



## **Cap-and-Invest Linkage Criteria: Preliminary Analysis Report**

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## Acronyms and Abbreviations

<b>Acronym/Abbreviation</b>	<b>Definition</b>
AB	California Assembly Bill
APCR	Allowance Price Containment Reserve
AQHDIA	Air Quality and Health Disparities Improvement Account
CA	California
CAD	Canadian Dollars
CalEPA	California Environmental Protection Agency
CARB	California Air Resources Board
CCA	Climate Commitment Act
CERA	Carbon Emissions Reduction Account
CETA	Clean Energy Transformation Act
CIA	Climate Investment Account
DAC	Disadvantaged community, as designated in California
DEB	Direct environmental benefits, as related to offset projects
Ecology	Washington State Department of Ecology
ECR	Emissions Containment Reserve
GHG	Greenhouse gas
HEAL	Healthy Environment For All
PCU	Price ceiling unit
QC	Québec
RCW	Revised Code of Washington
SB	California Senate Bill
WAC	Washington Administrative Code
WCI, Inc	Western Climate Initiative, Inc

See Appendix A: Technical terms for an explanation of technical terms used in this document.

# Executive Summary

Washington is required to reduce greenhouse gas emissions statewide, compared to 1990 levels, 45% by 2030, 70% by 2040, and 95% by 2050.<sup>1</sup> In 2021, the Washington State Legislature passed the Climate Commitment Act (CCA) creating the cap-and-invest program, a comprehensive and economy-wide program designed to help Washington achieve those emissions reductions.

When the CCA was passed there was only one state in the U.S. – California – with an economy-wide greenhouse gas emissions trading program. California began its program in 2012, and the next year a similar program was started in Québec, Canada. California and Québec linked their programs in 2014, creating one shared carbon market.

The CCA directs the Washington Department of Ecology (Ecology) to “seek to enter into linkage agreements with other jurisdictions.”<sup>2</sup> Washington is exploring whether to link with the California-Québec joint market.

In a fully linked cap-and-invest program, Washington’s carbon market would combine with the joint California-Québec market to create a single shared market. A fully linked program would have joint allowance auctions with a common allowance price across all the jurisdictions. Allowances could be used to cover emissions in any of the three jurisdictions, regardless of which jurisdiction originally added them to the market. Market participants would also be able to trade allowances across jurisdictions, meaning a business in Washington could sell allowances to a business in California, for example.

Joining this larger California-Québec market is expected to produce the most sustainable market conditions with stable allowance prices and to substantially increase overall market activity, increasing market confidence and mitigating price volatility.

For this reason, Ecology elected to prioritize its exploration of linkage to ensure that, should it meet the linkage criteria, Washington’s economy and communities could begin reaping those benefits as soon as possible.

The question of whether Washington will link with the joint market in California and Québec is still undecided. California and Québec would each need to go through their own respective processes to determine whether to link with Washington. For Washington, the CCA lays out explicit requirements that must be met before a linkage agreement can be signed.

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<sup>1</sup> RCW 70A.45.020

<sup>2</sup> RCW 70A.65.210(1)

## Linkage requirements in the CCA

Before entering into a linkage agreement, Ecology must:

- Conduct an Environmental Justice Assessment.
- Hold a public hearing and engage in a comment process to obtain input on the linkage agreement from “relevant stakeholders and other interested parties.”<sup>3</sup>
- Find that linkage will achieve six “purposes.”<sup>4</sup>
- Determine “that the linking jurisdiction and the linkage agreement meet certain criteria.”<sup>5</sup>

The six “purposes” that a linkage agreement must achieve are:<sup>6</sup>

- (a) Allow for the mutual use and recognition of compliance instruments issued by Washington and other linked jurisdictions;
- (b) Broaden the greenhouse gas emission reduction opportunities to reduce the costs of compliance on covered entities and consumers;
- (c) Enable allowance auctions to be held jointly and provide for the use of a unified tracking system for compliance instruments;
- (d) Enhance market security;
- (e) Reduce program administration costs; and
- (f) Provide consistent requirements for covered entities whose operations span jurisdictional boundaries.

The linkage criteria are:<sup>7</sup>

- Determine that linkage “will provide for a more cost-effective means for covered entities to meet their compliance obligations in Washington while recognizing the special characteristics of the state’s economy, communities, and industries.”
- “Evaluate and make a finding regarding whether the aggregate number of unused allowances in a linked program would reduce the stringency of Washington's program and the state's ability to achieve its greenhouse gas emissions reduction limits.” As part of the evaluation, Ecology must include a “consideration of pre-2020 unused allowances.”
- Ensure that any jurisdiction Washington links with “has provisions to ensure the distribution of benefits from the program to vulnerable populations and overburdened communities.”

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<sup>3</sup> RCW 70A.65.210(3)

<sup>4</sup> RCW 70A.65.210(1) and RCW 70A.65.210(3)(a)

<sup>5</sup> RCW 70A.65.210(3)

<sup>6</sup> RCW 70A.65.210(1)

<sup>7</sup> RCW 70A.65.060(3) and RCW 70A.65.210(3)



- Ensure linkage will “not yield net adverse impacts to either jurisdictions’ highly impacted communities or analogous communities in the aggregate, relative to the baseline level of emissions.”
- Ensure linkage will not “adversely impact Washington’s ability to achieve the emission reduction limits established in RCW 70A.45.020.”

### **Summary of outreach and engagement**

Starting in January 2023 and continuing through mid-May of that year, Ecology conducted a public outreach and engagement process to get input on whether linkage would be beneficial to Washington and on considerations to include in our analysis of the linkage criteria.

Ecology sought input from Tribal leaders and staff, the Environmental Justice Council, the general public, academics, and stakeholders – including community-based organizations, environmental organizations, environmental justice organizations, and cap-and-invest market participants.

Ecology used several strategies to engage with the public statewide, including the creation and maintenance of a dedicated webpage, blog updates, meetings, online listening sessions, an online survey, email updates to the CCA mailing list, and direct outreach to individuals and groups.

- Online listening sessions: Ecology hosted three sessions on March 16, March 29, and April 18, 2023 with the purpose of providing information on the cap-and-invest program and linkage, and to gather input. A total of over 180 people attended.
- Online survey: The survey was open for responses from March 14 to May 15, 2023. It included 19 questions. There were 11 completed surveys.
- Invitation to provide comments by email, mail, and voicemail: Ecology received 45 unique public comment letters and emails. There were also 263 responses of a campaign email.<sup>8</sup>
- Small group stakeholder and community meetings with environmental, environmental justice and equity, and business interests: There were six small group meetings with 28 total attendees representing 10 organizations.

During those public engagement opportunities, participants could share overall thoughts on linkage or specific recommendations related to the linkage criteria. Commenters’ responses varied in their degree of support for or concerns regarding linkage. Commenters offered many recommendations for Ecology to consider in evaluating the linkage criteria and deciding whether to pursue linkage. Cascadia Consulting Group provided support during the public engagement period and developed a summary of the comments, available in Appendix C: Summary of Public Comments Received in Spring 2023.

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<sup>8</sup> Campaign emails are typically pre-populated emails that organizations encourage their constituents or members to send. The content of these emails is the same, except for the sender’s name and contact information.

Ecology staff reviewed all comments and resources provided and considered them when developing this report. If Ecology pursues linkage, public comments will additionally be considered during future phases, including negotiation of the linkage agreement.

### **Preliminary analysis of linkage criteria**

Our preliminary analysis compares potential outcomes of Washington’s cap-and-invest program if it remains a standalone program (no linkage) with potential outcomes if Washington enters into a combined carbon market with California and Québec (linkage).

The cap-and-invest program is designed to address the current climate crisis on three critical fronts: by reducing GHG emissions economy-wide, by creating a growing market for cleaner technologies and energy sources, and by funding environmental justice and climate resilience efforts in our state. These goals would not change in a linked market.

When assessing the potential impacts of linkage, we first reviewed the relative size of Washington’s cap-and-invest market compared to the California-Québec market. Based on the allowance budgets for 2023 through 2026, the joint California-Québec market is almost six times the size of Washington’s market. The significant difference in market size is anticipated to cause allowance prices in a Washington-California-Québec linked market to track the price in the California-Québec joint market at the time of linkage. Because Washington’s allowance prices are higher than those in the California-Québec linked market at the time of writing, it is likely that Washington’s allowance prices in a linked program will be lower than if Washington’s program remains separate. However, the extent of any allowance price decrease, and the level at which prices may stabilize, are difficult to predict.

Linkage would likely improve the cap-and-invest program’s economic durability, longevity, and efficacy. In a larger, more liquid market with a greater number of participants, allowance prices would likely be lower and change more predictably. Predictable prices can foster greater investments in decarbonization.

More moderate compliance costs and reduced volatility would provide a firmer foundation from which businesses can make long-term investments in improving their operations, thereby mitigating negative impacts on consumers. Each jurisdiction’s required emissions reductions would remain in place even after linkage and the overall effectiveness and stringency of each linked program would be protected, setting the stage for efficient long-term emissions reductions and consistent funding for Washington’s broader climate goals, particularly during the first decade of the program.

Our preliminary analysis of the linkage criteria is summarized in the table below. Unrelated to linkage, Québec and California are currently reviewing their cap-and-trade programs and will

propose changes to their respective program regulations.<sup>9</sup> As the California and Québec regulations are finalized, Ecology will evaluate any policy changes relevant to the linkage criteria and provide analysis and findings for all linkage-related criteria before making a final decision whether to enter into a linkage agreement with California and Québec.

*Table 1: Summary of linkage criteria analysis*

<b>Criterion</b>	<b>Regulatory citations</b>	<b>Preliminary determination</b>
Enabling joint allowance auctions and “the mutual use and recognition” of compliance instruments (Section 3.1.1)	RCW 70A.65.210(1)(a) and (c)	We expect that linkage will meet these criteria.
Providing a unified tracking system (Section 3.1.2)	RCW 70A.65.210(1)(c)	This criterion has already been met.
Enhance market security (Section 3.1.3)	RCW 70A.65.210(1)(d)	We expect that linkage will meet this criterion.
Reduce program administration costs (Section 3.1.4)	RCW 70A.65.210(1)(e)	We expect that linkage will meet this criterion.
Provide consistent requirements for covered entities operating in more than one jurisdiction (Section 3.1.5)	RCW 70A.65.210(1)(f)	We expect that linkage will meet this criterion.
Compliance costs (Section 3.2)	RCW 70A.65.060(3) and RCW 70A.65.210(1)(b)	We expect that linkage will reduce compliance costs for covered entities and consumers. As a result, it is likely that linkage will meet these criteria.
Greenhouse gas emissions limits (Section 3.3)	RCW 70A.65.210(3) and RCW 70A.65.210(3)(d)	Ecology will continue to evaluate the impacts of linking on meeting greenhouse gas limits as we gather more information on the outcomes of California’s and Québec’s program reviews.
Benefits to overburdened communities (Section 3.4)	RCW 70A.65.210(3)(b)	We reached a preliminary determination that linkage will meet this criterion based on our preliminary analysis of the existing policies that California and Québec have in place. However, if we pursue linkage, we will discuss opportunities to increase benefits for vulnerable populations and overburdened communities, or analogous communities.

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<sup>9</sup> California and Québec’s current program review is not related to linkage. California and Québec would need to go through their own evaluation processes to determine whether to pursue linkage with Washington. If all three jurisdictions decide to link, California and Québec would need to add amendments to their respective regulations to implement any potential linkage agreement.

Adverse impacts to highly impacted communities (Section 3.5)	RCW 70A.65.210(3)(c)	Ecology will continue to review this criterion. The program review in California and Québec may change some of the existing policies that influence the potential impacts to communities in each jurisdiction. If we pursue linkage, we will discuss opportunities to ensure that the net impacts on highly impacted or analogous communities are at a minimum neutral, and ideally positive.
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**Next steps**

The process to link markets is a multi-step process that started in January 2023. Ecology would need to complete the following steps before Washington could link with California and Québec:<sup>10</sup>

- Decide whether to pursue linking.
- Align carbon market policies.
- Complete an Environmental Justice Assessment.
- Develop a proposed linkage agreement with California and Québec.
- Establish findings on the linkage criteria.
- Sign a linkage agreement.

At this time, we cannot predict if or when we would enter into a linkage agreement with California and Québec and start holding joint allowance auctions. The steps outlined above would take more than a year, so the earliest Washington's program could be linked is 2025.

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<sup>10</sup> California and Québec have additional requirements for linking and those are not reflected here.

# 1 Background

The Climate Commitment Act (CCA) directs the Washington Department of Ecology (Ecology) to “consider opportunities to implement the [greenhouse gas emissions cap-and-invest] program in a manner that allows linking the state's program with those of other jurisdictions”<sup>11</sup> and “seek to enter into linkage agreements with other jurisdictions with external greenhouse gas emissions trading programs.”<sup>12</sup> The CCA specifies criteria that Ecology must use to determine whether to link (referred to in this document as “linkage criteria”) and gives Ecology authority to enter into linkage agreements.<sup>13</sup>

In January 2023, Ecology started exploring linkage with California and Québec, two jurisdictions that already have a linked carbon market. Over the following nine months, Ecology gathered public input on linkage and completed a preliminary analysis of the linkage criteria. The result of that work is summarized in this document.

The question of whether Washington will link with the joint market in California and Québec is still undecided. Ecology’s preliminary analysis of the linkage criteria will inform the Director of Ecology’s preliminary decision whether to pursue linkage with California and Québec. California and Québec would also each need to go through their own respective processes to determine whether to pursue linking with Washington.

Linking carbon markets is a multi-step process that would take at least two years. If all three jurisdictions decide to pursue linking, Ecology would continue to assess the potential impacts of linkage on Washington’s communities, economy, and climate goals and issue final findings on the linkage criteria prior to entering into a linkage agreement.

## 1.1 Washington’s cap-and-invest program

Washington is required to reduce greenhouse gas (GHG) emissions statewide, compared to 1990 levels, 45% by 2030, 70% by 2040, and 95% by 2050.<sup>14</sup> In 2021, the Washington State Legislature passed the Climate Commitment Act (CCA) creating the cap-and-invest program, a comprehensive and economy-wide program designed to help Washington achieve those emissions reductions. Generally, businesses and entities are covered under the program if they generate covered emissions that exceed 25,000 metric tons of carbon dioxide equivalent per year. Sectors and businesses that are included under the program include fuel suppliers (including fuels used in transportation), manufacturing, natural gas and electric utilities, and waste-to-energy facilities (starting in 2027).

The current climate emergency cannot be addressed with a single program – and Washington state agencies administer a suite of complementary policies designed to reduce emissions

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<sup>11</sup> RCW 70.65.060(3)

<sup>12</sup> RCW 70A.65.210(1)

<sup>13</sup> RCW 70A.65.210

<sup>14</sup> RCW 70A.45.020

statewide. However, cap-and-invest is by far the largest and most impactful climate program in Washington’s history and it plays a pivotal role in our state’s ability to effectively mitigate greenhouse gas emissions and minimize the worst impacts of climate change.

A successful cap-and-invest program in Washington may serve as a model for similar policies developed and implemented in other states and jurisdictions. While California and Québec’s programs served as a model for Washington, many states with smaller economies than California are looking to our cap-and-invest program as evidence that sweeping emissions reduction policies are feasible and effective. Cutting emissions in other states may benefit Washington’s atmosphere just as much as reductions at home, but the adoption of similar greenhouse gas reduction policies in other states is a lot more likely if their legislators and state agencies have a roadmap to follow.

A durable, economy-wide greenhouse gas emissions-reduction program also helps ensure that the benefits of associated reductions in other types of pollution will be experienced by Washington communities. Because businesses with high emissions often also produce other pollutants – and because these facilities are often located in areas with vulnerable or underserved populations – the CCA is not just about reducing impacts from climate change, but also about improving the backyard air we breathe today.

### **1.1.1 How does cap-and-invest work?**

Entities required to participate in the program must obtain allowances equivalent to their covered emissions (called their “compliance obligation”). One allowance allows for one ton of GHG emissions. While the CCA requires that some types of entities receive allowances for free, most need to purchase allowances, primarily during quarterly auctions administered by Ecology. The proceeds from these quarterly auctions are required by law to go to critical climate projects focusing on clean transportation, increasing climate resiliency in our ecosystems and communities, and addressing issues of environmental justice and health inequity in our state.

Entities can also buy allowances from other market participants (called the “secondary market”) or cover a small portion of their compliance obligation with “offset credits” issued by Ecology for qualified projects. Together, allowances and offset credits are referred to as “compliance instruments.”

## **1.2 What is linkage?**

When the CCA was passed in 2021, there was only one state in the U.S. – California – with an economy-wide GHG emissions trading program. California began its program in 2012, and a year later a similar program was started in Québec, Canada. California and Québec linked their programs in 2014, creating one shared carbon market.

The CCA directs Ecology to “seek to enter into linkage agreements with other jurisdictions,” so Washington’s cap-and-invest program was designed to be compatible with the existing California-Québec joint market.<sup>15</sup>

### **1.2.1 How would a linked market work?**

In a fully linked cap-and-invest program, Washington’s carbon market would combine with the joint California-Québec market to create a single shared market. A fully linked market would have joint allowance auctions with a common allowance price across all the jurisdictions.

Before each auction, each of the three jurisdictions would decide how many allowances to offer for sale based on that jurisdiction’s overall GHG limit for that year and other factors. Market participants from all three jurisdictions would then purchase allowances from the joint auction, all at the same settlement price.

Allowances could be used to cover emissions in any of the three jurisdictions, regardless of which jurisdiction originally added them to the market. Market participants would also be able to trade allowances across jurisdictions, meaning a business in Washington could sell allowances to a business in California, for example.

If each jurisdiction decides to pursue linkage, the specifics of how a linked California-Québec-Washington market would function would still need to be discussed and negotiated. The law lays out explicit requirements that must be met before Washington can join a linkage agreement,<sup>16</sup> and there are many important steps left between this preliminary analysis and the development of any such agreement.

### **1.2.2 Why are we looking at linking now?**

A new GHG emissions-reduction policy such as cap-and-invest is bound to require an adjustment period both for the implementing agency and regulated entities. In a market-based system like cap-and-invest, the introduction of new financial instruments (allowances) and stringent compliance deadlines can cause concerns about allowance scarcity, especially in the early years of program. This can result in aggressive bidding practices that drive up allowance prices in the early years of the program.

High allowance prices can negatively impact consumers if businesses elect to pass along their compliance costs in the form of higher prices for goods like gas, home heating, or food products. Moreover, high allowance prices and the associated economic impacts can breed public mistrust of the program and leave it vulnerable to curtailment or repeal, with no other alternative economy-wide program in place to ensure Washington is able to meet its GHG reduction limits.

As we will discuss in more depth, the shared market in California and Québec is roughly six times the size of Washington’s standalone market. Joining this larger market is expected to

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<sup>15</sup> RCW 70A.65.210(1)

<sup>16</sup> RCW 70A.65.210

produce more sustainable market conditions with stable allowance prices and substantially increased overall liquidity, thereby increasing market confidence, and mitigating price volatility.

We have seen that businesses may elect to pass through their regulatory compliance costs to consumers by increasing prices – on gas and diesel, energy bills, and other daily necessities – so the positive impact of lower, more stable allowance prices on Washington residents is extremely important. Just as critical, we know that broad emissions reductions are an immediate necessity, as our ecosystems and communities face increasingly deadly impacts from climate change. Therefore, a durable, liquid program that incentivizes and supports decarbonization across industries could provide impactful benefits to the daily lives of Washington residents and environment.

For these reasons, Ecology elected to prioritize its exploration of linkage to ensure that, should it meet the linkage criteria, Washington’s economy and communities could begin reaping the benefits of linkage as soon as possible.

### **1.3 How cap-and-invest advances decarbonization**

The cap-and-invest program is designed to address the current climate crisis on three critical fronts: by reducing GHG emissions economy-wide, by creating a growing market for cleaner technologies and energy sources, and by funding environmental justice and climate resilience efforts in our state. These goals would not change in a linked market. The following discussion of some key aspects of Washington’s cap-and-invest program provides context for the analysis of linkage included in Section 3.

#### **1.3.1 Supply and demand creates financial incentives**

Under the cap-and-invest program, Ecology establishes an overall “cap” on the amount of allowable GHG emissions each year, and decreases the cap annually to ensure that covered entities are reducing their GHG emissions in proportion to the reductions required for Washington to achieve the GHG emissions limits established in RCW 70A.45.020.<sup>17</sup> A steep rate of decline in the early years of the program – 7% every year from 2023 until 2030 – is necessary to meet Washington’s legislatively-mandated 45% GHG reduction limit by 2030. The annual rate of decline levels off to 1.8% between 2031 and 2042, and 2.6% between 2043 and 2050.<sup>18</sup>

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<sup>17</sup> RCW 70A.65.060(1)

<sup>18</sup> WAC 173-446-210



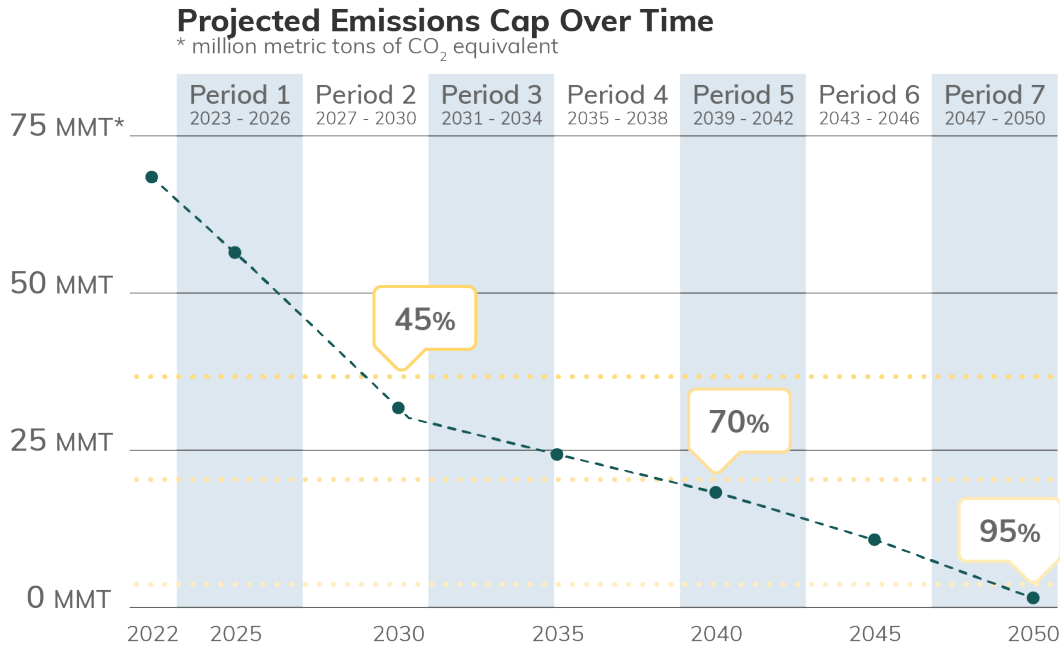


Figure 1: Projected emissions cap 2023-2050

Once the GHG emissions cap is set, Ecology issues “allowances” equal to that cap. One allowance is equal to one metric ton of GHG emissions. Entities required to participate in the program must obtain these allowances to cover their GHG emissions each year. If entities elect not to reduce their GHG emissions, allowances will quickly become more expensive due to competition between entities for the limited number of allowances available. As the cap reduces, the number of allowances (supply) drops each year, so entities are progressively incentivized to reduce their GHG emissions (demand) to avoid escalating compliance costs.

Simply put, the cap-and-invest program uses market forces to incentivize statewide decarbonization in the most economically efficient way possible.

### 1.3.2 Program flexibility pushes innovation

One of the hallmarks of this type of emissions-reduction program is that covered entities have flexibility to determine the most cost-effective way to comply. Each entity decides if it makes most sense, from a business perspective, to invest in technology or processes that will reduce their GHG emissions (thereby reducing their compliance obligation and the number of allowances they will need to purchase) or to continue to pay for those GHG emissions by purchasing allowances from a diminishing supply. They also have the flexibility to change this strategy over time, purchasing allowances in early years before pivoting to invest in new technologies with lower GHG emissions as they are developed and become more affordable, for example.

This market-based approach – and the flexibility inherent in a cap-and-invest program like Washington’s – is unique among economy-wide emissions-reduction mechanisms. By

simultaneously putting a price tag on GHG emissions, while allowing businesses to develop custom-built decarbonization strategies over time, the cap-and-invest program moves Washington closer to its climate goals and will create increased demand for cleaner technologies and energy sources.

### **1.3.3 Stable prices support long-term progress**

As noted above, Washington’s allowance budget has a steep initial rate of decline – 7% every year from 2023 until 2030. During these early years of the program, allowance prices will face upward pressure due to high demand. While the financial incentive to decarbonize is critical, the long-term success of the program – and of Washington’s efforts to combat climate change – require that entities be able to obtain allowances at reasonable, relatively predictable prices. Washington’s market, especially until 2030, is projected to be tight, meaning that competition for allowances will be significant. Such competition for allowances could lead to price spikes as market participants compete to obtain allowances they must have for compliance. A program that allows for sudden price spikes or drops could negatively impact businesses’ decisions to proactively decarbonize due to concerns about fluctuating compliance costs.

To mitigate these potential concerns, the CCA includes several price stabilization mechanisms, described below, which are relevant to Ecology’s evaluation of the linkage criteria.

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

The Allowance Price Containment Reserve (APCR) is a separate pool of allowances that are set aside from each annual allowance budget and released into the market when increased demand at a quarterly auction pushes prices above a pre-determined level. This mechanism is designed to ensure businesses can obtain allowances at fixed prices when market conditions push prices higher.

APCR auctions are only open to covered businesses and can only be used to cover emissions, they can’t be sold or traded among market participants to generate revenue.

Ecology was directed in the CCA to place at least 2% of total available allowances each year of the first compliance period (2023-2026) into the APCR.<sup>19</sup> To bolster market stability, Ecology elected to increase that amount, placing 5% of all allowances from 2023 through 2030 into the APCR on the first day of the program in January 2023.<sup>20</sup> This proactive step ensures that there are more allowances available in the APCR that can be purchased by covered entities when the allowance price at an auction exceeds set thresholds.

#### **Price ceiling**

The second price stabilization mechanism is the price ceiling, which is set at \$81.47 per allowance in 2023 and will increase by 5% plus the rate of inflation each year.<sup>21</sup> This mechanism

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<sup>19</sup> RCW 70A.65.150(2)

<sup>20</sup> WAC 173-446-370

<sup>21</sup> WAC 173-446-335

is sometimes called a “soft ceiling.” Allowance prices at an auction can technically go above this price, but if that occurs covered entities would be allowed to participate in a special sale of allowances at the price ceiling (“price ceiling units”). Because market participants know that price ceiling units will be available to covered entities to purchase if regular auction prices go too high, the incentive for entities to bid above the ceiling is limited.

### **Price Ceiling Units**

In addition, if any covered entities do not have sufficient allowances to cover their emissions for a four-year compliance period, and there are no allowances left in the APCR, Ecology is required by law to sell as many Price Ceiling Units (PCUs) as those entities require to meet their compliance obligation.<sup>22</sup>

Like APCR allowances, PCUs are only available to covered entities and can only be used for compliance – they cannot be sold to other market participants to generate revenue.<sup>23</sup>

PCUs are not included in the annual allowance budgets, so each PCU sold allows GHG emissions in excess of the emissions cap for that year. However, as explained below, Ecology is directed to periodically evaluate the program, including the annual allowance budgets, to ensure Washington is moving effectively toward its climate commitments. In addition, revenue from PCU sales must be used to achieve additional GHG reductions, though the source of the reductions is not defined at this time.

#### **1.3.4 Ensuring emissions reductions**

The CCA provides three important mechanisms to ensure that the program’s primary function – to reduce emissions in Washington – is achieved effectively: (1) periodic evaluations and adjustments, (2) an auction floor price, and (3) the emissions containment reserve. Together, these mechanisms help ensure that the supply of allowances does not outstrip demand and push prices too low, reducing the incentive for businesses to decarbonize.

#### **Periodic evaluations and adjustments**

The CCA gives Ecology broad authority to adjust the annual allowance budgets to ensure that entities under the program are contributing to meeting the statewide GHG emissions reductions of 45% by 2030, 70% by 2040, and 95% by 2050.

Ecology is required to complete evaluations of the program by December 31, 2027 (one year after the end of the first four-year compliance period) and by December 31, 2035 (one year after the end of the third compliance period), including the program’s impact upon reducing GHG emissions. If these evaluations show that “adjustments to the annual allowance budgets are necessary for covered entities to achieve their proportionate share of the 2030 and 2040 emission reduction limits ... [Ecology] shall adjust the annual allowance budgets accordingly.”<sup>24</sup>

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<sup>22</sup> RCW 70A.65.160, WAC 173-446-380, -385

<sup>23</sup> WAC 173-446-380

<sup>24</sup> RCW 70A.65.070(3)

Similarly, Ecology is required to conduct evaluations by December 31 of 2040 and 2045, and adjust future allowance budgets accordingly.

In addition to these periodic reviews, Ecology is authorized to make “additional adjustments to annual allowance budgets as necessary to ensure successful achievement of the proportionate emission reduction limits by covered entities.”<sup>25</sup>

### **Price floor**

Each year, Ecology announces the annual floor price in accordance with the methodology laid out in the Climate Commitment Act program rule.<sup>26</sup> Unlike the price ceiling, the floor price is a “hard floor,” meaning that allowances can never be sold at auction for prices below the floor price. The floor price increases by 5% plus inflation every year, the same rate as the price ceiling.

### **Emissions Containment Reserve**

The CCA also includes an automated mechanism to limit allowance supply to ensure the program functions as intended. If there are allowances left unsold after a quarterly auction, they are slowly added to the available allowances at future auctions. If those same allowances remain unsold for 24 consecutive months, they are automatically swept into a separate Emissions Containment Reserve (ECR) account.<sup>27</sup> The ECR account provides a pool of allowances for new or expanded covered entities. Once distributed, ECR allowances must be used for compliance and cannot be traded. Thus, putting allowances in the ECR effectively removes these allowances from the market, tightening supply and putting upward pressure on prices.

At this early point in the program, lack of demand for allowances in the Washington market does not appear to be an issue. All allowances were sold in the three quarterly auctions held so far in 2023. Because of the steep cap decline rate, it is unlikely that the ECR will be activated before 2030. However, should emissions reductions or other factors result in a surplus of allowances in Washington’s market, the ECR would help maintain the financial incentive for entities to decarbonize in the long term.

### **1.3.5 Funding clean air and communities**

The cap-and-invest program incentivizes broad-based reductions in GHG emissions throughout the economy. But, just as important, the auction of allowances to Washington’s GHG emitters also raises a substantial amount of revenue. That revenue, by law, must be invested by the Legislature in initiatives and projects to reduce GHG emissions across Washington’s economy, with a particular focus on the transportation sector – the biggest source of emissions in the state. Auction revenue is also required to go to programs designed to help communities adapt to the impact of a rapidly changing climate, promote green energy, and address issues of air-

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<sup>25</sup> RCW 70A.65.070(3)

<sup>26</sup> WAC 173-446-335

<sup>27</sup> WAC 173-446-300(5)

related health inequity in communities that have historically borne more than their fair share of pollution.

In addition, the law requires that at least 35%, with a goal of 40%, of all auction revenue be spent on projects that provide “direct and meaningful benefits” to vulnerable populations within overburdened communities, and that an additional 10% be spent on projects supported by Tribes.<sup>28</sup>

### **1.3.6 Addressing environmental justice and health inequity**

The CCA includes a number of policies designed to ensure that the benefits of the cap-and-invest program are felt across the state, with a particular focus on environmental justice concerns.

#### **Improving Air Quality in Overburdened Communities initiative**

The purpose of the Improving Air Quality in Overburdened Communities Initiative (Section 3 of the CCA) is to reduce criteria air pollution<sup>29</sup> in the Washington communities it most affects.<sup>30</sup> Criteria air pollutants are six common substances known to harm human health and the environment:

- Carbon monoxide
- Lead
- Nitrogen dioxide
- Ozone
- Particle pollution
- Sulfur dioxide

This initiative is still in its early stages, but Ecology has identified 16 areas of the state containing multiple overburdened communities, neighborhoods, and towns that are highly impacted by criteria air pollution.<sup>31</sup> These areas were identified through a detailed, criteria-based process including proactive engagement with communities, the Environmental Justice Council, and the public.

Reducing criteria air pollution in the identified overburdened communities will happen in stages over multiple years. Future actions by Ecology to implement this initiative include:

- Working with Tribal governments to identify which of their communities are highly impacted by criteria air pollution.

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<sup>28</sup> RCW 70A.65.230

<sup>29</sup> Environmental Protection Agency. Criteria Air Pollutants. <https://www.epa.gov/criteria-air-pollutants>. Accessed September 2023.

<sup>30</sup> RCW 70A.65.020

<sup>31</sup> Washington Department of Ecology. Improving Air Quality in Overburdened Communities. <https://ecology.wa.gov/Air-Climate/Climate-Commitment-Act/Overburdened-communities>. Accessed July 2023.

- Engaging with identified communities as this work progresses.
- Expanding the air quality monitoring network in the identified communities.
- Collecting and analyzing data about criteria air pollutants affecting these communities.
- Acting to reduce criteria air pollution in the identified communities.
- Reporting every two years about the air pollution, GHG emissions, and health impacts in each community.
- Re-evaluating the list of communities every six years.

### **Environmental Justice Assessments**

The Healthy Environment for All (HEAL) Act also requires that Ecology and other state agencies complete an Environmental Justice Assessment before implementing significant agency actions. The CCA separately requires that Ecology complete an Environmental Justice Assessment before linking.<sup>32</sup> The purpose of an Environmental Justice Assessment is to “support the agency's consideration of overburdened communities and vulnerable populations when making decisions and to assist the agency with the equitable distribution of environmental benefits, the reduction of environmental harms, and the identification and reduction of environmental and health disparities.”<sup>33</sup>

### **Offset credit restrictions**

The cap-and-invest program allows emitters to cover a portion of their emissions – less than eight percent – with offset credits from qualified projects. These offset credits are “under the cap,” meaning that Ecology reduces the number of available allowances in the annual allowance budgets by the number of offset credits used for compliance in order to keep Washington on track to meet its 2030, 2040, and 2050 emissions limits.<sup>34</sup>

The CCA also gives Ecology authority to reduce the number of offset credits a specific company can use if it is determined, after receiving input from the Environmental Justice Council, that the company has (or is likely to) “contribute[d] substantively to cumulative air pollution burden in an overburdened community” or violate[d] any air pollution permits.<sup>35</sup>

### **Tribal Offset Project Grant program**

The Washington Legislature appropriates \$5 million per biennium to fund a grant program to support federally recognized Tribes looking to develop offset projects on Tribal lands to generate and sell offset credits under the cap-and-invest program.<sup>36</sup>

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<sup>32</sup> RCW 70A.65.060(3)

<sup>33</sup> RCW 70A.02.060

<sup>34</sup> RCW 70A.65.170(5)(a)

<sup>35</sup> RCW 70A.65.170(3)(d)

<sup>36</sup> RCW 70A.65.180(2)

## 1.4 Linkage requirements in the CCA

As noted above, the CCA requires that Ecology “shall seek to enter into linkage agreements with other jurisdictions,” and the Director of Ecology is authorized to negotiate and sign those agreements.<sup>37</sup> However, before entering into a linkage agreement, Ecology must:

- Conduct an Environmental Justice Assessment.
- Hold a public hearing and engage in a comment process to obtain input on the linkage agreement from “relevant stakeholders and other interested parties.”
- Find that linkage will achieve six “purposes” listed in RCW 70A.65.210(1).
- Determine “that the linking jurisdiction and the linkage agreement meet certain criteria.”<sup>38</sup>

### 1.4.1 Purposes that linkage must achieve

The “purposes” that a linkage agreement must achieve are set forth in RCW 70A.65.210(1):

- (a) Allow for the mutual use and recognition of compliance instruments issued by Washington and other linked jurisdictions;
- (b) Broaden the greenhouse gas emission reduction opportunities to reduce the costs of compliance on covered entities and consumers;
- (c) Enable allowance auctions to be held jointly and provide for the use of a unified tracking system for compliance instruments;
- (d) Enhance market security;
- (e) Reduce program administration costs; and

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<sup>37</sup> RCW 70A.65.210(1); RCW 70A.65.210(2)

<sup>38</sup> RCW 70A.65.060(3); RCW 70A.65.210. When the CCA uses the term “criteria” it is referring to those listed in RCW 70A.65.210(3) and in RCW 70A.65.210(1) by reference. However, throughout this document, Ecology will use the term “criteria” more broadly to refer to all of the requirements under RCW 70A.65.060(3) and RCW 70A.65.210(1) and (3).

The CCA also states in RCW 70A.65.210(2) that any final linkage agreement should include:

- (a) Provisions relating to regular, periodic auctions, including requirements for eligibility for auction participation, the use of a single auction provider to facilitate joint auctions, publication of auction-related information, processes for auction participation, purchase limits by auction participant type, bidding processes, dates of auctions, and financial requirements;
- (b) Provisions related to holding limits to ensure no entities in any of the programs are disadvantaged relative to their counterparts in the other jurisdictions;
- (c) Other requirements, such as greenhouse gas reporting and verification, offset protocols, criteria and process, and supervision and enforcement, to prevent fraud, abuse, and market manipulation;
- (d) Common program registry, electronic auction platform, tracking systems for compliance instruments, and monitoring of compliance instruments;
- (e) Provisions to ensure coordinated administrative and technical support;
- (f) Provisions for public notice and participation; and
- (g) Provisions to collectively resolve differences, amend the agreements, and delink or otherwise withdraw from the agreements.

This document does not analyze the agreement-related requirements in RCW 70A.65.210(2) because the Director of Ecology has not yet reached a preliminary decision as to whether to pursue linkage. These requirements would be assessed only if Washington enters into linkage agreement negotiations with California and Québec at some point in the future.

(f) Provide consistent requirements for covered entities whose operations span jurisdictional boundaries.

#### 1.4.2 Criteria that must be met

Ecology must evaluate whether linkage “will provide for a more cost-effective means for covered entities to meet their compliance obligations in Washington while recognizing the special characteristics of the state’s economy, communities, and industries.”<sup>39</sup> Ecology must also “evaluate and make a finding regarding whether the aggregate number of unused allowances in a linked program would reduce the stringency of Washington's program and the state's ability to achieve its greenhouse gas emissions reduction limits.” As part of the evaluation, Ecology must include a “consideration of pre-2020 unused allowances.”<sup>40</sup> In addition, Ecology must ensure that:

- Any jurisdiction Washington links with “has provisions to ensure the distribution of benefits from the program to vulnerable populations and overburdened communities.”
- Linkage will “not yield net adverse impacts to either jurisdictions’ highly impacted communities or analogous communities in the aggregate, relative to the baseline level of emissions.”
- Linkage will not “adversely impact Washington's ability to achieve the emission reduction limits established in RCW 70A.45.020.”<sup>41</sup>

If Ecology determines that these criteria cannot be met, and therefore that full linkage should not occur, Ecology can consider alternatives such as a “linkage agreement with limitations”, including restrictions on how much of a Washington entity’s compliance obligation can be met using allowances from another jurisdiction.<sup>42</sup>

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<sup>39</sup> RCW 70A.65.060(3)

<sup>40</sup> RCW 70A.65.210(3)

<sup>41</sup> RCW 70A.65.210(3)

<sup>42</sup> RCW 70A.65.210(3). A fully linked program would have joint allowance auctions with a common allowance price across all the jurisdictions. Allowances could be used for compliance in any of the three jurisdictions without restrictions, regardless of which jurisdiction originally added them to the market. At this time, the structure of a potential partial linkage or a “linkage agreement with limitations” is uncertain.



## 2 Summary of Outreach and Engagement

Starting in January 2023, and continuing through mid-May, Ecology conducted a public outreach and engagement process to get input on whether linkage would be beneficial to Washington; and input on considerations to include in our analysis of the linkage criteria.

Ecology used several strategies to engage with the public statewide, including the creation and maintenance of a dedicated webpage, blog updates, multiple meetings and listening sessions, email updates to the CCA mailing list, and direct outreach to individuals and groups.

Ecology sought input from Tribal leaders and staff, the Environmental Justice Council, the general public, academics, and stakeholders – including community-based organizations, environmental organizations, environmental justice organizations, and cap-and-invest market participants.

### 2.1 Tribal government consultation

In January, Ecology invited Tribal leaders and staff to government-to-government consultation and an online forum for Tribal governments. The Tribal forum provided an opportunity for Tribal government staff to learn about Ecology's process to decide whether to link cap-and-invest markets and to share comments on linkage with Ecology. The forum was attended by 10 representatives of Tribal governments or organizations.

To date, Ecology received comments from one Tribal government. Government-to-government consultations on linkage can be requested at any time by emailing [CCALinkage@ecy.wa.gov](mailto:CCALinkage@ecy.wa.gov).

### 2.2 Environmental Justice Council consultation

Ecology initiated communication with the Environmental Justice Council staff on this project in January 2023. Ecology shared the timeline for exploring linkage and offered to present at Environmental Justice Council meetings and at the Environmental Justice Council's CCA Committee. At Councilmembers' invitation, Ecology staff have attended CCA Committee meetings as well as meetings of the Environmental Justice Council in the spring and summer.

At the beginning of the linkage exploratory process, Ecology shared some draft public engagement materials with the CCA Committee for input. The CCA Committee provided Ecology with a list of stakeholders for individual outreach as well as feedback on the online survey questions.

Once the public comment period closed, Ecology provided the CCA Committee with a compilation of all the comments. Ecology staff also shared draft analysis of the linkage criteria with the CCA Committee for feedback. At the request of the Environmental Justice Council, Ecology adjusted the schedule for publicly sharing this analysis and making the preliminary decision on pursuing linkage in order to give them more time to provide input. If Ecology's Director decides to pursue linkage, Ecology staff will continue to consult with the Environmental Justice Council and CCA Committee throughout the process.

## 2.3 Public engagement

Ecology requested comments from the public on linkage from January 31 through May 15, 2023. Ecology provided multiple public engagement opportunities, including:

- Online listening sessions: Ecology hosted three sessions on March 16, March 29, and April 18, 2023 with the purpose of providing information on the cap-and-invest program and linkage, and to gather input. A total of over 180 people attended.
- Online survey: The survey was open for responses from March 14 to May 15, 2023. It included 19 questions and there were 11 completed surveys.
- Invitation to provide comments by email, mail, and voicemail: Ecology received 45 unique public comment letters and emails. There were also 263 responses of a campaign email.<sup>43</sup>
- Small group stakeholder and community meetings with environmental, environmental justice and equity, and business interests: There were six small group meetings with 28 total attendees representing 8 organizations.<sup>44</sup>

Some commenters provided feedback in more than one way such as completing the survey and submitting a comment letter. Ecology received written comments from the following sectors/groups:<sup>45</sup>

- 16 organizations, including environmental groups, environmental justice groups, and community-based organizations.
- 28 private sector entities.
- 15 individuals, including academics. An additional 263 individuals sent a campaign email.
- 3 public agencies.

## 2.4 Summary of public comments

During those public engagement opportunities, participants could share overall thoughts on linkage or specific recommendations related to the linkage criteria. Ecology specifically asked for input on the following topics:

- What thoughts or comments do you have about how linking may impact you or your community?
- What input would you like to share to inform whether Ecology pursues linking carbon markets with California and Québec?

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<sup>43</sup> Campaign emails are typically pre-populated emails that organizations encourage their constituents or members to send. The content of these emails is the same, except for the sender's name and contact information.

<sup>44</sup> Ecology continued to have informational meetings with stakeholder groups after the public engagement period ended, and those meetings did not include comments. Two informational meetings are included in this total.

<sup>45</sup> The survey gave respondents the option to select their type of organization or entity. For comment letters, Ecology categorized commenters into different sectors/groups. The number of comment letters and surveys received and the numbers of commenters by sector/group are different because some comment letters were signed by multiple entities and some entities submitted comments via multiple pathways.

- What should Ecology consider when evaluating the linkage criteria?<sup>46</sup> Do you have recommended informational resources that could inform our analysis of these criteria?
  - Criterion #1: Ensure that California and Québec have provisions to ensure their programs provide benefits to vulnerable populations and overburdened communities.
  - Criterion #2: Ensure that linking would not have an overall negative effect on highly impacted communities in Washington, California, or Québec.
  - Criterion #3: Ensure that linking markets would not impact Washington’s ability to achieve its greenhouse gas emissions reduction limits, including an analysis of pre-2020 unused allowances in a linked program.
  - Criterion #4: Ensure that linking markets would reduce the cost of compliance for covered businesses.

Commenters’ responses varied in their degree of support for or concerns regarding linkage. Commenters offered many recommendations for Ecology to consider in evaluating the linkage criteria and deciding whether to pursue linkage.

Ecology staff reviewed all comments and resources provided and considered them when developing this report. While we are not responding individually to comments, we acknowledge many of the ideas in our analysis of the linkage criteria. If Ecology pursues linkage, the comments will additionally be considered during future phases (see Next steps), including negotiation of the linkage agreement.

Cascadia Consulting Group provided support during the public engagement period and developed a summary of the comments, available in Appendix C: Summary of Public Comments Received in Spring 2023. Recurring topics mentioned in the comments, as identified by Ecology staff and Cascadia Consulting Group, are provided below and categorized based on relevance to the various linkage criteria.

Some comments did not directly relate to linkage and instead related to other aspects of the CCA. Those are not included in this summary.

The summary of comments included in this section is intended to encapsulate input as it was shared through the public engagement process and does not reflect Ecology’s agreement or disagreement with any of the statements made.

To request the full set of comments received during the Spring 2023 public engagement period, email [CCALinkage@ecy.wa.gov](mailto:CCALinkage@ecy.wa.gov).

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<sup>46</sup> During the Spring 2023 public engagement period, Ecology numbered four criteria which were the focus of public input. We referred to the criterion related to benefits to communities (RCW 70A.65.210(3)(b)) as criteria #1, the criterion related to adverse impacts to communities (RCW 70A.65.210(3)(c)) as criteria #2, the criteria related to achieving greenhouse gas limits (RCW 70A.65.210(3) and (3)(d)) as criteria #3, and the criteria related to compliance costs (RCW 70A.65.060(3) and RCW 70A.65.210(1)(b)) as criteria #4.

### 2.4.1 General comments

Many of the comments were related to overall thoughts on linkage, the linkage process, or were relevant to multiple linkage criteria. Topics mentioned in the comments include:

- Link as soon as possible so linkage occurs during the first compliance period.
- Delay linkage to get more public input and gather more information on how the cap-and-invest program operates independently.
- Share information about future opportunities for public input. Gather additional input from overburdened communities in Washington, Tribes, the Environmental Justice Council, covered entities, and communities in California and Québec.
- Conduct an Environmental Justice Assessment.
- Consider partial linkage to restrict the number of allowances from the joint California-Québec carbon market that businesses could use for compliance in Washington. Some commenters recommended phasing the process by starting with partial linkage and then fully linking after further evaluation of impacts.
- Analyze the potential impacts of linking on allowance prices, auction revenues, net flow of allowances, and GHG emissions reductions in Washington.
- Share more information about how linkage would impact offset projects, including offset protocols and the use of offset credits for compliance in Washington.
- Wait to link until California makes changes to their cap-and-trade program. Policy changes mentioned by commenters include: legislation to extend the program past 2030, address unused allowances, address environmental justice impacts, lower the GHG emissions cap, and changes to offsets and offset protocols.
- Some commenters shared thoughts on policies Washington should change before linking that are related to: limits on the use of offset credits for compliance, free allocation of allowances to certain industries, electricity imports, cost containment mechanisms, overall GHG emission cap levels, and other areas.

### 2.4.2 Comments related to allowance market operations and administrative costs

A few commenters shared thoughts on how linking would provide benefits to Washington related to allowance market operations and administrative costs, including:

- Streamlining auction administration and program management.
- Increasing market security because a single allowance price helps safeguard against market manipulation, and regulators can share info and best practices.
- Reducing program costs.

### 2.4.3 Comments related to compliance costs

Most of the comments related to compliance costs expressed that linkage would reduce the cost of compliance for covered entities and consumers in Washington. Some of the expected impacts of linkage on Washington's market that are noted in the comments include:

- Larger markets provide more options for cost-effective GHG reductions.

- Linkage would lead to lower allowance prices, which would result in lower costs to consumers.
- Linkage would increase market liquidity.
- Linkage would increase market stability. Some commenters noted that linkage would especially benefit Washington in the early years of the program by mitigating price fluctuations that often occur when starting a new market.
- Linkage would reduce price volatility. Some commenters noted that prices are impacted by the actions of a relative few entities in markets the size of Washington's.
- Having the same allowance prices between linked jurisdictions is important for economic competitiveness.
- Linkage would reduce administrative costs for covered entities that are operating in multiple jurisdictions (e.g., California and Washington).
- Linkage avoids double compliance obligations for entities that operate in both California and Washington.

#### 2.4.4 Comments related to greenhouse gas emissions limits

Commenters hold a variety of perspectives about the potential impact of linking on Washington's GHG limits.

Some commenters believe that linkage to the existing California-Québec market will increase the likelihood of Washington meeting its GHG limits, and cite what they identify as major benefits of linkage:

- The creation of a single market and resulting allowance price would reduce costs to participants and thereby build support among market participants and the public, increasing program durability. They argue this also serves to strengthen the state's economic competitiveness.
- Lower costs and increased public support could enable program administrators to adopt more ambitious GHG targets. Some commenters cite a study that shows that reinvested cost savings from formally linked carbon markets can result in doubled carbon emissions reductions by 2030.
- Linkage can send a strong political signal of cooperation on climate change which, in and of itself, can encourage and enable other jurisdictions to implement cap-and-invest policies, and facilitates enhanced climate ambition.
- Linkage reduces the impacts of competitiveness across jurisdictions for companies situating business operations, thereby reducing concerns over emissions leakage between linked jurisdictions.
- Linkage would decrease allowance costs and reduce allowance price volatility, enhancing market credibility, stability, and durability. Commenters believe that improved market credibility and durability would accelerate private sector investments in reducing GHG emissions, enhancing development of green energy and low carbon technology and products.

- Linkage allows jurisdictions to meet required GHG emissions reductions aggregated across the linked jurisdictions, while accruing the associated cost and policy benefits.

Some commenters noted the existing mechanisms in place in Washington’s cap-and-invest program designed to contain costs and ensure emissions reductions, such as the provision for the adjustment of allowance budgets and the Emissions Containment Reserve. Commenters also expressed concern about the frequency with which Washington would trigger Allowance Price Containment Reserve auctions or price ceiling unit sales if the program remains standalone. They noted that APCR auctions and price ceiling unit sales would add more allowances to the market and price ceiling unit sales would result in emissions above the cap. In addition, commenters noted that complementary state and federal policies – like the Clean Fuel Standard, Zero Emission Vehicle law, and the Inflation Reduction Act incentives – would help Washington achieve its GHG reduction limits.

Some commenters expressed concerns that lower allowance prices expected as a result of linkage would negatively impact Washington’s ability to meet its GHG reduction limits. Commenters’ concerns include:

- Lower allowance prices could reduce the financial incentive for companies to invest in technology and process improvements to reduce their GHG emissions.
- A decrease in allowance prices from linkage could result in lower funding levels for decarbonization projects in Washington, which could result in lower total reductions in GHGs and local pollutants.
- The unused allowances in the existing California-Québec market could be purchased by Washington entities, thus allowing higher emissions in Washington.
- The difference in cap decline rate – the rate of GHG reduction – between now and 2030 in Washington compared to California could result in Washington becoming a net importer of allowances from the other jurisdictions.
- Impacts due to uncertainty for market participants related to the California Air Resources Board’s (CARB) authority to continue the California cap-and-trade program beyond 2030.

Some commenters suggested that Ecology consider various methods of partially linking to the California-Québec market to mitigate for risks and possible negative effects.

#### **2.4.5 Comments related to benefits to overburdened communities**

We asked for public input to inform our evaluation of the distribution of cap-and-trade program benefits in California and Québec, including the types of benefits Ecology should consider when evaluating this criterion. Commenters suggested:

- In addition to an analysis of the benefits from allowance auction revenue, also consider benefits related to air quality and offset projects.
- Review past funding allocation as well as policies to direct funding in the future.
- Compare how each jurisdiction defines overburdened communities or analogous terms.

Commenters shared information on some of the policies and programs that California has in place to target funding to certain communities and improve air quality.

#### **2.4.6 Comments related to adverse impacts to highly impacted communities**

Comments were mixed on the anticipated impacts of linking on highly impacted communities in Washington, California, and Québec.

The potential adverse impacts mentioned in comment letters include:

- The underlying structure of GHG emissions trading systems allows companies to pay to continue to emit greenhouse gases.
- Lower allowance prices could delay a facility's decisions to reduce GHG emissions.
- Lower allowance prices could reduce the amount of funding from auction revenues for projects in overburdened communities.

Other commenters believe that linking will benefit highly impacted communities by:

- Reducing compliance costs and leading to lower energy and fuel prices for low-income households.
- Contributing to greater program stability and durability.
- Encouraging the adoption of stronger policies to protect highly impacted communities and more ambitious GHG reduction targets.

Commenters had differing opinions on the impact of GHG emissions trading programs on local air pollution and shared several studies that assessed that topic in California.

Commenters also suggested that Ecology:

- Compare how each jurisdiction defines highly impacted communities or analogous terms.
- Consider policies and practices in California and Québec related to community engagement, environmental justice oversight, and Tribal consultation.
- Outline how impacts to highly impacted communities will be measured and tracked over time.

As mentioned in the General comments section above, commenters also recommended that Ecology do more outreach to communities in Washington, California, and Québec.



### 3 Preliminary Analysis of Linkage Criteria

Our preliminary analysis compares potential outcomes of Washington’s cap-and-invest program if it remains a standalone program (no linkage) with potential outcomes if Washington enters into a combined carbon market with California and Québec (linkage).

As described in Section 1.4, there are six “purposes” that linkage must achieve and additional “criteria” that must be met.<sup>47</sup> We have grouped similar purposes and criteria into five main topics:

1. Allowance market operations and administrative costs.
  - These are the “purposes” set forth in RCW 70A.65.210(1).
2. Compliance costs.
3. Greenhouse gas emissions limits and achieving required emissions reductions.
4. Benefits to overburdened communities.
5. Adverse impacts to highly impacted communities.

Unrelated to linkage, Québec and California are currently reviewing their cap-and-trade programs and will propose changes to their respective program regulations. As the California and Québec regulations are finalized, Ecology will evaluate any policy changes relevant to the linkage criteria and provide analysis and findings for all linkage criteria before making a final decision whether to enter into a linkage agreement with California and Québec.<sup>48</sup>

#### Relative market size

To assess the potential impacts of linkage, we first reviewed the relative size of Washington’s cap-and-invest market compared to the California-Québec market (Table 2). Based on the allowance budgets for 2023 through 2026, the joint California-Québec market is almost six times the size of Washington’s market.

The significant difference in market size is anticipated to cause allowance prices in a Washington-California-Québec linked market to track the price in the California-Québec joint market at the time of linkage.<sup>49</sup> It is likely, therefore, that allowance prices in a linked program will be lower than if Washington’s program remains a standalone program. However, the extent of any allowance price decrease, and the level at which prices may stabilize, are difficult to predict at this time.

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<sup>47</sup> The purposes are in RCW 70A.65.210(1) and the criteria are in RCW 70A.65.210(3).

<sup>48</sup> California and Québec’s current respective program reviews are not related to linkage. California and Québec would need to go through their own evaluation processes to determine whether to pursue linkage with Washington. If all three jurisdictions decide to link, California and Québec would need to amend their respective regulations to implement any potential linkage agreement.

<sup>49</sup> Vivid Economics. 2022. Summary of market modeling and analysis of the proposed Cap and Invest Program. Publication 22-02-038. Department of Ecology.

<https://apps.ecology.wa.gov/publications/SummaryPages/2202038.html>.



Table 2: Comparison of allowance budgets<sup>50</sup>

Emissions year	Washington	California	Québec
2023	63,288,565	294,100,000	52,790,000
2024	58,524,909	280,700,000	51,550,000
2025	53,761,254	267,400,000	50,310,000
2026	48,997,598	254,000,000	49,080,000

As part of California’s and Québec’s processes to review their program regulations, California has announced plans to revisit its cap decline rate and “unused” allowances.<sup>51</sup> As a result, it is possible that allowance prices may rise in the combined California-Québec market prior to linkage.

### 3.1 Allowance market operations and administrative costs

The CCA directs Ecology to “seek to enter into linkage agreements” in order to achieve “purposes” that are related to auction operation, administrative costs, and entity requirements.<sup>52</sup> These purposes include:

- Enabling allowance auctions to be held jointly and providing “for the mutual use and recognition” of compliance instruments.
- Providing a unified tracking system for compliance instruments.
- “Enhanc[ing] market security.”
- “Reduc[ing] program administration costs.”

<sup>50</sup> Sources: Washington: [WAC 173-446-210](#), Table 210-1; California: Code of Regulation [§ 95841](#); Québec: [O.C. 1126-2017](#), 22 November 2017.

<sup>51</sup> Washington, like California and Québec, authorizes market participants to hold allowances subject to applicable holding limits. California uses the terms “banked” or “unused” allowances and the CCA uses the term “unused” allowances. In general, “unused” or “banked” allowances are allowances that market participants have in their accounts (including their general, compliance, and limited use holding accounts) because they have not needed to use them for compliance. This could be a result of actual emissions being lower than when the caps were originally established in law. Entities may be saving the allowances to use for future compliance obligations or to sell on the secondary market to generate revenue. In 2022, CARB determined that the volume of unused vintage 2013-2020 allowances available to private entities in the California and Québec programs was approximately 5% of the total number of vintage 2013-2030 allowances issued within the joint market. See CARB, Board Resolutions 18-51 Cap-and-Trade allowance report. [https://ww2.arb.ca.gov/sites/default/files/cap-and-trade/Allowance%20Report\\_Reso18\\_51.pdf](https://ww2.arb.ca.gov/sites/default/files/cap-and-trade/Allowance%20Report_Reso18_51.pdf). We discuss the potential impacts of unused allowances on Washington’s ability to meet its emissions-reduction limits in Section 3.3.2 of this document.

<sup>52</sup> RCW 70A.65.210(1) and RCW 70A.65.210(3)(a)

- “Provid[ing] consistent requirements for covered entities whose operations span jurisdictional boundaries.”

### 3.1.1 Enabling joint allowance auctions and “the mutual use and recognition” of compliance instruments

Two of the core objectives of linking any carbon markets are to establish joint auctions at which allowances from all participating jurisdictions can be freely sold, and to ensure that compliance instruments from each participating jurisdiction are recognized by all jurisdictions.

The existing linkage agreement between California and Québec explicitly states that the agreement is intended to:

- “provide for the equivalence and interchangeability of compliance instruments issued by the Parties [California and Québec] for the purpose of compliance with their respective cap-and-trade programs;”
- “permit the transfer and exchange of compliance instruments between participants registered with the Parties’ respective cap and-trade programs using a common secure registry;” and
- “allow for planning and holding joint auctions of compliance instruments.”<sup>53</sup>

Ecology anticipates that any linkage agreement between California, Québec, and Washington would contain the same, or similar, language, that regularly scheduled auctions would be held jointly, and that compliance instruments (allowances and offset credits) from each jurisdiction would be recognized by all three jurisdictions.

Québec and California may address offset protocols and requirements for the use of offset credits as they undergo their separate and unrelated processes to update their program requirements. Offset credits are compliance instruments representing emissions reductions or emissions removals that can be purchased and used by a covered entity to meet their obligation under the CCA. Prior to linking, Washington would discuss with the other jurisdictions specific provisions related to offset credits, including offset protocols and the role of direct environmental benefits (DEBs). As a result, how offset credits would be treated in the Washington cap-and-trade program under any linkage agreement would be subject to further evaluation.

Preliminary determination: We expect that linkage will meet these criteria.

### 3.1.2 Providing a unified tracking system

Washington currently uses the Western Climate Initiative, Inc. (WCI, Inc.) online platform to conduct allowance auctions, register participants, facilitate allowance trading, and track

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<sup>53</sup> Government of California and Government of Québec. 2017. Agreement on the harmonization and integration of cap-and-trade programs for reducing greenhouse gas emissions, Article I.  
[https://ww2.arb.ca.gov/sites/default/files/cap-and-trade/linkage/2017\\_linkage\\_agreement\\_ca-gc-on.pdf](https://ww2.arb.ca.gov/sites/default/files/cap-and-trade/linkage/2017_linkage_agreement_ca-gc-on.pdf).

compliance instruments.<sup>54</sup> California and Québec use the same platform. Therefore, all three jurisdictions already utilize the same platform to register and track compliance instruments, and upon linkage, their processes would become even more unified, resulting in further administration and program implementation related efficiencies.

Preliminary determination: This criterion has already been met.

### 3.1.3 Enhance market security

The shared WCI, Inc. online platform that Washington, California, and Québec all use emphasizes security. Therefore, some of the advantages that were assumed to flow from linkage – sharing a proven platform with a strong record of information technology security – have already been realized.

Ecology believes that linkage can further enhance market security. For example, once linked, all three jurisdictions would be able to more easily share information on any market participants that appear to be violating market rules or engaging in impermissible behavior in one or more jurisdictions. Based on this sharing of information, all three jurisdictions would have greater (and earlier) notice of impermissible conduct and would be able to better coordinate on potential enforcement investigations, findings, and corrective actions. This would further enhance market security and reduce the potential for market manipulation.

Preliminary determination: We expect that linkage will meet this criterion.

### 3.1.4 Reduce program administration costs

For the purposes of analysis, Washington’s administrative costs can be divided into costs based on staffing and operational needs, and costs associated with the auction platform.

#### **Staffing and operational costs**

These costs include those associated with duties such as receiving and verifying emissions reports and conducting education and outreach to covered entities. Washington has already benefitted from collaboration with California and Québec because staff from those jurisdictions provided invaluable advice, resource materials, and other support to help Ecology staff get the cap-and-invest program up and running by January 1, 2023.

Ongoing costs for staffing and workload are largely based on the number of market participants and the volume of associated work. The number of covered entities registered in the Washington program is unlikely to be impacted by linkage because an entity’s program participation is determined by its emissions in Washington. It is possible that linkage may result in fewer general market participants registering in Washington because they need only register in one of the linked jurisdictions. Additionally, through harmonized reporting standards, potential GHG reporting errors may decline, improving Washington’s GHG verification efforts.

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<sup>54</sup>Western Climate Initiative, Inc. (WCI, Inc.). 2023. <https://wci-inc.org>.

As a result, it appears that while staffing and operational costs may decline with linkage, the extent of any potential decline may not be significant.

### **Auction platform costs**

Washington's participation in the WCI, Inc. online platform has already reduced Washington's overall program implementation costs. The costs and time that would have been needed for Washington to develop, test, implement, and maintain its own online secure auction platform would have almost certainly been substantially higher than what Washington has paid to become a participating jurisdiction and join the existing WCI, Inc. platform.

Although the extent of any other cost impacts is difficult to estimate, we expect that costs in general would decrease over time with linkage, as the jurisdictions collaborate and continue the harmonization process, resulting in administrative efficiencies. As an example, joint auctions would reduce operational costs and joint contracting for services would continue to become easier through greater collaboration. This should not only reduce Washington's administrative costs, but also, as explained below, reduce the costs for covered entities who operate in more than one jurisdiction.

Preliminary determination: We expect that linkage will meet this criterion.

### **3.1.5 Provide consistent requirements for covered entities operating in more than one jurisdiction**

For Washington, Québec, and California to link, the jurisdictions will need to harmonize important program requirements. This process is already well underway because Washington's program adopted key elements from California and Québec's programs and has been designed to be "linkage ready" in as many ways as possible. As a result, many fundamental requirements are already identical to, or substantially harmonized with, those of California and Québec.

However, not all aspects of the programs need to be identical in order to link. For example, although California and Québec have successfully operated linked markets for almost a decade, each jurisdiction's program has unique characteristics such as the types of offset projects each program allows. The same will likely remain true if Washington links with the other two jurisdictions in the future.

The three jurisdictions will need to engage, as equal parties, in a process to analyze and discuss program requirements in detail and determine whether various requirements need to be identical, need only be similar, or can remain different. Then, all three would need to agree on what each of these requirements should be and the degree of variability that could exist between programs to ensure an effective market that continues to drive down GHG emissions, minimize leakage,<sup>55</sup> and support communities.

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<sup>55</sup> Leakage is when companies move to states that don't regulate GHG emissions to avoid regulatory costs. See Appendix A: Technical Terms.

Once the jurisdictions have reached consensus as to the preferred approach to important aspects of the program, each jurisdiction would then need to make any necessary changes to its relevant statutes, rules, or guidance to ensure harmonization. Therefore, although we believe that linkage would result in more consistent requirements for covered entities operating in multiple jurisdictions, the process to achieve this result would take time and would begin only after all three jurisdictions have met their respective requirements to pursue linkage.

Preliminary determination: We expect that linkage will meet this criterion.

### 3.1.6 Preliminary determination

Based on the structure of the California-Québec linked market and language in their existing linkage agreement, we expect that linkage will meet these criteria related to allowance market operations and administrative costs.

## 3.2 Compliance costs

Before entering into a linkage agreement, Ecology must evaluate whether linkage will:

- “Provide for a more cost-effective means for covered entities to meet their compliance obligations in Washington while recognizing the special characteristics of the state’s economy, communities, and industries.”<sup>56</sup>
- “Broaden the GHG emission reduction opportunities to reduce the costs of compliance on covered entities and consumers.”<sup>57</sup>

### 3.2.1 Linkage’s impact on compliance costs, consumers, and the economy

Washington’s cap-and-invest program is designed to reduce greenhouse gases in a flexible manner, allowing entities to reduce their emissions in the ways that are the most cost-effective for them.

Research has shown that larger markets are more liquid, reduce price volatility, and result in lower cost emissions reductions.<sup>58</sup> Studies have also suggested that entities operating in larger carbon markets rather than multiple smaller markets are more likely to invest in clean technologies, as afforded by a more standardized and stable regulatory environment.<sup>59</sup> Joining the substantially larger combined California-Québec market will make it easier for Washington

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<sup>56</sup> RCW 70A.65.060(3)

<sup>57</sup> RCW 70A.65.210(1)(b)

<sup>58</sup> Dellink, R., J. Stéphanie, J. Chateau, R. Duval. 2014. Towards global carbon pricing: Direct and indirect linking of carbon markets. *OECD Journal: Economic Studies*, 2013(1). [http://dx.doi.org/10.1787/eco\\_studies-2013-5k421kk9j3vb](http://dx.doi.org/10.1787/eco_studies-2013-5k421kk9j3vb); Woerman, M. 2023. Linking carbon markets with different initial conditions. *Journal of Environmental Economics and Management*, 119: 102820. <https://doi.org/10.1016/j.jeem.2023.102820>; Burtraw, D., K. Palmer, C. Munnings, et al. 2023. Linking by degrees: Incremental alignment of cap-and-trade markets. *Resources for the Future*. <https://media.rff.org/documents/RFF-DP-13-04.pdf>.

<sup>59</sup> Holtsmark, K. and K. Midttomme. 2021. The dynamics of linking permit markets. *Journal of Public Economics*, 198(2021): 104406. <https://www.sciencedirect.com/science/article/abs/pii/S0047272721000426>.

entities to reduce their compliance costs – both by reducing allowance prices and by expanding market demand for cleaner technologies and energy sources.

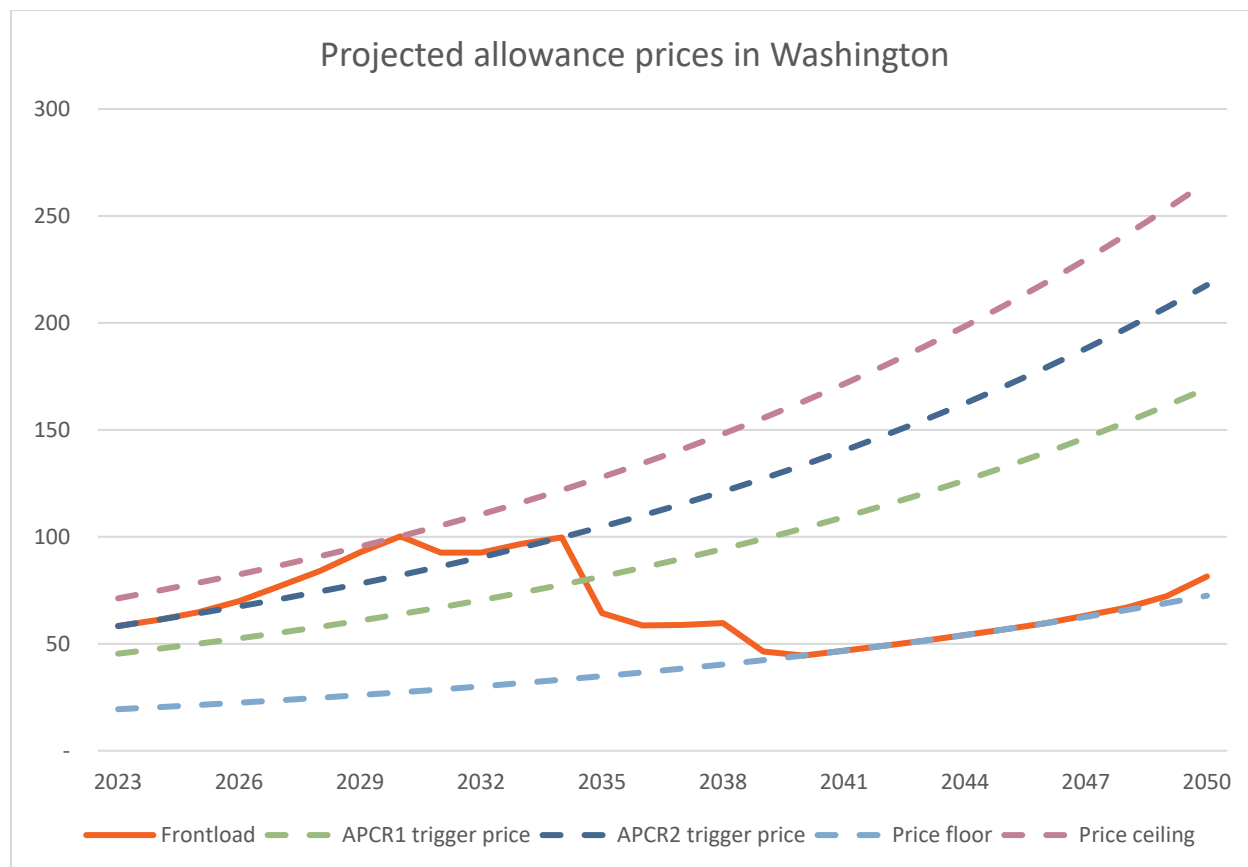


Figure 2: Projected allowance prices in Washington in a standalone carbon market. The graph shows allowance prices rising in the early years of the program and reaching the price ceiling in 2030, then leveling off, then rapidly decreasing after 2034 and falling to the price floor around 2040. From the Final Regulatory Analysis for the Chapter 173-446 WAC.

Critically, this also means reduced prices for consumers in cases where businesses decide to pass their compliance costs on to their customers. Economic modeling done in 2022 indicated that allowance prices in a standalone Washington market were likely to escalate to the price ceiling (around \$100) between 2023 and 2030 (see Figure 2)<sup>60</sup> – meaning that these “pass-through” costs could have a negative impact on household budgets. Reducing this impact between 2023 and 2030 on consumers benefits all Washingtonians, and particularly helps lower-income residents, who spend a larger percentage of their income on necessities like food, transportation, and home heating. Linkage, therefore, may not only help mitigate overall consumer cost impacts, it may especially lessen the impact upon vulnerable populations.

<sup>60</sup> WA. Dept. of Ecology. 2022. Final regulatory analyses for Chapter 173-446 WAC, Climate Commitment Act Program. Publication 22-02-047. <https://apps.ecology.wa.gov/publications/SummaryPages/2202047.html>.

In addition, having consistent compliance costs across jurisdictions could increase the incentive for businesses to invest in decarbonization, pushing Washington closer to its climate goals and further lowering costs that might otherwise be passed on to consumers.

In a linked market, market policies and allowance prices in all jurisdictions would be equivalent, meaning that businesses with facilities in multiple jurisdictions (which include some of Washington’s biggest emitters) would have a clearer idea of future compliance costs across their operations. This could make long-term decarbonization planning simpler and more efficient. Businesses could develop one decarbonization strategy for all their facilities at the same time based on the common allowance price – meaning it would likely be more efficient to purchase and install the same new technology in all facilities.

When new technologies and upgrades are purchased in larger quantities, they typically come at a lower cost per unit (called “economies of scale”). Along with more predictable cross-jurisdictional compliance costs, these economies of scale make it easier for businesses to invest more aggressively. In an unlinked market, Washington’s higher and more volatile allowance prices may result in businesses deciding to hold back on early investments to preserve working capital for potential allowance purchases.

More broadly, an increased incentive to decarbonize could bolster demand for alternative fuels and more energy-efficient technologies, incentivizing further innovation in Washington’s economy and making new options more readily available and affordable. For example, increasing the availability of electric vehicles and low-carbon fuels helps both businesses and the general public by reducing reliance on fossil fuels, thereby putting downward pressure on transportation costs overall. Reducing transportation costs may be especially important for lower-income residents.

### **3.2.2 Linkage’s impact on program durability and longevity**

Washington State has committed to dramatically cutting GHG emissions by 2030, and to achieving net carbon neutrality by 2050. Ensuring that Washington’s climate policies are robust and stable over the long term is critical for the state to achieve these commitments. The durability and stability of the cap-and-invest program is especially important because this program has a much broader environmental and economic impact than any of the complementary policies that are focused only on one sector of the economy.

#### **High prices undermine durability**

Initial allowance prices in Washington have been higher than those in the California-Québec market.<sup>61</sup> Washington’s program has been in place for less than a year and it is difficult to

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<sup>61</sup> The settlement price for current vintage allowances in Washington’s three auctions has been \$48.50 (February), \$56.01 (May), and \$63.03 (August). The settlement price in the three most recent combined California and Québec auctions was \$27.85 (February), \$30.33 (May), and \$35.20 (August) and the average over the last year has been \$29.44 (August 2022 through August 2023). Information from:



predict future allowance prices with any certainty, given the limited data. However as mentioned above, economic modeling indicated that without linkage, allowance prices could continue to increase until 2030 and reach the price ceiling (see Figure 2).<sup>62</sup> If allowance prices remain high, businesses have a greater financial incentive to pass on their compliance costs to their customers. Higher consumer prices could remain the norm even when compliance costs are lower.<sup>63</sup>

The impact of high and volatile allowance prices could have unforeseen economic impacts that threaten program longevity, and erode public support for the program, risking the curtailment or repeal of the state's largest and most impactful climate policy. This risk is especially high during the early years of the program, when the market is still new and before the benefits of revenue investments are evident. Washington's progressive emissions reduction requirements would still be in force, but the state's ability to achieve those limits would be severely impeded.

In addition, uncertainty as to the program's future could impede long-term business planning and could cause Washington businesses to shelve short- and long-term decarbonization projects. An uncertain regulatory environment and unpredictable changes in compliance costs could discourage business growth, potentially incentivizing curtailment or closure of facilities. This would not only harm the state's economy but could cause leakage of greenhouse gas emissions to other jurisdictions if businesses relocate. As a result, uncertainty as to the program's future could have a significant negative impact upon the state's economy and climate goals.

The cap-and-invest program generates substantial revenue for climate investments, which will further reduce emissions and address other air quality issues impacting Washington communities. The loss of the program, therefore, would also mean the loss of billions of dollars over the next 27 years that would otherwise increase access to clean transportation, build resilience to climate change, and advance environmental justice and health equity across the state.

### **Linkage reduces volatility and preserves progress toward emissions reduction requirements**

Linkage would likely improve the cap-and-invest program's durability, longevity, and efficacy. In a larger, more liquid market with a greater number of participants, allowance prices would likely change more predictably. Predictable price changes can foster greater investments in decarbonization because they allow businesses to plan operational changes with more

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Department of Ecology. 2023. Cap-and-invest auctions and markets. <https://ecology.wa.gov/air-climate/climate-commitment-act/cap-and-invest/auctions-and-market>; CARB. 2023. Summary of California-Québec Joint Auction Settlement Prices and Results. [https://ww2.arb.ca.gov/sites/default/files/2020-08/results\\_summary.pdf](https://ww2.arb.ca.gov/sites/default/files/2020-08/results_summary.pdf).

<sup>62</sup> Vivid Economics. 2022. Summary of market modeling and analysis of the proposed Cap and Invest Program, exhibit 5. <https://apps.ecology.wa.gov/publications/SummaryPages/2202038.html>.

<sup>63</sup> Federal Reserve Bank of St. Louis. 2023. Oil and gas prices move together like rockets and feathers. <https://fredblog.stlouisfed.org/2022/06/oil-and-gas-prices-move-together-like-rockets-and-feathers>.

Tappata, M. 2009. Rockets and Feathers: Understanding Asymmetric Pricing. *The RAND Journal of Economics*, 40(4): 673–687. <http://www.jstor.org/stable/25593733>.

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confidence.<sup>64</sup> In addition, allowance prices in the linked market would likely be more in line with the lower prices in the California-Québec market, as was shown in the analysis conducted by Vivid Economics in 2022.<sup>65</sup>

Joining the larger California-Québec market may also make Washington’s program more resilient to unexpected state-specific economic events. In a comparatively smaller market such as Washington’s, natural disasters, business closures, or new industries entering the state all could have an outsized impact on allowance prices. In a much larger and more liquid market, spanning multiple jurisdictions and two countries, the impact of these localized factors will be lessened, making the combined market more stable and allowance prices more predictable.

More moderate compliance costs and reduced volatility would provide a firmer foundation from which businesses could make long-term investments in improving their operations, thereby mitigating negative impacts on consumers.<sup>66</sup> As discussed in detail in the next section, each jurisdiction’s required emissions reductions would remain in place even after linkage, and the overall effectiveness and stringency of the linked program would be protected. This sets the stage for efficient long-term emissions reductions and consistent funding for Washington’s broader climate goals.

### 3.2.3 Preliminary determination

We expect that linkage will reduce compliance costs for covered entities and consumers. As a result, it is likely that linkage will meet these criteria.

## 3.3 Greenhouse gas emissions limits

Before proceeding with linkage, Ecology must:

- Determine that linkage will “[n]ot adversely impact Washington’s ability to achieve the emission reduction limits” of 45% by 2030, 70% by 2040, and 95% by 2050.<sup>67</sup>
- “Evaluate and make a finding regarding whether the aggregate number of unused allowances in a linked program would reduce the stringency of Washington’s program and the state’s ability to achieve its greenhouse gas emissions reduction limits.”<sup>68</sup>

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<sup>64</sup> Yang, J., S. Fuss, D. Johansson, et al. 2023. Investment dynamics in the energy sector under carbon price uncertainty and risk aversion. *Energy and Climate Change* 4:100110. <https://doi.org/10.1016/j.egycc.2023.100110>.

<sup>65</sup> Vivid Economics. 2022. Summary of market modeling and analysis of the proposed Cap and Invest Program. Publication 22-02-038. Department of Ecology. <https://apps.ecology.wa.gov/publications/SummaryPages/2202038.html>.

<sup>66</sup> Blyth, W., et al. 2007. Investment risks under uncertain climate change policy. *Energy Policy* 35(11): 766-5773. <https://doi.org/10.1016/j.enpol.2007.05.030>.

<sup>67</sup> RCW 70A.65.210(3)(d)

<sup>68</sup> RCW 70A.65.210(3)

### 3.3.1 Linkage's impact on achieving Washington's greenhouse gas emission reduction limits

An expected impact of linking is that allowance prices in Washington would be more stable and decrease in the near-term, aligning more closely with prices in the California-Québec market at the time linkage occurs (see Section 3.2). While we cannot know what this price will be, economic modeling anticipated that it would be above the current California-Québec price, but below Washington's.<sup>69</sup>

Some have expressed concern that lower prices will make it more likely for covered entities to meet their compliance obligations by purchasing allowances rather than investing in operational changes to reduce their emissions, thereby threatening the ability of Washington to meet GHG emission reduction limits. However, as discussed above, on its own, Washington's program may not be large enough, or liquid enough, to avoid allowance prices increasing to a level that could undermine the durability and longevity of the program. Therefore, Washington continuing as a standalone program and rejecting linkage could lead to the program being curtailed or even repealed, making it significantly more difficult for our state to meet its GHG emission reduction mandates. On the other hand, by joining the larger and more stable California-Québec market, Washington's cap-and-invest program would likely become more balanced and durable, setting the stage for long-term success, revenue generation and on-going emissions reductions. In addition to enhancing durability, linkage may lead to greater GHG emissions reductions for a number of other reasons, explained below.

#### **Market stability supports consistent investment**

As mentioned in Section 3.2 Compliance costs, joining the larger California-Québec market would likely have a stabilizing impact on allowance prices, giving covered entities the ability to plan their compliance strategies more effectively and with greater confidence. For example, financially costly investments in operational overhauls or system upgrades might be more readily pursued by businesses.

#### **Economies of scale lower the cost of decarbonization**

As noted earlier, a linked market would also allow businesses with facilities in multiple jurisdictions to benefit from economies of scale when investing in new equipment or other upgrades. This increases the likelihood that a company would invest in decarbonization, when the same changes could save them money long-term across multiple jurisdictions.

#### **Increased demand for clean technology reduces overall costs**

Increased market stability, streamlined compliance strategies, and more cost-effective upgrades for some of the largest industries (including petroleum refineries) resulting from a linked market would also result in a larger, more innovative market for clean technologies and low-carbon energy sources, as detailed in Section 3.2.1. Ongoing demand for, and use of, these

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<sup>69</sup> Vivid Economics. 2022. Summary of market modeling and analysis of the proposed Cap and Invest Program. <https://apps.ecology.wa.gov/publications/SummaryPages/2202038.html>.

clean alternatives would likely drive further production and put downward pressure on prices. Companies could enter into long-term contracts for low-carbon products at scale to supply their operations throughout the linked jurisdictions, including most of the West Coast. This will be true both for those products and for traditional transportation fuels, because the economy overall will be less reliant on fossil fuels thereby limiting the prices oil companies can charge. This, in turn, could positively impact other consumer products due to reduced transportation costs, increasing public support for the program and pressure on industry to pursue further reductions.

### **Additional safeguards to ensure emissions reductions**

As discussed in Section 1.3.4, it is also important to keep in mind that Ecology has broad authority to adjust annual allowance budgets to ensure that covered entities achieve their proportionate share of meeting Washington’s emissions reduction limits.<sup>70</sup> Ecology is directed to tighten the yearly allowance budgets as necessary to ensure that these limits are met.

There are also other backstops designed to keep prices within a specified range (see Section 1.3.3) and to keep emissions reductions on track. For example, the Emissions Containment Reserve serves as an automated tightening mechanism if allowance prices stay at the floor price for too long, removing allowances that remain unsold for 24 months from the market to keep supply and demand in better balance.

### **The impact of other programs on emissions reductions**

Although the cap-and-invest program is the broadest emissions reduction program in Washington, other policies push specific industries to decarbonize and work synergistically with cap-and-invest to reduce GHG emissions. The Clean Energy Transformation Act (CETA) will play a significant role in decarbonizing Washington’s electrical grid by 2045.<sup>71</sup> Lower allowance prices now will benefit ratepayers by mitigating potential increases in energy costs in the near-term, while additional reductions under CETA will ensure lower emissions long-term. Likewise, the Clean Fuel Standard incentivizes the production of lower-carbon transportation fuels and the expansion of electrified transit infrastructure,<sup>72</sup> while the Zero-Emission Vehicles law is designed to increase the number of electric, hydrogen, and plug-in hybrid cars on the road.<sup>73</sup>

Federal climate policy can also have a significant influence on Washington State’s ability to meet its climate goals. The Inflation Reduction Act and Infrastructure Investment and Jobs Act have created unprecedented funding opportunities designed to spur investment in low-carbon

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<sup>70</sup> RCW 70A.65.070(3)

<sup>71</sup> Chapter 19.405 RCW; Department of Commerce. Clean Energy Transformation Act. <https://www.commerce.wa.gov/growing-the-economy/energy/ceta>. Accessed July 20, 2023.

<sup>72</sup> Chapter 70A.535 RCW; Department of Ecology. Clean Fuel Standard. <https://ecology.wa.gov/air-climate/reducing-greenhouse-gas-emissions/clean-fuel-standard>. Accessed July 20, 2023.

<sup>73</sup> RCW 70A.30.010; Department of Ecology. Zero-emissions Vehicles Law. <https://ecology.wa.gov/Air-Climate/Reducing-Greenhouse-Gas-Emissions/ZEV>. Accessed July 20, 2023.

infrastructure and technology.<sup>74</sup> Therefore, although the cap-and-invest program is critical to achieving the state’s emission limits, other programs will complement the cap-and-invest program to provide additional incentive for decarbonization across different sectors, while also moderating demand for allowances and putting downward pressure on allowance prices.

Lastly, although this preliminary analysis is focused on the impact of linkage on Washington’s GHG reduction mandates, climate change is a global crisis. Reductions in GHG emissions in other states and countries contribute as much to climate change mitigation as GHG reductions achieved within the state. Washington is a leader in the efforts to address this crisis by committing to decarbonizing its economy within thirty years and putting in place the broad-based policies to do so. Other states are now building, or actively considering, cap-and-invest programs. Linking fledgling cap-and-invest programs to established carbon markets as they get off the ground and begin operation can minimize negative impacts of a program launch while maximizing the possibility of positive results. Washington’s potential linkage with California and Québec could serve as a powerful demonstration that linkage is not only achievable but is an effective way for states and provinces to efficiently join together to address this crisis.

### **3.3.2 The impact of unused allowances on Washington’s emissions limits**

Entities in California and Québec hold over 300 million unused allowances. If linkage were to occur between Washington and the California-Québec market, concerns have been raised that these allowances may be sold to Washington entities, and a greater availability of allowances at a lower price could undermine the incentive for Washington businesses to decarbonize.

In 2022, CARB concluded that the approximately 310 million unused vintage 2013-2020 allowances equaled approximately 5% of the total number of allowances issued.<sup>75</sup> CARB also expects that these unused allowances will be used and retired by the end of the decade (2030) as the post-2020 California program nearly doubles in stringency with a faster rate of decline in the number of new allowances available in each year.<sup>76; 77</sup> California is currently reviewing its program and considering changes to future allowance supply in the context of the increased ambition in CARB’s 2022 Scoping Plan for Achieving Carbon Neutrality. That review could lead to California reducing its 2030 GHG emissions reduction target, which could lead to these unused allowances being used for compliance earlier, and therefore retired at an even faster rate, which could in turn cause allowance prices in the California-Québec market to increase. In

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<sup>74</sup> The White House. The Inflation Reduction Act Guidebook. 2023.

<https://www.whitehouse.gov/cleanenergy/inflation-reduction-act-guidebook>.

<sup>75</sup> CARB. 2022. BR 18-51 Cap-and-Trade Allowance Report. [https://ww2.arb.ca.gov/sites/default/files/cap-and-trade/Allowance\\_Report\\_Reso18\\_51.pdf](https://ww2.arb.ca.gov/sites/default/files/cap-and-trade/Allowance_Report_Reso18_51.pdf)

<sup>76</sup> CARB. 2022. 2022 Scoping Plan for Achieving Carbon Neutrality. [https://ww2.arb.ca.gov/sites/default/files/2022-12/2022-sp\\_1.pdf](https://ww2.arb.ca.gov/sites/default/files/2022-12/2022-sp_1.pdf).

<sup>77</sup> In their review of the 2022 Scoping Plan, the Legislative Analyst’s Office estimates a more modest reduction in unused allowances to 200 million by 2030, and recommends CARB consider program changes in order to improve the chances of meeting emissions reduction goals. California Legislative Analyst’s Office. 2023. Assessing California’s Climate Policies: The 2022 Scoping Plan Update. <https://lao.ca.gov/Publications/Report/4656>.

addition, CARB is re-evaluating the potential impacts of the unused allowances in the California-Québec market and plans to report back to the California Legislature by the end of the year.<sup>78</sup>

At this point it is not clear what impact, or how large an impact, the unused California-Québec allowances may have on the Washington market and emissions reductions. On one hand, the fundamental forces of supply and demand indicate that the supply of unused allowances in the California-Québec market will reduce allowance prices in Washington after linkage. On the other hand, if unused allowances are used for compliance by California and Québec entities prior to linkage, especially as allowance prices in the California-Québec market rise, they may not be available for purchase by Washington entities. This would minimize the impact on prices and any resulting changes to incentives for Washington entities to reduce emissions.

Washington entities having access to the larger pool of allowances in the California-Québec market may be beneficial in some ways. Washington's market has a steep year-over-year rate of cap decline until 2030 and is currently estimated to be a tight market. A tight market would be anticipated to increase allowance prices and compliance costs in Washington over those in California and Québec in the next decade. Linkage and the resulting availability of additional allowances could help mitigate these pressures. Therefore, the availability of at least some additional allowances may have positive impacts on entity compliance costs, consumer costs, and program durability, which in turn may contribute to emissions reductions.

As a result of the lack of clarity on this issue, Ecology will keep reviewing potential impacts of unused allowances as California and Québec review their programs and consider changes to future allowance budgets. However, Ecology has broad authority to adjust annual allowance budgets to assure that emissions limits are met, and that covered entities achieve their proportionate share of meeting those limits in 2030, 2040, and 2050.<sup>79</sup> This authority means that if California's and Québec's unused allowances are having a negative impact on the ability of Washington to meet its emissions limits, Ecology can adjust Washington allowance budgets as necessary to address the issue.

### 3.3.3 Preliminary determination

Ecology will continue to evaluate the impacts of linking on meeting Washington's GHG limits as we gather more information on the outcome of California's and Québec's program reviews.

## 3.4 Benefits to overburdened communities

The CCA states that "a linkage agreement approved by the department must ... ensure that the linking jurisdiction has provisions to ensure the distribution of benefits from the program to vulnerable populations and overburdened communities."<sup>80</sup>

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<sup>78</sup> California Air Resources Board. 2023. Important Process Information Regarding Cap-and-Trade Regulatory Updates: Issued February 28, 2023. [https://ww2.arb.ca.gov/sites/default/files/2023-02/nc-CT\\_Notice\\_Feb\\_2023.pdf](https://ww2.arb.ca.gov/sites/default/files/2023-02/nc-CT_Notice_Feb_2023.pdf).

<sup>79</sup> RCW 70A.65.070(3)

<sup>80</sup> RCW 70A.65.210(3)(b)

California and Québec both have extensive policies separate from their cap-and-trade programs to provide benefits to vulnerable populations, overburdened communities, or analogous communities, such as public funding for education, public funding for health care, and tax credits for low-income families. For example, as a result of its many social support and income equality-oriented policies and relatively low cost of living, Québec has the lowest poverty rate in Canada.<sup>81</sup> However, the analysis in this section focuses on policies tied directly to the cap-and-trade programs, including benefits from projects funded by allowance auction revenue, offset projects, and air quality improvements.

This criterion, as well as the criterion concerning adverse impacts to highly impacted communities (Section 3.5), asks Ecology to look at impacts on “vulnerable populations,” “overburdened communities,” and “highly impacted communities.” For both of these criteria, we used California’s and Québec’s definitions and identifications of analogous communities in their respective jurisdictions.

- For California, we used their definition and identification of priority populations, which includes disadvantaged communities, and low-income communities and households.<sup>82</sup>
- For Québec, we used their definition and identification of communities through the Material and Social Deprivation Index,<sup>83</sup> and northern communities. The northern community population is approximately one third aboriginal people.<sup>84</sup>

For additional information on these terms, see Appendix B: Comparison of overburdened communities, highly impacted communities, and analogous terms across jurisdictions.

### 3.4.1 California

In California, funds generated from the cap-and-trade program’s auction of state-owned allowances are deposited into the Greenhouse Gas Reduction Fund and appropriated by the Legislature. The Legislature allocates auction proceeds toward programs administered by 23 state agencies, collectively referred to as California Climate Investments. California directs a minimum of 35% of California Climate Investments toward projects that benefit “priority populations,” which are disadvantaged communities (sometimes referred to in California as “DACs”) and low-income communities and households. These requirements were initially established in 2012 through Senate Bill (SB) 535 and then updated through Assembly Bill (AB) 1550.<sup>85</sup> SB 535 directs the California Environmental Protection Agency to designate

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<sup>81</sup> Statistics Canada. 2022. Disaggregated trends in poverty from the 2021 Census of Population.

<https://www12.statcan.gc.ca/census-recensement/2021/as-sa/98-200-X/2021009/98-200-X2021009-eng.cfm>.

<sup>82</sup> California Climate Investments. Priority Populations. <https://www.caclimateinvestments.ca.gov/priority-populations>. Access July 2023.

<sup>83</sup> Québec Government. 2019. Material and Social Deprivation Index.

<https://www.inspq.qc.ca/en/deprivation/material-and-social-deprivation-index>.

<sup>84</sup> Québec Government. 2023. Northern Québec Territory. <https://www.quebec.ca/en/government/quebec-at-a-glance/northern-quebec-territory>.

<sup>85</sup> SB 535: De León, Chapter 830, Statutes of 2012; AB 1550: Chapter 369, Statutes of 2016.

disadvantaged communities.<sup>86</sup> The minimum funding levels established through SB 535 and AB 1550 are:

- At least 25% of auction proceeds must be invested in projects that are located in or benefit individuals living in disadvantaged communities.
- An additional minimum of 5% of auction proceeds must be invested in projects located in low-income communities or benefiting low-income households.
- An additional minimum of 5% must be allocated toward projects within and benefiting low-income communities, or low-income households, that are within ½ mile of a disadvantaged community.

As of November 2022, California reports that 73% of California Climate Investment funds (over \$6.7 billion) had been spent on projects benefitting priority populations, more than double the 35% requirement in the statute.<sup>87</sup> Projects include building affordable housing, expanding transit access, incentivizing energy efficiency upgrades in low-income housing, funding for clean mobility options, training and workforce development programs, etc. This number excludes funds spent on high-speed rail.

To implement California AB 617, CARB created the Community Air Protection Program, which funds air monitoring and emissions reduction in communities most impacted by air pollution.<sup>88</sup> California Climate Investments funds nearly all of the implementation of the Community Air Protection Program.

California also allocates no-cost allowances to electrical utilities and natural gas suppliers. Revenues from those utility-owned allowances are auctioned for the benefit of ratepayers in California.<sup>89</sup> The California Public Utilities Commission directs the use of the investor-owned utilities' auction proceeds. Those auction proceeds are used in ways that benefit low-income households, such as the California Climate Credit and through clean energy programs. Some of the clean energy programs are required by statute, like the Disadvantaged Communities Green

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<sup>86</sup> California Office of Environmental Health Hazard Assessment. 2023. SB 535 Disadvantaged Communities. <https://oehha.ca.gov/calenviroscreen/sb535>.

<sup>87</sup> California Climate Investments. Priority Populations. <https://www.caclimateinvestments.ca.gov/priority-populations>. Accessed July 20, 2023.

<sup>88</sup> AB 617: C. Garcia, Chapter 136, Statutes of 2017; CARB. Community Air Protection Program. <https://ww2.arb.ca.gov/capp>. Accessed July 2023.

<sup>89</sup> CARB. Electrical Distribution Utility and Natural Gas Supplier Allowance Allocation. <https://ww2.arb.ca.gov/our-work/programs/cap-and-trade-program/allowance-allocation/edu-ngs>. Accessed July 20, 2023.



Tariff,<sup>90</sup> Community Solar Green Tariff,<sup>91</sup> Disadvantaged Communities - Single-family Solar Homes,<sup>92</sup> and the Solar on Multifamily Affordable Housing Programs.<sup>93</sup>

Entities with compliance obligations in California can use a limited number of offset credits for compliance (for up to 4% of emissions during 2021-2025 and 6% of emissions during 2026-2030). AB 398 created an additional requirement that no more than half of offset credits used for compliance may come from projects that do not provide direct environmental benefits to the state of California.<sup>94</sup> AB 398 defines direct environmental benefits (DEBs) projects as projects that result in “the reduction or avoidance of emissions of any air pollutant in the state or the reduction or avoidance of any pollutant that could have an adverse impact on waters of the state.”<sup>95</sup> AB 398 also instructed CARB to establish a Compliance Offset Protocol Taskforce to recommend ways to prioritize benefits from offset projects to disadvantaged communities, tribal lands, and rural and agricultural areas. The task force shared its final recommendations in March 2021.<sup>96</sup> California does not currently have incentives or requirements to locate offset projects in disadvantaged communities, low-income communities, or on tribal lands.

### 3.4.2 Québec

In Québec, by law, all auction proceeds are deposited in the Fund for Electrification and Climate Change and can only be used for the fight against climate change.<sup>97</sup> The 2030 Plan for a Green Economy (Green Economy Plan) “guides the government’s action to reduce GHG emissions and adapt to climate change over the course of this decade.” One of the nine principles in the Green Economy Plan is to “ensure a just transition for society as a whole and factor in the specific realities of each of Québec’s regions.”<sup>98</sup> The Government of Québec envisions a just climate

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<sup>90</sup> California Public Utilities Commission. The Disadvantaged Communities Green Tariff DAC-GT Program. <https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/demand-side-management/solar-in-disadvantaged-communities/the-disadvantaged-communities-green-tariff-dac-gt-program>. Accessed August 11, 2023.

<sup>91</sup> California Public Utilities Commission. The Community Solar Green Tariff CSGT Program. <https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/demand-side-management/solar-in-disadvantaged-communities/the-community-solar-green-tariff-csgt-program>. Accessed August 11, 2023.

<sup>92</sup> California Public Utilities Commission. Solar in Disadvantaged Communities. <https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/demand-side-management/solar-in-disadvantaged-communities>. Accessed August 11, 2023.

<sup>93</sup> California Public Utilities Commission. The Solar on Multifamily Affordable Housing (SOMAH) Program. <https://www.cpuc.ca.gov/somah>. Accessed August 11, 2023.

<sup>94</sup> AB 398: Chapter 135, Statutes of 2017

<sup>95</sup> CARB. Direct Environmental Benefits in the State (DEBs). <https://ww2.arb.ca.gov/our-work/programs/compliance-offset-program/direct-environmental-benefits>. Accessed July 20, 2023.

<sup>96</sup> CARB. Compliance Offsets Protocol Task Force Final Recommendations, March 2, 2021. <https://ww2.arb.ca.gov/resources/documents/compliance-offsets-protocol-task-force-final-recommendations-march-2-2021>. Accessed August 28, 2023

<sup>97</sup> Québec Government. Electrification and Climate Change Fund (FECC). <https://www.environnement.gouv.qc.ca/ministere/fonds-electrification-changements-climatiques/index.htm>. Accessed August 20, 2023.

<sup>98</sup> Québec Government. 2023. 2030 Plan for a Green Economy. <https://www.quebec.ca/en/government/policies-orientations/plan-green-economy>. Accessed July 20, 2023.



transition as one in which the social, economic, and environmental benefits and costs are distributed equitably and fairly between the various societal stakeholders and current and future generations. Although Québec has many social programs in place, they recognize that not all individuals and groups in society are equal in the face of climate change and certain population groups will be more affected than others, particularly low-income households.

Québec develops a five-year implementation plan to outline the climate actions to implement the Green Economy Plan. Interventions in the Implementation Plans must be made with a just transition focus, meaning Québec has a goal to ensure the benefits and costs of this transition are fairly distributed. Examples of just transition issues that are receiving particular attention under the Green Economy Plan include: prioritizing adaptation measures based on risk level, a just energy transition, fairness for future generations, competitiveness of economic sectors and companies, and matching skills with labor needs.

In our analysis, we found that the Québec cap-and-trade program does not have mandatory funding targets (such as a percentage of revenues) for communities identified using the Material and Social Deprivation Index. However, we determined that the 2023-2028 Implementation Plan includes several programs in mitigation and adaptation that would benefit those communities. For example, some programs aim to reduce industrial sector emissions and transportation sector emissions, which would benefit air quality in communities impacted by those sources.<sup>99</sup>

The Implementation Plan targets 486 million Canadian Dollars (CAD) to protect the health, the quality of life, and the security of people and communities facing climate impacts (Objective 3.1 of the Implementation Plan). One area of focus is strengthening Québec's resilience to the impacts of climate change, with a focus on impacts to the most vulnerable communities. Finally, 2.2 billion CAD are dedicated to the electrification of the transportation sector (car, light trucks, public transit, and school transit) which will improve air quality in communities.

The current Implementation Plan also includes programs to benefit northern and indigenous communities - over 300 million CAD to support off-grid communities to plan and implement renewable energy projects, over 14 million CAD to preserve the quality of life in northern communities, and over 23 million CAD to support indigenous community leadership in the climate transition.

In our review of policies related to benefits from offset projects, we did not find policies in Québec to incentivize the development of offset projects in communities identified using the Material and Social Deprivation Index, or in northern communities.

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<sup>99</sup>Québec Government. 2023. Green Economy 2023-2028 Implementation Plan. <https://www.quebec.ca/en/government/policies-orientations/plan-green-economy/implementation>. Accessed July 20, 2023.

### 3.4.3 Preliminary determination

We reached a preliminary determination that linkage will meet this criterion based on our preliminary analysis of the existing policies that California and Québec have in place. However, if Ecology pursues linkage, we will discuss opportunities to increase benefits for vulnerable populations and overburdened communities with California and Québec.

## 3.5 Adverse impacts to highly impacted communities

The CCA requires that “a linkage agreement approved by the department must...Be determined by the department to not yield net adverse impacts to either jurisdictions’ highly impacted communities or analogous communities in the aggregate, relative to the baseline level of emissions.”<sup>100</sup>

The CCA uses the term “net adverse impacts” but does not define it. Ecology has interpreted this to mean that the overall impact of linking on highly impacted communities or analogous communities must be neutral or positive relative to a standalone Washington cap-and-invest program.

We expect that the impacts of linkage will vary in scale and type – ranging from environmental to economic. For this evaluation, we have not completed additional modeling or scenario analysis to quantify the impacts. Additional information is needed related to California’s and Québec’s program reviews, as well as further discussions with the two jurisdictions. If Ecology moves forward with linking, we will complete additional analysis, including the regulatory assessment required for rulemaking and an Environmental Justice Assessment meeting the requirements of RCW 70A.02.060.

In defining the term “highly impacted communities,” the CCA refers to the process used to designate those communities in CETA. For CETA, the Washington Department of Health designates as a highly impacted community “any census tract with a 9 or 10 overall rank on the Environmental Health Disparities map, or any census tract with tribal lands.”<sup>101</sup>

For California and Québec, we will look at analogous communities as described in Appendix B: Comparison of overburdened communities, highly impacted communities, and analogous terms across jurisdictions:

- California: priority populations, which include disadvantaged communities and low-income communities and households.
- Québec: communities identified through the Material and Social Deprivation Index and northern communities.

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<sup>100</sup> RCW 70A.65.210(3)(c)

<sup>101</sup> Washington State Department of Health. Clean Energy Transformation Act – Cumulative Impact Analysis. <https://doh.wa.gov/data-statistical-reports/washington-tracking-network-wtn/climate-projections/clean-energy-transformation-act>. Accessed July 20, 2023.

Many of the expected impacts on communities in Washington described below would be the result of more stable and lower allowance prices in Washington under a linked program compared to allowance prices if Washington's program remains standalone. In our review of the relative sizes of the emissions trading systems in Section 3 (see Relative Market Size), we note that modeling indicates the allowance price after Washington links would track the California-Québec allowance price at the time of linkage.<sup>102</sup> Therefore, we expect that linking with Washington would result in modest impacts on California and Québec's allowance prices and therefore modest impacts to their populations.

### 3.5.1 Air pollution and health

Commenters pointed to numerous studies of varying methodology and scope reviewing California's cap-and-trade program and assessing whether it resulted in air quality getting better or worse for highly impacted communities. The results of the studies submitted to Ecology by commenters have been mixed, with some claiming that air pollution disparities got worse while the program was underway and others showing that disadvantaged communities had the highest air quality improvements.<sup>103</sup> CARB has looked into the potential relationship between implementation of California's cap-and-trade program and local air pollution and has posted its own assessment on its webpage.<sup>104</sup> In this analysis, Ecology will not review those studies in detail or evaluate the methodology used in each. The CCA requires Ecology to compare the impact of linking to the impact of not linking. The CCA does not require Ecology to evaluate the efficacy of a GHG emissions trading system in reducing criteria air pollutants or addressing health disparities in the jurisdiction in which it is located. Therefore, an evaluation of the impact of California's cap-and-trade program on criteria air pollution in California is beyond the scope of this analysis.

Some commenters expressed concerns that lower allowance prices in Washington would impact local air pollution levels by reducing the incentive for companies to invest in technologies to reduce their GHG emissions. This concern assumes that there is a tight

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<sup>102</sup> Vivid Economics. 2022. Summary of market modeling and analysis of the proposed Cap and Invest Program. Publication 22-02-038. Department of Ecology.

<https://apps.ecology.wa.gov/publications/SummaryPages/2202038.html>.

<sup>103</sup> Studies Ecology reviewed to analyze impacts to air quality from the California cap-and-trade program include: OEHHA. 2022. Impacts of Greenhouse Gas Emissions Limits Within Disadvantaged Communities: Progress Towards Reducing Inequities. <https://oehha.ca.gov/environmental-justice/report/ab32-benefits>.; Hernández-Cortes, D., K Meng. 2023. Do environmental markets cause environmental injustice? Evidence from California's carbon market. *Journal of Public Economics* 217: 104786. <https://doi.org/10.1016/j.jpubeco.2022.104786>;

Cushing, L., D. Blaustein-Rejto, M. Wander, et al. 2018. Carbon trading, co-pollutants, and environmental equity: Evidence from California's cap-and-trade program (2011–2015). *PLOS Medicine*.

<https://doi.org/10.1371/journal.pmed.1002604>.; Pastor, M., M. Ash, L. Cushing, et al. 2022. Up in the Air: Revisiting Equity Dimensions of California's Cap-and-Trade System. USC Dornsife Equity Research Institute. <https://dornsife.usc.edu/eri/publications/up-in-the-air-revisiting-equity-dimensions-of-californias-cap-and-trade-system>.

<sup>104</sup> CARB. 2023. FAQ Cap-and-Trade Program: Environmental Justice Communities and Local Air Pollution.

<https://ww2.arb.ca.gov/resources/documents/faq-cap-and-trade-program>. Accessed July 2023.

correlation between GHG emissions and the emission of co-pollutants. However, the correlation varies based on the type of industry and the type of pollutant.<sup>105</sup>

Because of the comparative sizes of the respective markets, we do not expect linkage with Washington to significantly affect allowance prices in the California – Québec market. With modest impacts on allowance prices, any financial incentives to decarbonize in those jurisdictions will remain the same. Therefore, we expect that linkage would have minimal, or no, impact on air pollution in California and Québec.

We expect that linking with California and Québec could have positive long-term impacts on air quality and public health for highly impacted communities in Washington, as a result of a more durable cap-and-invest program that can sustain emissions reductions over the long-term from 2023 to 2050 (see Section 3.2.2). Our analysis also found that more stable and predictable allowance prices that would be expected in a linked market could incentivize businesses to invest in decarbonization (see Section 3.3.1), which may result in reductions in co-pollutants.

In addition, the CCA includes several policies intended to address air pollution in highly impacted communities. These policies would remain in place in a linked program. The Air Quality in Overburdened Communities initiative was created by the CCA to monitor air quality in overburdened communities, determine the sources of air pollution, establish air quality targets, and adopt and enforce strategies to reduce air pollution and protect human health in those communities (see Section 1.3.6).<sup>106</sup> The communities identified by that initiative as overburdened and highly impacted by criteria air pollution largely overlap with those identified as highly impacted communities through the CETA process.

The CCA also gives Ecology authority to reduce the number of offset credits a company can use for compliance if we determine, with input from the Environmental Justice Council, that the company has or is likely to “contribute substantively to cumulative air pollution burden in an overburdened community” or has violated any air pollution permits.<sup>107</sup>

Regardless of linkage, air pollution will continue to be monitored and regulated through the state and federal clean air acts and state and local clean air agencies in California and Washington, and the Clean Air Regulation and Environment Quality Act in Québec.

### 3.5.2 Investments of auction proceeds

In Washington, the CCA directs auction proceeds into several different accounts and determines which accounts receive priority. For example, the Carbon Emissions Reduction Account (CERA) funds projects to reduce emissions from the transportation sector and is

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<sup>105</sup> OEHHA. 2022. Impacts of Greenhouse Gas Emissions Limits Within Disadvantaged Communities: Progress Towards Reducing Inequities. California Office of Environmental Health Hazard Assessment (OEHHA). <https://oehha.ca.gov/environmental-justice/report/ab32-benefits>.

<sup>106</sup> Washington Department of Ecology. Improving Air Quality in Overburdened Communities. <https://ecology.wa.gov/Air-Climate/Climate-Commitment-Act/Overburdened-communities>. Accessed July 2023.

<sup>107</sup> RCW 70A.65.170(3)(d)

statutorily prioritized for funding. Remaining proceeds go into other accounts, including the Climate Investment Account (CIA) and the Air Quality and Health Disparities Improvement Account (AQHDIA). AQHDIA is used for projects that improve air quality and reduce health disparities in overburdened communities highly impacted by air pollution and the Legislature intends to dedicate at least \$20,000,000 per biennium into this account.<sup>108</sup> In addition, the CCA requires that a minimum of 35%, with a target of 40%, of all funding from cap-and-invest auction proceeds be used for projects that benefit vulnerable populations within overburdened communities.

### **Impact on overall auction proceeds**

We expect that auction proceeds allocated to each jurisdiction in a linked market would be based on the number of allowances each jurisdiction adds to the joint auction. As mentioned above, if Washington links, we expect allowance prices would be similar to prices in the California-Québec market at the time of linkage. Therefore, we do not anticipate that linkage would have a significant impact on the auction proceeds in California and Québec.

We anticipate that Washington's auction proceeds would be lower in a linked market compared to a standalone Washington market from the time of linkage until the end of the third compliance period in 2034. Based on the economic modeling from 2022, prices in a standalone Washington market are projected to fall toward the price floor beginning in 2035 (see Figure 2).<sup>109</sup>

This drop-off in allowance prices is expected for two reasons:

- The program's emissions cap declines at a slower rate after the second compliance period.
- The combined impacts of the cap-and-invest program and other complementary policies will have cut emissions in the electricity sector (due to the Clean Energy Transformation Act) and transportation sector (due to the Clean Fuel Standard and Zero Emission Vehicles program), thereby reducing demand for allowances.

This projected price reduction would mean significantly less revenue for investment in climate and community-focused projects from 2035 onward. The Legislature would need to take this potential future revenue drop into account when appropriating funds in the early years of the program, by either funding only shorter-term projects or knowingly only funding the early phases of longer-term climate-related projects.

Moreover, Washington revenues in a linked market may not be any lower than originally projected when the CCA was passed in 2021. At that time it was assumed that allowance prices

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<sup>108</sup> RCW 70A.65.280(3)

<sup>109</sup> Vivid Economics. 2022. Summary of market modeling and analysis of the proposed Cap and Invest Program. Publication 22-02-038. Department of Ecology.  
<https://apps.ecology.wa.gov/publications/SummaryPages/2202038.html>.

would be equivalent to those in California – starting at \$20.60 in 2023 and increasing by 7% per year.<sup>110</sup> The actual allowance price in the first Washington auction was \$48.50, increasing to \$56.01 in the second quarterly auction, and \$63.03 in the third.<sup>111</sup> The revenues generated by the CCA to-date, therefore, have exceeded the Legislature’s expectation of funding for CERA, CIA, and AQHDIA.

As discussed in previous sections, linkage would result in a larger, more liquid market with more stable prices. While revenues in Washington might be lower initially than they would be in a standalone market, this would be balanced by a more consistent and predictable source of revenue for carbon reduction and environmental justice projects over the long term.

### 3.5.3 Household energy and fuel costs

Household energy and fuel costs make up a higher proportion of household spending for low-income families. Commenters representing energy companies shared that they expect linkage will reduce compliance and administrative costs, which would likely result in savings to their customers.

The law does not require or encourage covered entities to pass compliance costs on to their customers and Ecology does not have the authority to regulate private companies’ pricing or profits. This issue has become particularly relevant since the launch of the program in January 2023, when transportation fuel suppliers began increasing gasoline prices and attributing the increase, in part, to anticipation of future compliance costs under cap-and-invest.

Ecology did not quantify potential impacts to household costs from linkage at this time, partly because it is dependent on pricing choices made by private energy and fuel companies, which Ecology does not have insight into. However, we do know that fuel costs trickle down into the cost of other consumer goods, since businesses build in the cost of national and international shipping into their prices. So it is critical that the potential financial burden on consumers – and especially on lower income households – be a consideration when weighing the impacts of the lower allowance prices anticipated in a linked carbon market.

There are a number of energy companies that operate in both Washington and California. A linked program is expected to reduce their administrative costs by ensuring consistency in program requirements and prices across markets, allowing companies to develop one strategy for compliance and decarbonization in both jurisdictions. Linkage would also reduce concerns about inflated compliance costs due to double counting electricity sector emissions - having a

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<sup>110</sup> Washington State Legislature. 2021. Multiple Agency Fiscal Note Summary: Climate Commitment Act

<https://app.leg.wa.gov/committeeschedules/Home/Document/233176>.

<sup>111</sup> WA Department of Ecology. 2023. Auction #1 Summary Report - February 2023. Publication 23-02-022.

<https://apps.ecology.wa.gov/publications/summarypages/2302022.html>; WA Department of Ecology. 2023.

Auction #2 Summary Report – May 2023. Publication 23-02-057.

<https://apps.ecology.wa.gov/publications/summarypages/2302057.html>; Washington Department of Ecology.

2023. Auction #3 Summary Report – September 2023. Publication 23-02-060.

<https://apps.ecology.wa.gov/publications/SummaryPages/2302060.html>.

compliance obligation in two jurisdictions for the same metric ton of emissions. These efficiencies from a linked market would likely reduce energy and fuel costs for households in Washington.

### **3.5.4 Job creation/job loss**

The employment impact of increasing demand for low-carbon technologies and energy options spurred by the cap-and-invest program can be assumed to have a mixed impact on jobs. While some jobs in the fossil fuel and transportation industries might be lost, new job opportunities would be created as these sectors evolve. The Climate Commitment Account is specifically intended, in part, to fund training programs designed to support workers with this type of transition, and the employment impact of accelerated growth in the green economy is assumed to be a net positive.

We expect the impact of linkage on jobs in Washington will also be mixed. Lower auction proceeds would mean less revenue for climate projects in the near term (see Section 3.5.2). It is not yet known what percentage of these projects would create employment opportunities since revenue is only just beginning to be appropriated. However, the degree to which linkage might reduce funding for job-creating programs and projects when compared to funding from a standalone market can be considered to be a negative impact.

However, higher allowance prices in a standalone Washington market could lead to leakage – which is when companies move to states that don't regulate GHG emissions to avoid unsustainable regulatory costs. We anticipate that the potential impacts from leakage – to both increased global emissions and decreased jobs in Washington, would have a larger negative economic impact on highly impacted communities than the potential job impacts from lower auction proceeds.

### **3.5.5 Offset projects**

The CCA limits how offset projects can be used for compliance in Washington. In the first 4-year compliance period (2023-2026), the CCA allows for up to 8% of an entity's compliance obligation to be met with offset credits. That is reduced to 6% in later compliance periods. Both limits include special consideration for the use of offset credits from projects on federally-recognized Tribal lands, meaning entities must invest in Tribal projects in order to maximize the use of offset credits.

The CCA also describes how offset credits can be used in a linked program. The overall limit on the use of offset credits for compliance, and the separate limit for the use of offset credits from projects on Tribal lands would continue to apply in a linked program. In a standalone program, all of the offset credits used for compliance in Washington must be from projects that provide direct environmental benefits (DEBs) to Washington. In a linked program, the statutory requirement for DEBs for Washington is reduced. In the first compliance period, at least 50% of offset credits would need to come from projects that provide DEBs for Washington. The remaining would need to be from offset projects located in a linked jurisdiction. In later



compliance periods, at least 75% must provide DEBs to Washington with the remaining 25% from offset projects located in a linked jurisdiction.<sup>112</sup>

As of August 2023, no offset credits have yet been issued under the cap-and-invest program, so we do not currently have data on offset credit prices in Washington. However, we expect that the price of offset credits from projects that provide DEBs to Washington will be lower after linkage because covered entities will be able to meet a portion of their compliance obligation with non-DEBs offset credits.

If there is significant additional demand for offset credits from Washington covered entities, then linkage may cause the price of offset credits issued by California and Québec to increase. However, given the difference in the sizes of the markets, the impact in California and Québec is highly uncertain and the magnitude of any impact is expected to be relatively small.

If Washington links, we expect that the current requirement to reduce the number of allowances in the annual allowance budget by the number of offset credits used for compliance that year, often referred to as “offsets under the cap,” will remain in place, unless changed by the Legislature.<sup>113</sup>

### 3.5.6 Mitigating climate change

Highly impacted communities are more likely than the rest of the population to suffer from the impacts of climate change and air pollution, and to lack the healthcare and financial resources to address those impacts. Reducing GHG emissions and contributing to reducing impacts of climate change would provide meaningful benefits to highly impacted communities that have historically borne more than their share of environmental, economic, and health costs.

One concern with linkage is that reduced allowance prices may, in turn, reduce the incentive for companies to decarbonize (see analysis in Section 3.3). As discussed previously, one of the most substantial impacts of linkage would be to increase program stability, while also mitigating potential negative consumer impacts that would likely result from increasing allowance prices in a standalone Washington market. This could result in increased public support for the program, increasing social pressure on businesses to reinvest compliance costs savings into proactive decarbonization.

Allowing for lower-cost emissions reductions could in turn build support from covered entities and the public for efforts to increase program ambition. A successful program linkage could also encourage other jurisdictions to adopt GHG emissions trading policies and join the linked market, further contributing to the global emissions reductions needed to avert the worst impacts of climate change.

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<sup>112</sup> RCW 70A.65.170

<sup>113</sup> RCW 70A.65.170(5)(a)



We believe, therefore, that a larger market that is more stable, durable, and allows for more efficient carbon reduction would produce net benefits to highly impacted communities in Washington, California, and Québec.

### 3.5.7 Program authority and oversight

If Washington, California, and Québec all decide to link, each jurisdiction will retain its authority to evaluate, adjust, and enforce its emissions trading program.

In addition to internal program reviews, each jurisdiction has external advisory bodies tasked with assessing and making recommendations. In Washington, the Environmental Justice Council is tasked with providing recommendations to the Governor and state agencies on the development and implementation of the cap-and-invest program and the use of auction revenues.<sup>114</sup> The Environmental Justice Council consists of 16 members appointed by the Governor, with seats for community representatives, a youth community representative, environmental justice practitioners, Tribes, labor, and business.

California has two external advisory bodies. The Independent Emissions Market Advisory Committee analyzes the environmental and economic performance of California's cap-and-trade program and other relevant climate policies, then reports its findings to CARB and the Joint Legislative Committee on Climate Change.<sup>115</sup> The Independent Emissions Market Advisory Committee is made up of five experts on emissions trading market design appointed by the Governor and Legislature.

The California Global Warming Solutions Act of 2006 required CARB to convene an Environmental Justice Advisory Committee to advise CARB in developing the Climate Change Scoping Plan, and any other matters related to implementing AB 32.<sup>116</sup> The Environmental Justice Advisory Committee is comprised of representatives from communities in California with the most significant exposure to air pollution, including, communities with minority or low-income populations.<sup>117</sup>

In addition, the California Office of Environmental Health Hazard Assessment has periodically evaluated the benefits and impacts from emissions associated with climate change policies and programs in disadvantaged communities.

In Québec, the Advisory Committee on Climate Change advises the Minister of the Environment, the Fight Against Climate Change, Wildlife and Parks on climate change

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<sup>114</sup> Washington Environmental Justice Council. <https://waportal.org/partners/home/environmental-justice-council>. Accessed July 2023.

<sup>115</sup> CalEPA. 2023. Independent Emissions Market Advisory Committee. <https://calepa.ca.gov/independent-emissions-market-advisory-committee/#:~:text=The%20Independent%20Emissions%20Market%20Advisory,Legislative%20Committee%20on%20Climate%20Change>. Accessed July 2023.

<sup>116</sup> AB 32; Stats. 2006, chapter 488

<sup>117</sup> CARB. 2023. Environmental Justice Advisory Committee. <https://ww2.arb.ca.gov/environmental-justice-advisory-committee>. Accessed July 2023

directions, programs, policies, and strategies.<sup>118</sup> The Committee is made up of 9 to 13 appointed members, mostly from the scientific community.

Through regular program evaluations and adjustments, jurisdictions can assess whether a linked program is meeting GHG reduction and environmental justice goals and adjust allowance budgets and other program features, if needed.

### **3.5.8 Preliminary determination**

Ecology will continue to review this criterion. The current program reviews underway in California and Québec may change some of the existing policies that influence the potential impacts to communities in each jurisdiction. If we pursue linkage, we will discuss opportunities to ensure that the net impacts on highly impacted or analogous communities are, at a minimum, neutral and ideally positive.

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<sup>118</sup> Québec Government. 2023. Climate Change Advisory Committee.

<https://www.quebec.ca/gouvernement/ministeres-et-organismes/comite-consultatif-changements-climatiques>.

## 4 Next steps

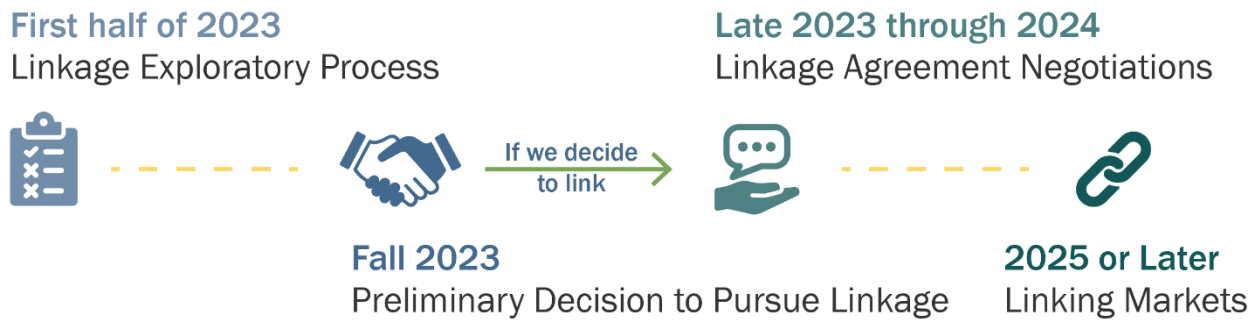


Figure 3: Process and timeline for linkage.

The process to link markets is a multi-step process that started in January 2023 and will take at least two years. Ecology would need to complete the following steps before Washington could link with California and Québec. California and Québec have additional requirements for linking that are not reflected here.

### Decide whether to pursue linking

The Director of Ecology will make a preliminary decision in Fall 2023 as to whether Washington will pursue linkage.

The other jurisdictions would also need to decide to work through their respective processes to pursue linkage.

### Align carbon market policies

If all three jurisdictions decide to pursue linkage, we would continue to engage in detailed discussions with California and Québec to compare our carbon market regulations and determine whether there are any impediments to linkage.

The CCA directed Ecology to develop Washington's cap-and-invest program to be "linkage-ready," so many of the key aspects of the cap-and-invest program are already aligned with California's and Québec's. For example, Washington's program uses the same auction platform. Washington's regulation also mirrors those programs' floor and ceiling price calculations, and Ecology adopted four offset protocols from the California program.

However, the three programs may still need to make some regulatory changes. Through the rulemaking process, Ecology will share proposed regulatory changes needed to link and the public will have opportunities to share comments on the proposal. In Washington, we anticipate the formal rulemaking process taking approximately one year including the

development of an Environmental Justice Assessment and a regulatory analysis that summarizes the cost-benefit analysis, an alternative analysis, and other analyses required by the Administrative Procedures Act.<sup>119</sup>

Many aspects of the cap-and-invest program come directly from the CCA, so changes to the statute through the legislative process may be necessary for linkage.<sup>120</sup>

If all three jurisdictions decide to link, California and Québec would need to add amendments to their respective regulations to implement any potential linkage agreement. All three programs would need to complete their processes to adopt policy changes before our carbon markets could actually be linked.

### **Complete an Environmental Justice Assessment**

Before Washington can enter into a linkage agreement, Ecology must conduct an Environmental Justice Assessment. As a part of the assessment, Ecology will identify overburdened communities and vulnerable populations that could be impacted by linkage and offer Tribal consultation. Ecology will summarize community engagement efforts along with identifying any anticipated benefits and harms from linking carbon markets.

### **Develop a proposed linkage agreement with California and Québec**

The three jurisdictions would discuss provisions to include in a proposed linkage agreement.<sup>121</sup> Ecology would conduct additional public outreach to obtain feedback on the terms of the linkage agreement, as required by the CCA.<sup>122</sup>

### **Establish findings on the linkage criteria**

This document outlines Ecology’s preliminary analysis of the linkage criteria. We will continue to assess the potential impacts of linkage on Washington’s communities, economy, and climate goals and weigh the impact of any changes the other jurisdictions make to their cap-and-trade

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<sup>119</sup> Requirements for Environmental Justice Assessments are outlined in the Healthy Environment for All (HEAL) Act (RCW 70A.02.060). For more information, see <https://ecology.wa.gov/about-us/who-we-are/environmental-justice/heal/ej-assessments>.

<sup>120</sup> The CCA directs Ecology to: “bring forth agency request legislation if the department finds that any provision of this chapter prevents linking Washington’s cap and invest program with that of any other jurisdiction” RCW 70A.65.060(6). The HEAL Act requires an Environmental Justice Assessment for significant agency actions, which includes “the submission of agency request legislation to the office of the governor or the office of financial management for approval” RCW 70A.02.010(12)(d).

<sup>121</sup> This includes determining whether the current linkage agreement between California and Québec meets the criteria from the CCA or if additional provisions would be needed. See linkage agreement at [https://ww2.arb.ca.gov/sites/default/files/cap-and-trade/linkage/2017\\_linkage\\_agreement\\_ca-qc-on.pdf](https://ww2.arb.ca.gov/sites/default/files/cap-and-trade/linkage/2017_linkage_agreement_ca-qc-on.pdf).

<sup>122</sup> The CCA requires Ecology to “conduct a public comment process to obtain input and a review of the linkage agreement by relevant stakeholders and other interested parties” RCW 70A.65.210(3).

programs. Ecology will issue our final findings on the linkage criteria prior to entering into a linkage agreement.

### **Sign a linkage agreement**

The CCA gives the Director of Ecology authorization to sign on to a linkage agreement only after Ecology has completed an Environmental Justice Assessment and asked for public input on a linkage agreement that meets the criteria in the CCA.<sup>123</sup>

### **Link markets**

At this time, we cannot predict if or when we would enter into a linkage agreement with California and Québec and start holding joint allowance auctions. The steps outlined above would take more than a year, so Washington's program could not be linked until 2025 or later.

## **4.1 How to stay engaged**

As described in the preceding section, there will be several more opportunities for public input before Ecology could join a linkage agreement. Ecology will send out announcements on the process and opportunities for input through the [Climate Commitment Act email alerts](#) and post updates on the Cap-and-Invest Linkage webpage: [cca.wa.gov/linkage](https://cca.wa.gov/linkage).<sup>124</sup>

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<sup>123</sup> The CCA states: “The department is authorized to enter into a linkage agreement with another jurisdiction after conducting an Environmental Justice Assessment and after formal notice and opportunity for a public hearing, and when consistent with the requirements of RCW 70A.65.210” RCW 70A.65.060(3).

<sup>124</sup> Sign up for email updates at

[https://public.govdelivery.com/accounts/WAECY/subscriber/new?topic\\_id=WAECY\\_15](https://public.govdelivery.com/accounts/WAECY/subscriber/new?topic_id=WAECY_15)

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## Appendix A: Technical Terms

**Allowance price containment reserve (APCR):** An account maintained by Ecology with allowances available for sale through separate reserve auctions at predefined prices to assist in containing compliance costs for covered and opt-in entities in the event of unanticipated high costs for compliance instruments (RCW 70A.65.010(2)).

**Allowance:** An authorization to emit up to one metric ton of carbon dioxide equivalent (RCW 701.65.010 (1)).

**Banked allowance:** This term is the same as unused allowance.

**Carbon dioxide equivalent:** A measure used to compare the emissions from various greenhouse gases based on their global warming potential (RCW 70A.65.010(13)).

**Compliance instrument:** An allowance or offset credit issued by the Department of Ecology or by an external greenhouse gas emissions trading program to which Washington has linked its greenhouse gas emissions cap-and-invest program. One compliance instrument is equal to one metric ton of carbon dioxide equivalent (RCW 701.65.010 (18)).

**Compliance obligation:** The requirement to submit to Ecology the number of compliance instruments equivalent to a covered or opt-in entity's covered emissions during the compliance period (RCW 70A.65.010 (19)).

**Compliance period:** The four-year period for which the compliance obligation is calculated for covered entities (RCW 70A.65.010 (20)).

**Covered emissions:** The emissions for which a covered entity has a compliance obligation under RCW 70A.65.080 (RCW 70A.65.010 (22)).

**Covered entity:** Designated by Ecology as specified in WAC 173-446-030 or 173-446-060. Each facility, supplier, or first jurisdictional deliverer serving as an electricity importer is a separate covered entity.

**Direct environmental benefits (DEBs):** In the context of offsets in Washington, this means environmental benefits accomplished through the reduction or avoidance of emissions of any air pollutant in the state or the reduction or avoidance of the release of any pollutant that could have an adverse impact on land or waters of the state (WAC 173-446-020).

**Emissions Containment Reserve (ECR):** The CCA includes an Emissions Containment Reserve to withhold allowances from the market to help ensure that the price of allowances remains sufficient to incentivize reductions in greenhouse gas emissions. The ECR is also used to

introduce a small number of allowances into the market in the case that new covered entities join the cap-and-invest program.

**Emissions Trading System (ETS):** An approach to reduce pollution by imposing a cap on the total emissions in one or more sectors of the economy. Covered entities are then allowed to trade allowance, resulting in a market price for the allowances. Sometimes referred to as “cap and trade” or “allowance trading.” Also referred to as an Emissions Trading Scheme.

**Leakage:** A reduction in emissions of greenhouse gases within the state that is offset by a directly attributable increase in greenhouse gas emissions outside the state and outside the geography of another jurisdiction with a linkage agreement with Washington (RCW 70A.65.010 (43)).

**Offset credit:** A tradable compliance instrument that represents an emissions reduction or emissions removal of one metric ton of carbon dioxide equivalent (RCW 70A.65.010 (51)).

**Price ceiling units (PCU):** The units issued at a fixed price by the Ecology for the purpose of limiting price increases and funding further investments in greenhouse gas reductions (RCW 70A.65.010 (57)). They are only available to covered entities and can only be use for compliance – they cannot be sold to other market participants to generate revenue (WAC 173-446-380).

**Secondary market:** The secondary market refers to the buying and selling of allowances between market participants.

**Settlement price:** The price announced by Ecology at the conclusion of each auction that all successful bidders pay for each allowance (WAC 173-446-020).



## Appendix B: Comparison of Overburdened Communities, Highly Impacted Communities, and Analogous Terms Across Jurisdictions

The criteria under RCW 70A.65.210(3)(b) and (c) asks Ecology to look at impacts on vulnerable populations, overburdened communities, and highly impacted communities.

(b) Ensure that the linking jurisdiction has provisions to ensure the distribution of benefits from the program to vulnerable populations and overburdened communities;

(c) Be determined by the department to not yield net adverse impacts to either jurisdictions' highly impacted communities or analogous communities in the aggregate, relative to the baseline level of emissions;

When looking at impacts in California and Québec, we used California’s and Québec’s definition and identification of analogous communities. For California, we used their definition and identification of priority populations, which includes disadvantaged communities, and low-income communities and households.<sup>125</sup> For Québec, we used their definition and identification of communities through the Material and Social Deprivation Index,<sup>126</sup> and northern communities.

The table below compares these terms across jurisdictions.

Jurisdiction	Term	Definition	Source
Washington	Overburdened Communities	"Overburdened community means a geographic area where vulnerable populations face combined, multiple environmental harms and health impacts or risks due to exposure to environmental pollutants or contaminants through multiple pathways, which may result in significant disparate adverse health outcomes or effects..."	Climate Commitment Act <a href="#">RCW 70A.65.010(54)</a>
Washington	Vulnerable Populations	"Vulnerable populations means population groups that are more likely to be at higher risk for poor health outcomes in response to	Climate Commitment Act

<sup>125</sup> California Climate Investments. Priority Populations. <https://www.caclimateinvestments.ca.gov/priority-populations>. Access July 2023.

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<sup>126</sup> Government of Québec. Material and Social Deprivation Index. <https://www.inspq.qc.ca/en/deprivation/material-and-social-deprivation-index>. Accessed July 2023.

		<p>environmental harms, due to: (i) Adverse socioeconomic factors, such as unemployment, high housing and transportation costs relative to income, limited access to nutritious food and adequate health care, linguistic isolation, and other factors that negatively affect health outcomes and increase vulnerability to the effects of environmental harms; and (ii) sensitivity factors, such as low birth weight and higher rates of hospitalization.</p> <p>(b) "Vulnerable populations" includes, but is not limited to:</p> <ul style="list-style-type: none"> <li>(i) Racial or ethnic minorities;</li> <li>(ii) Low-income populations;</li> <li>(iii) Populations disproportionately impacted by environmental harms; and</li> <li>(iv) Populations of workers experiencing environmental harms." </li></ul>	<p><a href="#">RCW 70A.65.010</a>(54)</p> <p>Healthy Environment for All Act</p> <p><a href="#">RCW 70A.02.010</a>(14)</p>
Washington	Highly Impacted Communities	Any census tract with a 9 or 10 overall rank on the Environmental Health Disparities map, or any census tract with tribal lands.	<p><a href="#">Clean Energy Transformation Act</a> RCW 19.405.020(23)</p> <p><a href="#">Washington Environmental Health Disparities Map</a></p>
Washington	Overburdened Communities Highly Impacted by Air Pollution	<p>Combined community indicators and air pollution indicators to identify 16 areas.</p> <p>Community indicators identified which communities are overburdened or vulnerable regardless of the air pollution impact. Indicators were any census tract with a 9 or 10 (≥80th percentile) overall rank on the Environmental Health Disparities map or census tract with ≥90th percentile on the EPA EJScreen Demographic Index.</p> <p>The air pollution indicator used a combination of monitoring, modeling, and emissions data to identify areas with an elevated level of one or more of the criteria pollutants or the highest cumulative level of criteria pollutants.</p>	<p><a href="#">Identifying Overburdened Communities Highly Impacted by Air Pollution: Technical Support Document</a></p> <p><a href="#">Washington Environmental Health Disparities Map</a></p> <p><a href="#">EPA EJScreen</a></p>

		<p>The six criteria air pollutants are carbon monoxide (CO), lead (Pb), ozone (O3), nitrogen dioxide (NO2), particulate matter (PM2.5) and (PM10), and sulfur dioxide (SO2).</p> <p>Tribal lands in Washington are included and will be added based on Tribal approval.</p> <p>Community boundaries are based on where Ecology expects to see elevated levels of criteria air pollution overlap with vulnerable populations in overburdened communities. The areas included some less vulnerable populations that did not meet the community indicator thresholds to create a continuous community that is similarly impacted by air pollution.</p>	
California	Disadvantaged Communities (DAC)	Census tracts in highest 25% of CalEnviroScreen score distribution; Census tracts in highest 5% of cumulative pollution burden score distribution; Census tracts identified in 2017 DAC designation; Lands under the control of federally recognized Tribes.	<a href="#">California Senate Bill 535</a> <a href="#">Disadvantaged Communities Map</a> <a href="#">CalEnviroScreen</a>
California	Low-income communities and households	Those with incomes either at or below 80% of the statewide median or below a threshold designated as low-income by the Department of Housing and Community Development.	<a href="#">AB 1550</a>
Québec	Material and Social Deprivation Index (MSDI)	<p>The MSDI consists of specific socioeconomic characteristics of populations living in a small area. It is composed of two dimensions: deprivation of goods and conveniences that are a part of modern life (such as housing, possession of a car, access to high-speed internet, or a neighborhood with recreational areas) and social deprivation referring to a fragile social network, starting with the family and encompassing the community. The ranking is a 1-5 with 1 as the least deprived to 5 being the most deprived.</p> <p>The index is built on six economic indicators:</p>	<a href="#">MSDI Webpage</a> <a href="#">Material and social deprivation index: a summary</a> <a href="#">MSDI Map of Québec</a>

		<ul style="list-style-type: none"> <li>• The proportion of the population aged 15 years and over without a high school diploma or equivalent;</li> <li>• The employment to population ratio for the population 15 years and over;</li> <li>• The average income of the population aged 15 years and over;</li> <li>• The proportion of the population aged 15 and over living alone;</li> <li>• The proportion of the population aged 15 and over who are separated, divorced or widowed;</li> <li>• The proportion of single-parent families</li> </ul>	
Québec	Northern Communities	<p>The North Québec territory extends north of the 49<sup>th</sup> parallel and north of the St. Lawrence River and the Gulf of St. Lawrence. The territory makes up 1.5% of Québec’s population (130,000 inhabitants). The Aboriginal peoples account for nearly one-third of the population.</p> <p>Income: From 2016 to 2020, disposable income per capita in Northern Québec was below the Québec average (In 2020, it was \$30,914 vs \$33,093 for all of Québec).</p>	<p><a href="#">Northern Québec Territory</a></p> <p><a href="#">Indigenous communities in Québec</a></p>

## Appendix C: Summary of Public Comments Received in Spring 2023



# Public Engagement Summary Report

Exploring Cap-and-Invest Linkage

Prepared by Cascadia Consulting Group, Inc. for the  
Washington State Department of Ecology

June 30, 2023



# Acknowledgements

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# 1 Introduction

In 2021, the Climate Commitment Act (CCA) established Washington's cap-and-invest program - a comprehensive, market-based program to reduce carbon pollution and achieve the greenhouse gas emissions limits set in state law. The Washington cap-and-invest program is the second of its kind in the United States. The first economy-wide greenhouse gas (GHG) emissions trading program in the U.S. began in California in 2013. A similar program was started in Québec, Canada at the same time. California and Québec linked their two programs in 2014, creating one shared carbon market.

The CCA directs the Washington State Department of Ecology (Ecology) to oversee the cap-and-invest program and “consider opportunities to implement the program in a manner that allows linking the state's program with those of other jurisdictions” (RCW 70A.65.060(3)). In January 2023, Ecology started to explore linking Washington's cap-and-invest program with the joint California-Québec carbon market, hereby referred to as linkage, a linked cap-and-invest program, or a linked market. A linked cap-and-invest program would mean that Washington would have joint allowance auctions with California and Québec, and all three jurisdictions would share a common allowance price. Market participants could also trade allowances across jurisdictions — meaning allowances issued by the other two programs could be used by Washington businesses to cover their emissions, and vice versa.

The CCA requires Ecology to review specific criteria to assess the potential impacts of linking on Washington's communities, economy, and climate goals (RCW 70A.65.210). Before signing a linkage agreement, Ecology must determine that:<sup>1</sup>

- Criteria 1: The linking jurisdictions have provisions to ensure their programs provide benefits to vulnerable populations and overburdened communities.
- Criteria 2: Linking would not have an overall negative effect on highly impacted communities in any jurisdiction.
- Criteria 3: Joining markets would not negatively impact Washington's ability to meet the emissions-reduction commitments set in state law.
- Criteria 4: Linking would reduce the cost of compliance for covered businesses.

Ecology began exploring linkage in January 2023 by reaching out to tribal governments, the Environmental Justice Council, and the public to gather input. Ecology sought input at the beginning of the exploratory process so that the input received could inform Ecology's upcoming analysis of the linkage criteria. Ecology provided multiple public engagement opportunities, including hosting three online listening sessions, offering

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<sup>1</sup> Ecology focused on getting input on these four criteria during the public engagement period and numbered them for discussion purposes. The CCA includes additional criteria related to the purposes of linking in RCW 70A.65.210(1).

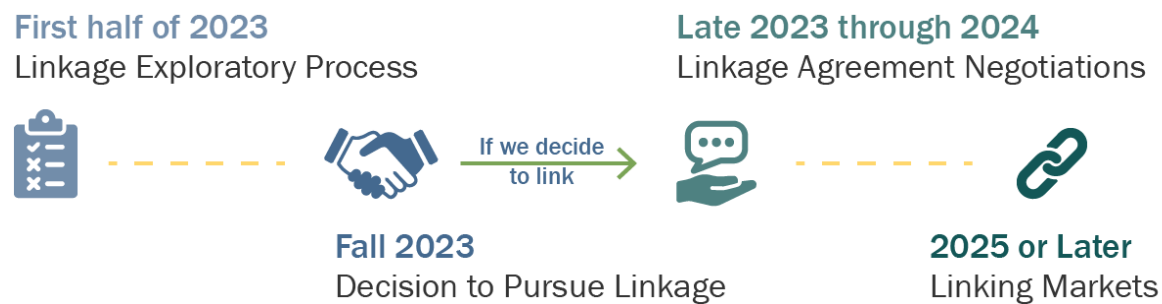
individual and small group meetings, administering an online survey, and accepting comments by email, mail, and voicemail. Through these engagement opportunities, Ecology asked stakeholders and the public about whether linkage would be beneficial to Washington and what Ecology should consider when evaluating the linkage criteria. Ecology contracted with Cascadia Consulting Group (Cascadia) early in 2023 to support public engagement and develop a high-level summary of public comments provided during the spring 2023 engagement period.

This summary report highlights common themes from the comments received during the public engagement process. It is not a comprehensive or detailed summary of that public input, due to the breadth and depth of topics covered. Cascadia recommends reading all the public comments for a more complete understanding of the range and weight of public sentiments.<sup>2</sup> In addition to reviewing this summary report, Ecology staff are reviewing all the public comments in full. This report does not include Ecology’s direct engagement with tribal governments and the Environmental Justice Council.

Ecology will use this input to inform its analysis of the linkage criteria laid out in the CCA and its preliminary decision whether to pursue linkage with California and Québec.<sup>3</sup> Ecology will release a report covering initial analysis of the linkage criteria in summer or fall 2023. Ecology plans to make a preliminary decision whether to pursue linking Washington’s carbon market with the California-Québec carbon market in fall 2023, likely October.

California and Québec will need to undergo their own processes and decide whether to link. If all three jurisdictions decide to pursue linking, they would begin negotiating a linkage agreement. Each jurisdiction may also need to make changes to their program regulations before linking. Carbon market linkage could occur sometime after 2025 (Figure 1).

**Figure 1. Timeline for linkage.**



<sup>2</sup> Available upon request, [CCALinkage@ecy.wa.gov](mailto:CCALinkage@ecy.wa.gov).

<sup>3</sup> Criteria are outlined in [RCW 70A.65.060\(3\)](#) and [RCW 70A.65.210\(3\)](#).

## 2 Public Engagement Methods

### 2.1 Public Engagement Opportunities

Between January 31 and May 15, 2023, Ecology provided multiple public engagement opportunities to solicit input on linking Washington’s cap-and-invest program with the joint California-Québec carbon market. Ecology hired Cascadia to support public engagement efforts and develop this summary of the public engagement responses across four engagement opportunities. These engagement opportunities included:

- **Three online listening sessions** to provide information on the cap-and-invest program and linkage and to gather input.
- **An online survey**, which was open for response from March 14 to May 15, 2023.
- **Individual and small group meetings** with stakeholders.
- **Open invitation for comments by email, mail, and voicemail.**

This public engagement process was the first of several opportunities that Ecology expects to offer for soliciting public input on linkage. Ecology expects additional opportunities for public input in 2024 or later.<sup>4</sup>

### Listening Sessions

Ecology hosted three online listening sessions. The purpose of the listening sessions was to provide information on the cap-and-invest program, linkage, and to gather input. Listening sessions were scheduled at varying times to support access for all interested individuals:

- March 16 from 2:00 pm to 5:00 pm.
- March 29 from 6:00 pm to 9:00 pm.
- April 18 from 10:00 am to 1:00 pm.

During the March 16 and April 18 listening sessions, attendees each self-selected into a breakout room to share their feedback on linkage and discuss linkage criteria. All breakout rooms discussed the two overarching questions. The March 29 listening session was much smaller, with 12 participants, so the group stayed together for the

<sup>4</sup> *Cap-and-Invest Linkage webpage (2023). Washington State Department of Ecology.*  
<https://ecology.wa.gov/Air-Climate/Climate-Commitment-Act/Cap-and-invest/linkage>

discussion instead of going into breakout rooms. Breakout room facilitators used an online whiteboard platform called Mural to take notes during the discussions.

- Breakout room 1 covered impacts to communities (criteria #1 and #2).
- Breakout room 2 covered impacts to meeting GHG commitments (criteria #3),
- Breakout room 3 covered impacts on cost of compliance (criteria #4).
- Breakout room 4 covered all criteria.

## Online Survey

The survey included a total of 19 questions and was accessible from March 14, 2023 to May 15, 2023. The survey was advertised on the Ecology website and shared by email and during the listening sessions. The survey asked respondents for their feedback on linking carbon markets on behalf of themselves as individuals or on behalf of their organizations. It began with questions about participant information and overarching comments, then included questions specific to four of the linkage criteria. Appendix A: Survey Questions includes the complete set of survey questions.

## Individual and Small Group Meetings

Ecology offered individual and small group meetings as another pathway for public engagement. A total of four small group or individual meetings occurred and three of those small group or individual meeting participants also submitted comments via the survey or email.

## Comment Letters and Emails

Ecology accepted comments via email, mail, and voicemail from January 31 through May 15, 2023. Ecology received all comments and comment letters by email and did not receive any comments via mail or voicemail.

## 2.2 Comment Analysis Methods

Due to the high volume of comment letters, the Cascadia team used the themes from the comment letters as the framework for the comment analysis. To process the comment letters, the Cascadia team reviewed and interpreted the comments, bucketed them topically by linkage criteria, and identified common themes that came up across the comments related to each criterion. The Cascadia team tagged comment letters by stakeholder type. Themes were considered recurring and were brought forward into the

report if they were mentioned by five or more comment letters. The comments provided by campaign email were analyzed once as part of the comment letter analysis.<sup>5</sup>

For the small group and individual meeting notes, only one of the small group meetings did not submit a separate public comment letter. To maintain consistency, the Cascadia team captured and analyzed the notes from that small group meeting with the comment letters.

To process the comments from the listening sessions and surveys, the Cascadia team reviewed comments for alignment with the themes from the comment letters. Cascadia analyzed the written Mural board comments as the primary listening session comments. These were categorized along with the criteria the comment was associated with on the Mural board. The written Mural comments may not have fully reflected the nuanced discussion within the breakout rooms and do not include questions or comments shared during the presentation and Q&A portion of the meeting.

To process survey entries, the Cascadia team took the following steps:

- Identified and removed incomplete surveys (any survey where the respondent did not select “submit”).
- Reviewed completed surveys for common themes. Results were analyzed by survey questions that were associated with four linkage criteria.

Cascadia categorized the comments as overarching comments or related to one of the four linkage criteria that were the focus of public engagement. Two of the linkage criteria address impacts on overburdened communities.<sup>6</sup> The Cascadia team chose to combine the comments related to impacts on overburdened communities (criteria 1 and 2) because there was significant thematic overlap.

During the review of public comments, the Cascadia team encountered difficulties due to the comments’ varying level of detail and technical complexity. Some of the public comments spoke specifically to the linkage criteria, while other comments were general and were not associated with a specific criterion. Some comments did not directly relate to linkage and instead shared thoughts or concerns with other aspects of the CCA. Some organizations and individuals provided comments via multiple avenues. Because

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<sup>5</sup> Campaign emails are typically pre-populated emails that organizations can encourage their constituents or members to send. The content of these emails is the same, except for the sender’s name and contact information.

<sup>6</sup> The CCA uses three different terms to talk about potential impacts of linkage on communities: vulnerable populations, overburdened communities, and highly impacted communities (RCW 70A.65.010). These terms generally refer to communities that already have a higher exposure to environmental pollutants. Commenters also used a variety of terms to talk about impacts to communities. Cascadia Consulting Group has chosen to use the term “overburdened communities” throughout this document to encompass the terms used in the CCA and the comments.

of this, the Cascadia team opted to pull forward recurring themes and comments into this report without quantifying the number of comments received on a given topic.

## 3 Engagement Results

Ecology received a robust set of public comments during the public comment period. In total, Ecology received:

- 45 unique public comment letters and emails.
- 263 responses from a campaign email.
- Over 180 total participants in the three virtual listening sessions.
- Four individual and small group meetings with 19 total attendees (virtual and hybrid).
- 11 completed surveys.

Commenters shared detailed and technical thoughts and questions on a wide range of topics through comment letters, surveys, meetings, and listening sessions. Across all the comment types, responses varied in their degree of support or opposition to linkage, and many responses included neutral statements on linkage. Individual comment letters often contained statements in support of linkage, concerns about linkage, and considerations for Ecology. Commenters offered many recommendations for Ecology to consider in evaluating the linkage criteria and deciding whether to pursue linkage.

Commenters represented a variety of stakeholders, including business and industry, energy and utility providers, environmental justice organizations, environmental organizations, government entities, academic and research institutions, trade organizations, and individuals.

Results are summarized by each of the four linkage criteria. Each section contains the following:

1. A brief narrative of some of the common themes that related to the criteria.
2. Common and unique considerations for Ecology during criteria analysis. The lists of considerations are not exhaustive or demonstrative of the breadth of feedback provided.

This report does not reflect Ecology's agreement or disagreement with any of the public comments or statements made in this summary. Additionally, the public comments and the statements made in this summary have not been verified for accuracy by Ecology, but rather summarize input as it was shared through the public engagement process.



## 3.1 Criteria 1 and 2

**Criteria 1:** *Ensure that California and Québec have provisions to ensure their programs provide benefits to vulnerable populations and overburdened communities.*

**Criteria 2:** *Ensure that linking would not have an overall negative effect on highly impacted communities in Washington, California, or Québec.*

Feedback about whether linkage can meet Criteria 1 and 2 is mixed and varied by stakeholder type. Energy producers and utilities generally believe that linking will not negatively affect overburdened communities. Due to lower costs of compliance and reduced administrative burden, some energy producers highlight the potential cost savings to end consumers as beneficial to overburdened communities. Some commenters noted that California and Québec have programs that currently provide benefits to overburdened communities. Commenters noted that communities, including overburdened ones, may benefit from consistent program oversight that may ensure reduced emissions and improved air quality if linkage is pursued.

Conversely, some commenters in the academic and non-profit sectors shared concerns about the impacts of linkage on overburdened communities. Commenters across sectors noted concerns that linkage could drive down auction prices, which many see as creating less revenue for the programs created by the CCA, to the detriment of overburdened communities. Commenters noted that linkage could decrease the amount of revenue generated from allowance auctions due to the lower price of allowances and affect Washington's ability to provide funding to programs for overburdened communities. Commenters stated that California and Québec do not have strong enough rules for protecting and supporting overburdened communities. Lastly, commenters identified concerns that linking carbon markets could dilute the strength of the CCA (such as lessening ability to reduce emissions) and reduce benefits, including funding access and air quality improvements, to overburdened communities.

## Considerations

In further analysis of Criteria 1 and 2, commenters asked Ecology to:

- Conduct more research on how linking may affect overburdened communities. Research impacts, including air quality, of the California and Québec cap-and-trade programs on overburdened communities.
- Evaluate past funding spent in California and Québec on overburdened communities.
- Examine funding alternatives if allowance prices drop and funding cannot be provided to CCA programs.

- Consider conducting a cost/benefit analysis of linking and determine if there would be a significant loss of revenue to reinvest in Washington by linking.
- Offer more engagement opportunities to better understand how overburdened communities feel about linkage, as well as how other stakeholders and sectors (including the electricity sector) feel about the current state of cap-and-invest markets.
- Understand and evaluate the range of impact to communities (as directed through HEAL Act).
- Understand how California, Québec and Washington define overburdened communities.
- Compare air quality and emissions reduction metrics between California, Québec, and Washington. Will metrics need to be localized to or adjusted across jurisdictions?
- Outline how impacts on overburdened communities will be measured and tracked over time. Understand how air quality has changed in communities, considering both regional air quality and local pollutants.

### 3.2 Criteria 3

**Criteria 3:** *Ensure that linking markets would not impact Washington's ability to meet the emissions-reduction commitments set in state law.*

Linking markets is seen to have a number of possible positive and negative impacts on Washington's ability to meet its emissions-reduction commitments. Feedback demonstrated concern about Washington's ability to meet its emissions-reduction commitments through linkage and about the lack of recent data on GHG emissions, due to a more complex market to navigate. Commenters expressed concern for potential loss of control on allowance pricing in a linked market. Commenters also noted concerns about setting allowance costs appropriately to reduce emissions; for example, linkage may deter emitters from reducing GHG emissions if the resulting costs of compliance and allowances are cheaper than decarbonizing.

Support for linkage pointed to the benefits of the wider public stage that linkage would give Washington and the ability to continue to be a leader across the country in GHG emissions-reductions and decarbonization. Commenters also noted that linking with a larger market would bring more attention to Washington's GHG emissions-reduction goals and cement Washington as a leader in emissions-reduction.



## Considerations

Commenters shared many questions, considerations, and recommendations for Ecology to consider in further analysis of Criteria 3, including requests for Ecology to:

- Evaluate and consider GHG emissions-reductions as a result of the investments made from CCA.
- Consider how emissions-reduction commitments and timelines vary or align across jurisdictions and how adjustments will be made over time.
- Consider the impacts of linkage on the potential for Washington to independently develop or direct revisions to existing offsets protocols.
- Consider raising the percentage limitation on offset usage to be consistent with California.
- Evaluate whether the aggregate number of unused allowances in a linked program would reduce the stringency of Washington's program and ability to achieve its emissions-reduction commitments.

### 3.3 Criteria 4

**Criteria 4:** *Ensure that linking markets would reduce the cost of compliance for covered businesses.*

Linking markets with California and Québec is largely seen as a positive for reducing costs and providing uniformity in the allowance market. Commenters across sectors noted that linkage would likely result in a more stable market and reduced cost of compliance for covered businesses. Many commenters representing businesses and industry are seeking stability in the market and hope that can be achieved through expedient linkage. A more stable market is seen as benefiting covered businesses and the end consumer. Commenters noted that a larger, simplified market through linkage would provide market and allowance price uniformity and stability, which would reduce the administrative burden and cost on businesses. Commenters shared that linkage may further reduce the need for duplicative market research and due diligence efforts if combined into a single market. Commenters noted that linkage may reduce the cost of achieving Washington's climate goals and broadens Washington's influence in advancing climate policy beyond its borders.

While the feedback on Criteria 4 was largely noting that linkage would reduce the cost of compliance for covered businesses, some commenters noted concern that linking would not reduce GHG emissions or reduce costs to consumers and businesses.

Commenters noted concerns that reduced allowance costs could reduce the amount of funding available for investment in Washington.

## Considerations

Commenters shared considerations for Ecology in further analysis of Criteria 4. Commenters are suggesting that Ecology:

- Evaluate and consider the cost of compliance and cost effectiveness in a linked market.
- Continue to evaluate the benefits of linkage, including to covered business, overburdened communities, and Washington State.
- Understand the potential administrative impacts of linking on covered entities.

## 3.4 General Feedback

Many of the public comments provided to Ecology addressed more than one criterion or extended beyond the criteria to evaluate linkage outlined in the CCA. A few of those comment themes are highlighted here:

- Some commenters were concerned about the California Air Resource Board's (CARB) authority to continue the California cap-and-trade program after 2030. They were concerned that uncertainty in the California market past 2030 would lead to dumping of allowances into the smaller Washington and Québec markets. Other commenters framed the uncertainty about CARB authority after 2030 as an opportunity to encourage urgency in linking.
- Commenters noted that linking may prevent double counting of emissions, for those emitters that must comply with two separate markets for the same GHG emissions.
- Some commenters felt that instead of full linkage, Ecology should explore partial linkage to restrict the number of allowances from the joint California-Québec carbon market that businesses could use for compliance in Washington.
- Some commenters requested that Ecology delay linking to allow Washington's market to mature.
- Across all criteria, commenters noted concerns on the impact linkage will have on overburdened communities, and the need to preserve the original intent of the CCA to reduce emissions.

## Considerations

Beyond the specific considerations commenters offered for each of the criteria, there were recommendations that Ecology should:

- Consider confirming that the California cap-and-trade program will have necessary authority past 2030 before linking.
- Engage further on linkage with community members, businesses, and covered entities.
- Understand the impact of excess allowances and to ensure a consistent price for carbon.
- Confirm what will serve as authority and/or oversight for addressing conflict, questions, and issues as they arise. How will adjustments to the program be made?
- Understand how a linked market would operate (including oversight for emissions-reductions) and how costs will be held consistent across jurisdictions.

## 4 Next Steps

Ecology will use the results from this public engagement process, in addition to the feedback garnered through the tribal engagement process and the feedback from the Environmental Justice Council, to inform the analysis of the linkage criteria outlined in the CCA and the preliminary decision on whether to pursue linkage. In summer or fall 2023, Ecology will issue a report covering initial analysis of the linkage criteria. Ecology expects to announce a preliminary decision on linkage in fall 2023, likely in October.

If Washington, California, and Québec all decide to pursue linkage, there will be several further opportunities for public input before finalizing a linkage agreement. We expect additional opportunities for public input in 2024 or later.<sup>7</sup>

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<sup>7</sup> *Cap-and-Invest Linkage webpage (2023). Washington State Department of Ecology.*  
<https://ecology.wa.gov/Air-Climate/Climate-Commitment-Act/Cap-and-invest/linkage>

# 5 Appendix A: Survey Questions



## Cap-and-Invest Linkage Online Survey

We want to hear your input on whether you think connecting to other carbon markets would be beneficial to Washington. We will use your input to inform our analysis of the linkage criteria laid out in the [Climate Commitment Act \(CCA\)](#) and the decision on whether to pursue linkage.

You can share your thoughts through this survey, by joining an online listening session, or emailing or calling us. This is a complex topic, so we encourage you to take your time reviewing these questions and the information on the [cap-and-invest linkage webpage](#) before completing the survey. The linkage webpage explains potential impacts of linking.

When taking the survey, you have the option to skip questions, but be sure to click “submit comments” at the end of the survey to share your feedback with Ecology. You can also come back and finish the survey later (to finish later, you must use the same device and web browser you used to start the survey on because a cookie that remembers your previous survey responses is stored in your browser).

Take the Survey at <https://www.surveymonkey.com/r/CCAlinkagesurvey>.

Please complete this survey by 11:59 pm Pacific on May 15, 2023.

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### Background

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Established by the Climate Commitment Act (CCA) in 2021, Washington’s cap-and-invest program is a comprehensive, market-based program to reduce carbon pollution and achieve the greenhouse gas limits set in state law.

Washington’s cap-and-invest program is only the second of its kind in the United States. The first U.S. program began in California in 2013, at the same time a similar program

was started in Québec, Canada. Given their similar structure and goals, it was determined that "linking" the two carbon markets could yield important benefits by reducing carbon emissions and increasing program stability. California and Québec connected their programs in 2014, creating one shared carbon market.

Now, Washington is starting the process of determining whether linking our carbon market with these other jurisdictions would be beneficial. A linked cap-and-invest program would mean that Washington would have joint allowance<sup>8</sup> auctions with California and Québec, and all three jurisdictions would share a common allowance price. Market participants could also trade allowances across jurisdictions — meaning allowances issued by the other two programs could be used by Washington businesses, and vice versa.

The Climate Commitment Act directs us to actively consider linking Washington's cap-and-invest program with other carbon markets and requires that our state's program be built in such a way that linking would be as seamless as possible. However, the law also requires us to review specific criteria to ensure linkage would benefit our state's communities, economy, and climate goals.

Ecology will decide whether to pursue linking in summer 2023 or later. California and Québec would need to undergo their own processes to decide whether to link, and then all three programs might need to revise some regulations, so linkage would not be implemented until at least 2025.

Resources to learn more about the cap-and-invest program and linkage before completing the survey:

- [Cap-and-invest linkage webpage](#)
- [Overview of cap-and-invest program](#)

For additional background:

- Climate Commitment Act: [Chapter 70A.65 RCW](#). Criteria for linking are in [RCW 70A.65.060\(3\)](#) and [RCW 70A.65.210\(3\)](#).
- Current [linkage agreement between California and Québec](#)
- Climate Commitment Act Program Rule: [Chapter 173-446 WAC](#)
- [Summary](#) of market modeling and analysis of the proposed Cap-and-Invest Program Rule

**Next steps:** We will use your input to inform our analysis of the [linkage criteria](#) laid out in the CCA and the decision on whether to pursue linkage, expected in summer 2023. If we decide to pursue linking, there will be an opportunity to provide input on the draft linkage agreement before Ecology approves it (sometime in 2024 or later).

Ecology plans to share a summary of comments we receive (without personal information) through a report on our website. Ecology will not respond individually to comments.

You can sign up for [Climate Commitment Act email alerts](#) to stay up to date on our work.

Please complete this survey by 11:59 pm pacific on May 15, 2023.

*All information, including personal or contact, submitted through this survey are public records and subject to disclosure as per the Washington State Public Records Act, RCW 42.56.*

To request an ADA accommodation, contact Ecology by phone at 360-407-6800 or email at [melanie.forster@ecy.wa.gov](mailto:melanie.forster@ecy.wa.gov), or visit <https://ecology.wa.gov/accessibility>. For Relay Service or TTY call 711 or 877-833-6341.

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### Survey Questions

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#### Participant information

1. Name (required)
2. Email address (required)
3. Organization or entity you represent (optional)
4. Type of organization/entity (optional)
  - Tribal government
  - Environmental organization
  - Environmental justice organization
  - Business / industry
  - Community group
  - State or local government
  - Individual
  - Other (please specify)

#### Overall comments on linking

5. What thoughts or comments do you have about how linking may impact you or your community?
6. What input would you like to share to inform whether Ecology pursues linking carbon markets with California and Québec?

#### Linkage criteria

Ecology is required to evaluate specific aspects of linkage (RCW 70A.65.060(3) and RCW 70A.65.210(3)) before linking carbon markets with other jurisdictions. The next set of questions asks for your input on how Ecology should evaluate four criteria, and your answers will inform Ecology's analysis.



## Linkage Criteria #1

**Ensure that California and Québec have provisions to ensure their programs provide benefits to vulnerable populations and overburdened communities.**

Section of the Climate Commitment Act: 70A.65.210(3)(b) How is Ecology currently planning to evaluate this criteria? Ecology's initial proposal for evaluating this criteria includes:

- Looking at what policies California and Québec have to ensure that their cap-and-trade programs provide benefits to vulnerable populations and overburdened communities.
  - Reviewing the types of projects and programs that have been funded with cap-and-trade revenue in California and Québec.
7. What do you think Ecology should consider when evaluating this criteria? In addition to looking at how California and Québec spend cap-and-trade revenues, with other types of program benefits should Ecology include in our analysis?
  8. What are your thoughts or comments on how linking may affect highly impacted communities, which includes communities on Tribal lands? What potential negative effects should Ecology include in our analysis?

## Linkage Criteria #2

**Ensure that linking would not have an overall negative effect on highly impacted communities in Washington, California, or Québec.**

Section of the Climate Commitment Act: 70A.65.210(3)(c) How is Ecology currently planning to evaluate this criteria? Ecology's initial proposal for evaluating this criteria includes:

- Reviewing existing research on the impacts of cap-and-trade programs on highly impacted communities in California and Québec.
  - Reviewing the [CCA](#), the [HEAL Act](#), and other environmental regulations for policies that would assess and mitigate negative effects on [highly impacted communities](#) in Washington.
9. What are your thoughts or comments on how linking may affect highly impacted communities, which includes communities on Tribal lands?
  10. What are your suggestions for how to reduce potential negative effects of linking on highly impacted communities?
  11. What do you think Ecology should consider when evaluating this criteria?
  12. Do you have recommended informational resources (reports, websites, research studies, etc.) that could inform our analysis of this criteria? Please provide links to the resources you mentioned or upload them into this folder.

### Linkage Criteria #3

**Ensure that linking markets would not impact Washington’s ability to achieve its greenhouse gas emissions reduction limits, including an analysis of pre-2020 unused allowances in a linked program.**

Section of the Climate Commitment Act: 70A.65.210(3) and 70A.65.210(3)(d)

An "allowance" means a business is allowed to emit up to one metric ton of carbon dioxide equivalent. Allowances can be purchased from Ecology, traded, or saved for future use.

“Unused allowances” are allowances that businesses in the joint California-Québec market currently have because they have not used them for compliance. They may be saving them to use for future compliance obligations or to sell on the secondary market to generate revenue. If Washington links markets with California and Québec, businesses in those jurisdictions could start selling their unused allowances to Washington businesses or using them for compliance in Washington if they also have facilities here.

#### **How is Ecology currently planning to evaluate this criteria?**

Ecology’s initial proposal for evaluating this criteria includes:

- Reviewing the policies in the CCA and related regulations that allow Ecology to adjust the number of allowances offered each year based on whether the cap-and-invest program is meeting its goals.
- Reviewing existing analysis on the allowance supply in the California-Québec market.

13. What do you think Ecology should consider when evaluating this criteria?

14. Do you have recommended informational resources (reports, websites, research studies, etc.) that could inform our analysis of this criteria? Please provide links to the resources you mentioned or upload them into this folder.

### Linkage Criteria #4

**Ensure that linking markets would reduce the cost of compliance for covered businesses.**

Section of the Climate Commitment Act: 70A.65.060(3)

To comply with the program, participating emitters must periodically submit "compliance instruments" equal to their covered emissions. There are two types of compliance instruments, each equal to one metric ton of carbon dioxide:



- Emissions allowances that Ecology issues.
- Offset credits gained from investing in projects that help reduce carbon in the atmosphere.

### **How is Ecology currently planning to evaluate this criteria?**

In 2022, Ecology commissioned an independent economic analysis of the cap-and-invest program that showed estimated allowance prices under different scenarios. In that report, the “linked” scenario was estimated to have lower allowance prices because prices were expected to align with the allowance prices in the joint California – Québec market. We intend to use this report in our analysis of this criteria.

15. What do you think Ecology should consider when evaluating this criteria?
16. Do you have recommended informational resources (reports, websites, research studies, etc.) that could inform our analysis of this criteria? Please provide links to the resources you mentioned or upload them into this folder.

### **Any other comments?**

17. Do you have recommendations of organizations or individuals Ecology should talk to about cap-and-invest linkage?
18. What information and resources would you like Ecology to provide about linkage?
19. Do you have other input you would like to share?

### **Thank you for sharing your comments.**

We know that engaging in this work takes time, and we are grateful for your help. This survey is part of a broader effort to seek public input on the potential linkage of Washington’s carbon market. You can learn more about other opportunities for input on our website.

We plan to issue a report detailing our analysis of the linking criteria, as well as a summary of the feedback we received during our exploratory process. After gathering and considering input, Ecology will decide whether to pursue linkage. We expect to announce a decision for Washington in late summer 2023.

If you have questions, contact Stephanie Potts at [CCAlinkage@ecy.wa.gov](mailto:CCAlinkage@ecy.wa.gov) or 425-466-5358. You can sign up for [Climate Commitment Act email alerts](#) to stay up to date on our work.