.

Aside from environmental benefits, formal linkage offers greater certainty through two pathways. First, the larger number and broader type of entities that can trade with one another leads to improved liquidity and economic efficiency. This contributes to program performance by ensuring that the carbon price

¹⁶ Jaffe, Judson, Ranson, Matthew and Robert Stavins. 2009. “Linking Tradable Permit Systems: A Key Element of Emerging International Climate Policy Architecture”. *Ecology Law Quarterly* 36: 789-808.

¹⁷ Flachsland, Christian, Marschinski, Robert and Ottmar Edenhofer. 2009. “To Link or Not to Link: Benefits and Disadvantages of Linking Cap-and-Trade Systems”. *Climate Policy* 9(4): 358-372.

¹⁸ Bodansky, Daniel, Hoedl, Seth, Metcalf, Gilbert and Robert Stavins. 2015. “Facilitating Linkage of Climate Policies Through the Paris Outcome”. *Climate Policy*: 1-17.

¹⁹ Edmonds, James, Yu, Sha, McJeon, Haewon, Forrister, Dirk, Aldy, Joseph, Hultman, Nathan, Cui, Ryna, Waldhoff, Stephanie, Clarke, Leon, de Clara, Stefano and Clayton Munnings. 2021. “How Much Could Article 6 Enhance Nationally Determined Contribution Ambition Toward Paris Agreement Goals Through Economic Efficiency?”. *Climate Change Economics* 12(2).



accurately reflects underlying abatement costs. Second, formal linkage can dampen carbon price volatility caused by regional variations, especially if critical factors such as seasonal weather or economic activity are imperfectly correlated across jurisdictions.²⁰ This is particularly pertinent to California and Washington, where electric loads peak at different times.

While the value of formal linkage is significant, there are at least two administrative challenges associated with such an approach. For these reasons, regulators may find formal linkage a slower process than typically anticipated, despite the apparent benefits. First, systems that are not formally linked from the beginning will inevitably be designed differently. Some of these design differences will need to be addressed before a formal link occurs to avoid unintended market outcomes while ensuring the environmental integrity of both programs. Thus, policy negotiations are a prerequisite to formal linkage.²¹ Second, formal linkage can change incentives in subtle ways that could lead to an increase in emissions by incentivizing less stringent caps.²² These incentives can be dulled or reversed with smart policy design, with several authors noting that formal linkage can decrease emissions by incentivizing more stringent caps.²³ It is therefore important to harmonize designs and align incentives to avoid increasing emissions and encourage decreasing emissions.

A complementary approach is to pursue “linkage by degrees,” which celebrates the incremental alignment of policy designs and implementation strategies between carbon pricing programs.²⁴ Further harmonizing carbon price designs across jurisdictions allows regulators to capture a substantial portion of the economic and environmental benefits typically associated with formal linkage, without executing a formal linkage. For example, two programs might align the level of their price floors and price ceilings, thereby increasing certainty for compliance entities and their consumers. In addition, aligned price floors and ceilings would mitigate, to some extent, concerns over competitiveness impacts and emissions leakage across jurisdictions that formal linkage would completely remedy. As another example, a program seeking to link with another program might align its approach to ensuring that carbon offsets are as of high quality as the other program, thereby guaranteeing environmental integrity and bolstering emissions reductions. These types of incremental alignments of policy design, facilitated by the sharing of best practices and earned expertise over time, strengthens the implementation of each carbon pricing program. In addition,

²⁰ Burtraw, Dallas, Palmer, Karen, Munnings, Clayton, Weber, Paige and Matt Woerman. 2013. “Linking by Degrees: Incremental Alignment of Cap-and-Trade Markets”. Resources for the Future Discussion Paper 13-04.

²¹ Doda, Baran and Luca Taschini. 2017. “Carbon Dating: When Is It Beneficial to Link?”. *Journal of the Association of Environmental and Resource Economists* 4(3):

²² For example, see Holtsmark, Bjart and Dag E. Sommervoll. 2012. “International Emissions Trading: Good or Bad?” *Economics Letters* 117: 362-364.

²³ For example, see Mehling, Michael A., Metcalf, Gilbert E., and Robert N. Stavins. 2018. “Linking Climate Policies to Advance Global Mitigation”. *Science* 350: 997-998.

²⁴ Burtraw, Dallas, Palmer, Karen, Munnings, Clayton, Weber, Paige and Matt Woerman. 2013. “Linking by Degrees: Incremental Alignment of Cap-and-Trade Markets”. Resources for the Future Discussion Paper 13-04.



such “informal” linkage also smooths the path for formal linkage because program designs become increasingly compatible with progressive incremental alignment.

3. Coordination Between California and Washington

California and Washington each have rigorous processes to determine whether to accept a foreign program as a formally linked partner. In California, the board of the climate regulator (the California Air Resources Board, hereafter referred to as “CARB”) approves linkage after a finding from the Governor that (among other issues) the program under consideration for linkage is at least as stringent as California’s program. Thereafter, CARB must initiate a full rulemaking process to amend the carbon pricing program to accommodate the new link. By way of example, in 2013, Governor Jerry Brown directed CARB to undertake a number of additional steps prior to California’s linkage with Québec, including a linkage readiness report, and CARB undertook a lengthy rulemaking process that resulted in a number of changes to California’s program rules. In Washington, the CCA contains two sets of requirements. The first requires a formal linkage agreement that addresses a broad range of carbon pricing designs. The second relates to environmental justice, essentially requiring that any linkage agreement entered into by Ecology prevent against adverse effects on overburdened communities in both linked jurisdictions as well as achievement of Washington’s climate targets.

These processes mean formal linkage comes with hurdles in the short term. Consistent with these short-term costs, a representative from Ecology recently stated that “we’re not going to be [formally linking with California] at the beginning [and] we don’t know for sure when or if we will ever be linked”.²⁵ However, both programs clearly aspire to formally link, and have already started laying the groundwork to be able to do so. The programs are already practicing informal linkage by sharing best practices and earned expertise. Ecology has already amended parts of its proposed regulation to mimic CARB’s approach to “support [the] regulatory program and potential linkage”²⁶ and has noticed its explicit intent to “mirror rules from [CARB] for their offset program as soon as possible”.²⁷ In addition, Washington recently signed an agreement with WCI Inc. to administer its online auctioning platform, which it already does for California.²⁸ This move allows for easy combining of auctions if a formal linkage were to be executed.

4. A Roadmap for Alignment and Linking

A coordinated approach between California and Washington’s carbon pricing programs must move beyond the binary question of whether to formally link today. It is impractical to expect two programs that started at different times (under unique circumstances and with varying designs) to be ready to link at the outset. A pragmatic roadmap would appropriately characterize formal linkage as a longer-term objective best achieved through short-term harmonization of program design. This can be viewed as both a “no regrets” approach (since aligning program design offers its own benefit) and as a measured strategy

²⁵ Carbon Pulse. 2021. “Washington State Carbon Market Will Not Be Linked From Outset – Govt Official”.

²⁶ Presentation on Draft Chapter 173-441 WAC on 22 July 2021.

²⁷ Presentation on Draft Chapter 173-446 WAC on 16 December 2021.

²⁸ Department of Ecology. 2021. “Washington Inks Deal with Carbon Emissions Auction Platform: Agreement with WCI Inc. Delivers Proven Auctions System for Key Climate Law.” News Release Published December 20th.



for maximizing the probability of a successful formal linkage. Speaking to the latter conceptualization, Burtraw et al. (2013) argue that incremental alignment helps ensure the long-term stability of a formal linkage because it “reduces the prospect of unanticipated difficulties” in the shared program.²⁹ Under such a pragmatic roadmap, the obstacles to formal linkage become the way, transforming into opportunities to capture a range of benefits through incremental alignment.

An approach of incremental alignment begs the question of which designs would benefit from harmonization. Table 1 evaluates alignment between Washington’s developing and California’s established carbon pricing programs, adapting an approach taken by Burtraw et al. (2013). The first column decomposes a carbon price into ten design elements that represent the central choices each jurisdiction’s regulators make when creating a program. These elements cover the following topics: technical issues; emissions reduction goal; allocation of allowances; cost management; and, enforcement and contingencies. The next two columns assess the importance of each design element in the context of formal linkage. The second column analyzes whether or not aligning the design element is important for ensuring that the environmental integrity of both programs remains constant or further improves under formal linkage. The third column analyzes whether aligning the design element is important for reasons unrelated to environmental integrity such as distributional, equity, or political issues.

The final two columns assess the readiness of Washington and California’s programs to execute a formal linkage. The fifth column analyzes whether the design element is already aligned across programs. The sixth column analyzes whether programs are ready for formal linkage based on the design element in question. If a design element is not important—based on columns two and three—or if that design element is already aligned, then we conclude that the programs are ready to formally link based on that design element. However, if a design element is important but not already aligned between these programs, then we recommend that Washington regulators prioritize these areas for alignment.

Table 1 reveals that to date the Washington and California programs seem to have aligned some of the major design elements but others need to be addressed in more depth or reevaluated in light of linkage considerations. Also, a significant number of design elements receive a designation of “to be determined”, given that Washington’s rulemaking is ongoing. The most important misalignments (which are highlighted) fall into five categories: noncompliance penalties; price ceilings; cap setting; allowance allocation to emissions-intensive and trade-exposed industries (EITE); and, carbon offsets.

The remainder of this paper focuses on three opportunities (listed below) to prioritize incremental alignment. For each of these design considerations, we outline differing approaches taken by California and Washington, why those differences are important, and options for aligning design. Where appropriate, we offer a recommendation on which form of alignment is preferable and outline associated benefits. By discussing these issues in detail, our aim is to capture short-term benefits through incremental alignment while simultaneously facilitating formal linkage as an outcome. We do not focus on allocations to EITE industries or carbon offsets because these complex designs seem to be in an earlier stage of formulation.

²⁹ Burtraw, Dallas, Palmer, Karen, Munnings, Clayton, Weber, Paige and Matt Woerman. 2013. “Linking by Degrees: Incremental Alignment of Cap-and-Trade Markets”. Resources for the Future Discussion Paper 13-04.



- a) Noncompliance penalties
- b) Price Ceilings
- c) Cap Setting

Table 1
Evaluating Alignment Across Washing and California Carbon Pricing Programs

Design Element	Important for Environmental Integrity?	Important for Policy Implementation?	Already Aligned?	Ready to Link?
<u>Technical Issues</u>				
1. Measurement, Reporting, and Verification				
a. Measurement methods	Yes	Yes	Yes	Yes
b. Reporting of process emissions	Yes	Yes	Yes	Yes
c. Reporting of fugitive emissions	Yes	Yes	TBD	TBD
d. Reporting of emissions from imported power	Yes	Yes	Yes	Yes
2. Allowance Tracking System				
a. Registries (e.g., serial number systems)	Yes	Yes	Yes	Yes
b. Data collection on transactions	No	Maybe	Yes	Yes
c. Public access to data	Maybe	Yes	TBD	TBD
<u>Emissions Reduction Goal</u>				
3. Emissions Cap				

Design Element	Important for Environmental Integrity?	Important for Policy Implementation?	Already Aligned?	Ready to Link?
a. Are caps defined in terms of total tons?	Yes	Yes	Yes	Yes
b. Are cap stringencies coordinated?	Maybe	Maybe	No	No
c. Are programs binding?	Yes	Yes	Yes	Yes
d. Are other policies accounted for in cap setting?	Maybe	Maybe	No	No
4. Emissions Coverage				
a. Covered sectors	No	Maybe	Yes	Yes
b. Point of regulation	No	Maybe	Yes	Yes
c. Compliance thresholds	No	Maybe	Yes	Yes
d. Coverage of imported, fugitive, process emissions	Yes	Yes	TBD	TBD
e. Compliance periods	No	No	No	Yes
f. Compliance obligations (e.g., interim retirement)	Maybe	Maybe	Maybe	Maybe
<u>Allocation of Allowances</u>				
5. Allocation				
a. Method of allocation to electricity	No	No	Yes	Yes
b. Method of allocation to gas	No	No	Yes	Yes
c. Method of allocation to transport	Maybe	Maybe	Yes	Yes
d. Method of allocation to industry EITE	Yes	Yes	No	No
e. Method of allocation to industry non-EITE	No	No	TBD	TBD

Design Element	Important for Environmental Integrity?	Important for Policy Implementation?	Already Aligned?	Ready to Link?
f. Treatment of entrants and exits	No	Maybe	TBD	TBD
g. Use of revenue from auctions	No	Maybe	TBD	TBD
h. Measures to address leakage	Yes	Yes	TBD	TBD
6. Auction Coordination				
a. Third-party participation	Maybe	Maybe	Yes	Yes
b. Purchase limit	No	Maybe	Yes	Yes
c. Auction format	No	No	Yes	Yes
d. Frequency and timing	No	No	TBD	TBD
e. Common auction platform	No	No	Yes	Yes
<u>Cost Management</u>				
7. Temporal Considerations				
a. Banking provisions	Maybe	Yes	Yes	Yes
b. Quantitative restrictions (e.g., holding limit)	No	Maybe	Yes	Yes
c. Qualitative restrictions (e.g., value across periods)	Maybe	Maybe	TBD	TBD
8. Carbon Offsets				
a. Qualitative limits	Maybe	Yes	No	No
b. Quantitative limits	Maybe	Yes	No	No
c. Certification protocols	Maybe	Yes	TBD	TBD
d. Invalidation rules	Maybe	Yes	Yes	Yes
e. Liability rules	No	Yes	TBD	TBD
9. Price Collars				

Design Element	Important for Environmental Integrity?	Important for Policy Implementation?	Already Aligned?	Ready to Link?
a. Price floor and rate of change	Yes	Yes	TBD	TBD
b. Emissions containment reserve	Yes	Yes	No	No
c. Cost containment reserve	Yes	Yes	TBD	TBD
d. Price ceiling and rate of change	Yes	Yes	TBD	TBD
e. Use of unsold allowances	Yes	No	No	No
f. Do additional allowances come from within cap?	Yes	Yes	No	No
<u>Enforcement and Contingencies</u>				
10. Legal Provisions				
a. Penalties for noncompliance	Yes	Yes	No	No
b. Market oversight	Yes	Yes	Yes	Yes
c. Provisions for delinking	Maybe	Maybe	TBD	TBD
d. Process for regulatory updates	Maybe	Yes	TBD	TBD

a. Noncompliance Penalties

Certainty regarding noncompliance outcomes and strict enforcement is a key advantage of carbon pricing programs over more traditional forms of regulation, which often rely on legal proceedings and regulatory negotiations. In fact, many carbon pricing programs enjoy perfect compliance rates, although there are notable exceptions including, for example, regional carbon pricing programs in China.³⁰ In the context of formal linkage, noncompliance penalties do not have to be replicated word for word, but there needs to be mutual trust between programs that enforcement is equally consistent, certain, and strict.

California’s program requires a regulated entity to surrender a quantity of allowances that is four times that entity’s excess emissions—calculated as the difference between the compliance obligation and any

³⁰ Munnings, Clayton, Morgenstern, Richard, Wang, Zhongmin and Xiu Liu. 2016. “Assessing the Design of Three Carbon Trading Pilot Programs in China”. *Energy Policy* 96: 688-699.



surrendered allowances or offsets by the deadline—due within five days of the auction following that deadline. Given the timing of compliance deadlines and quarterly auctions, this gives regulated entities about one month, at most, to rectify their noncompliance. If the excess emissions are not rectified under this timeframe, then additional violations and fines begin accruing. The regulation specifies that at least three-fourths of an entity’s compliance shortfall must be satisfied using allowances from California or allowances from a linked partner.³¹

Washington’s program imposes a similar requirement that a regulated entity must surrender a quantity of allowances that is four times that entity’s excess emissions. The legislation gives regulated entities six months to rectify its noncompliance. If a regulated entity fails to do so, then Ecology must issue an order (involving a plan and schedule for coming into compliance), a penalty of up to 10,000 USD per day, or both. In addition, Ecology *may* impose additional financial penalties. During the first compliance period (lasting from 2023 through 2026), Ecology “may reduce the amount of penalty by adjusting the monetary amount or the number of [excess emissions].”³²

The difference in designs between California and Washington’s approach to enforcement are enough to threaten a formal linkage. Specifically, Washington gives regulated entities more time and more outs, while granting Ecology substantial discretion to lower the strength of enforcement. Especially during the first compliance period, it seems difficult to imagine that California would feel secure in its linkage partner’s ability to enforce against noncompliant regulated entities. To that end, we make the following recommendations to bolster the strength of enforcement as Ecology drafts regulations:

- In the event of failure to rectify noncompliance after six months, Ecology should commit to issuing both an order and a fine to the offending regulated entity by stating this plainly in regulation. This will bolster the strength of enforcement, thereby improving the overall effectiveness and environmental impact of Washington’s program.
- During the first compliance period, Ecology should commit to not using its discretion to lower fines or the quantity of excess allowances owed. Use of discretion muddies the waters for regulators and regulated entities, in addition to diminishing smooth program functioning.

b. Price Ceilings

Regulators often design carbon prices with maximum values to protect consumers against overly high costs and to limit overall volatility. The two most common tools that serve this function are “soft” and “hard” price ceilings. Soft price ceilings provide a limited volume of additional allowances, referred to as a “reserve”, at a predetermined price maximum, while hard price ceilings print an unlimited volume of additional allowances at that predetermined price maximum. Allowances set aside into price ceilings are sometimes referred to as a price containment reserve. Unlike California or Quebec, Washington’s program

³¹ California Cap-and-Trade Regulation, Section 95857.

³² Washington Climate Commitment Act, Section 23.



also features a similar notion—an emissions containment reserve—that withholds, rather than adds, allowance volume into the market at a predefined price.³³

Historically, carbon prices have typically been relatively low and therefore have not reached the level of the ceiling.³⁴ However, recently, a carbon pricing program in the Northeast United States, the Regional Greenhouse Gas Initiative, triggered its soft price ceiling. In addition, as programs mature and take on a more prominent role in state’s climate policy mixes, we are seeing carbon prices rise substantially, with California being a prime example of this new trend. Therefore, the consideration of a price ceiling is particularly timely, as more triggers will likely occur in the near future.

California’s approach to price ceilings is to have three reserves, each with a trigger price. The first two are “soft” (starting with triggers at 41.40 USD and 53.20 USD in 2021) and the last one is “hard,” starting with a trigger at 65.00 USD in 2021. Each price raises by 5 percent plus inflation as determined by the Consumer Price Index. The hard price ceiling introduces the possibility of increased emissions because an unlimited quantity of new allowances would be printed to keep prices at the 65.00 USD trigger price. Therefore, CARB plans to use revenues from the price ceilings to purchase carbon offsets, thereby maintaining the environmental integrity of the cap.

The CCA directs Ecology to establish a price ceiling with a trigger that increases gradually. The trigger must be equal to “the level established in jurisdictions with which [Ecology] has entered into a linkage agreement”.³⁵ The CCA states that Ecology must seed the reserve with no less than 2 percent of the total quantity of allowances available from the overall budget for the corresponding compliance period. If the allowance price containment reserve runs out of allowances, then Ecology will turn to printing new allowances while using the corresponding revenues to invest in abatement, an approach clearly adopted from California’s design.³⁶

It is apparent that Washington positioned its legislation to replicate many of California’s designs for a price ceiling. In this way, the programs are already incrementally aligning their design, regardless of whether they eventually formally link. Simply stating the intent to equate trigger prices with a linked jurisdiction is meaningful. That Washington has mimicked California’s approach in the event of a formal link shows substantial coordination and significant forethought.

Regardless of formal linkage, Washington should build upon the positive momentum from their incremental alignment with California. One strategy for doing so would be for Washington to align its trigger price with California’s levels, even ahead of formal linkage. This would increase certainty for

³³ We do not discuss this provision here because it is IETA’s understanding that, if a linkage with California were to proceed, then this provision would be dropped from the Washington program. However, if it were not dropped, then it could provide a barrier to linkage that would need to be harmonized before formal linkage and, as such, IETA would further analyze this program design.

³⁴ Burtraw, Dallas and Amelia Keyes. 2018. “Recognizing Gravity as a Strong Force in Atmosphere Emissions Markets”. *Agricultural and Resource Economics Review* 47 Special issue 2 (Climate Change and Land Conservation and Restoration): 201-219.

³⁵ Washington Climate Commitment Act, Section 16.

³⁶ Washington Climate Commitment Act, Section 18.



regulated entities, and it would protect against adverse competitiveness impacts as well as emissions leakage. These benefits accrue even if formal linkage never occurs.

One potential problem is that California has three price ceilings, whereas Washington seems to only envision a single price ceiling. Under a formally linked program, a price ceiling automatically propagates from one program to another when triggered. This can occur indirectly if, for example, California's first soft price ceiling were triggered and California entities immediately purchased and retired price ceiling allowances. In this scenario, the cost savings from the triggering would be communicated through changes to the carbon price observed in the joint market.^{37 38} For this reason, Washington should strongly consider replicating California's approach by creating three price ceilings to prepare for a formal linkage.

A final point concerns the finer details of auctions from the price containment reserve. Comments from Ecology in a recent workshop³⁹ introduce the possibility of discretionary auctions from the price containment reserve for regulated entities that are behind on their compliance efforts. This introduces uncertainty in the market and could complicate linkage efforts. Therefore, this is another area where Washington may look to align with California design. In addition, certain details around auction format differ from the designs in California, which could also prove problematic.

c. Cap Setting

Cap setting is important because it is a primary determinant of the carbon price. In turn, the difference in carbon prices between programs will be an important consideration if formal linkage negotiations begin in earnest. Because California and Washington make their own decisions about cap setting on their own timelines, there is a potential that formal linkage (or the discussion thereof) could lead both programs to strategically adopt a cap that economically benefits their respective states. In short, the program that expects to export allowances may have an incentive to adopt a less stringent cap to create surplus allowances and an importer may have an incentive to adopt a less stringent cap to reduce spending on imports.^{40 41} This incentive can be overcome in several ways, any combination of which may prove effective. Indeed, many others argue that formal linkage leads to enhanced ambition by facilitating more aggressive caps.⁴² The overall aim of regulators should be to harmonize designs and align incentives to avoid increasing emissions and encourage decreasing emissions as a result of formal linkage.

³⁷ Robert Stavins. 2007. "A US Cap-and-Trade System to Address Global Climate Change". Published for the Hamilton Project by The Brookings Institution.

³⁸ Sterk, Wolfgang, Mehling, Michael, Flachsland, Christian and Wolfgang Sterk. 2009. "Linking Carbon Markets: Concepts, Case Studies and Pathways". *Climate Policy* 9(4): 341-357.

³⁹ Washington Department of Ecology. Workshop on Climate Commitment Act. Hosted on 11 January 2022.

⁴⁰ Peter Bohm. 1992. "Distributional Impacts of Allowing International Trade in CO2 Emissions Quotas". *The World Economy* 15(1): 107-114.

⁴¹ Carsten Helm. 2003. "International Emissions Trading with Endogenous Allowance Choices". *Journal of Public Economics* 87: 2732-2747.

⁴² Michael A., Metcalf, Gilbert E., and Robert N. Stavins. 2018. "Linking Climate Policies to Advance Global Mitigation". *Science* 350: 997-998. Edmonds, James, Yu, Sha, McJeon, Haewon, Forrister, Dirk, Aldy,



The first way is through endowing a sense of responsibility towards enhanced ambition.⁴³ In other words, insofar as the intent of the formal linkage is to reduce overall emissions more quickly, then this shared vision can inherently protect against strategically permissive caps. Successful coordination between leadership in Washington and California can play a role in creating such a shared vision.

The second way is through applying a discount rate to trading across borders. For example, if a regulated entity in Washington wants to import a California allowance to cover one ton of its emissions, then a 2% discount rate would require that entity to buy ~1.02 California allowances to cover its one ton of emissions. In this way, there is a net positive climate impact for each transaction, like the concept of “overall mitigation in global emissions” recently decided at the Conference of the Parties in Glasgow. This option clearly improves the overall abatement across linked jurisdictions, which is beneficial, but at the expense of financially penalizing trading between linked jurisdictions.⁴⁴ It is therefore not an ideal approach.

The third way is to incrementally align cap setting processes and timing. For example, California has a cap formula that lists each year’s allowance budget from 2021 to 2050. Washington should strive to do the same as it promulgates its regulations. Separately, California undergoes its periodic Scoping Plan processes, after which cap levels are potentially modified. Washington should strive to undergo similar periodic reviews at the same time as California. This would allow for the jurisdictions to make cap setting decisions simultaneously with shared information.

A related concern is that if a program is nonbinding (that is, a carbon price of zero or a carbon price resting on the minimum “floor” price), then exports of allowances from that program to another program erodes the environmental integrity of the overall cap. In other words, in this example, the exported allowances, unlike allowances from the local jurisdiction, do not represent an opportunity cost to regulated entities of emitting one ton of emissions.⁴⁵ This is not a concern in California at the moment because the carbon price is high above its floor and is therefore clearly binding. Moreover, allowance price projections expect that prices will stay well above the floor for into the future. Every allowance in the program consequently represents one ton of emissions. It is unclear whether this is a concern in Washington due to a lack of modeling estimates. The cap-and-invest program has not started and there is therefore no price data to compare against California. In addition, there are not any published analyses that estimate future allowance prices in Washington.

Joseph, Hultman, Nathan, Cui, Ryna, Waldhoff, Stephanie, Clarke, Leon, de Clara, Stefano and Clayton Munnings. 2021. “How Much Could Article 6 Enhance Nationally Determined Contribution Ambition Toward Paris Agreement Goals Through Economic Efficiency?”. *Climate Change Economics* 12(2).

⁴³ Flachsland, Christian, Marschinski, Robert and Ottmar Edenhofer. 2009. “To Link or Not to Link: Benefits and Disadvantages of Linking Cap-and-Trade Systems”. *Climate Policy* 9(4): 358-372.

⁴⁴ Piris-Cabezas, Pedro and Ruben Lubowski. 2020. “Automatic Cancellation, Overall Mitigation in Global Emissions, and Article 6 of the Paris Agreement: An Economic Analysis”. Published by Environmental Defense Fund.

⁴⁵ Burtraw, Dallas, Munnings, Clayton, Palmer, Karen and Matthew Woerman. 2017. “Linking with Different Initial Conditions”. Resources for the Future Discussion Paper.



Nonetheless, to further track potential nonbinding caps, we recommend that California and Washington track the role of competing policies in their respective programs because they are a key input to the demand for allowances. The information collected by regulators in their respective jurisdictions should be shared with all current and potential formal linkage partners. California collects and publishes this information via its periodic Scoping Plan processes. While Washington does not have to replicate the Scoping Plan process, emulating enough of the elements such that the jurisdictions' climate policy mixes are comparable and transparent would smooth the way for formal linkage.

A final point concerns the frequency of auctions. As indicated in Table 1, this design element is usually unimportant for the environmental integrity or policy implementation of a formal linkage. That said, comments from Ecology in a recent workshop⁴⁶ make it unclear whether the quantity of auctions is fixed or not. Insofar as infrequent auctions change the total number of allowances—thereby changing the overall cap levels—then they will become important to formal linkage discussions.

5. Conclusion

Washington is already incrementally aligning the design of its carbon pricing program to that of California. This coordination is not only beneficial in the short-term, but it also facilitates a long-term possibility for formal linkage and thereby large attendant benefits. This paper outlines three areas (noncompliance penalties, price ceilings, and cap setting) that must be addressed before formal linkage occurs and where California and Washington can further incrementally align their program designs. Overcoming these obstacles through consistent dialogue as well as exchange of best practices and earned expertise will be essential to successfully approaching a formal linkage.

⁴⁶ Washington Department of Ecology. Workshop on Climate Commitment Act. Hosted on 11 January 2022.