Public Service Commission of Wisconsin

Rebecca Cameron Valcq, Chairperson
Tyler Huebner, Commissioner
Summer Strand, Commissioner

4822 Madison Yards Way
P.O. Box 7854
Madison, WI 53707-7854

August 21, 2023

To the Parties:

Re: Quadrennial Planning Process IV 5-FE-104

Comments Due:	Address Comments To:
Monday, September 11, 2023 - 1:30 P.M.	**Mitchell Horrie** Public Service Commission P.O. Box 7854 Madison, WI 53707-7854
This docket uses the Electronic Records Filing system (ERF).	

The Commission Memorandum concerning Focus on Energy's Quad IV market-based carbon value and low-income benefits adder is being provided to the parties for comment. Comments must be received by 1:30 P.M. on Monday, September 11, 2023. Party comments must be filed using the Commission's ERF system. The ERF system can be accessed through the Public Service Commission's web site at http://psc.wi.gov. Members of the public may file comments using the ERF system or may file an original in person or by mail at the Public Service Commission, 4822 Madison Yards Way, P.O. Box 7854, Madison, WI 53707-7854.

Please direct questions about this docket or requests for additional accommodations for persons with a disability to the Commission's docket coordinator, Jolene Sheil at (608) 266-7375 or Jolene.Sheil@wisconsin.gov.

Sincerely,

Joe Fontaine
Administrator
Division of Digital Access,
Consumer and Environmental Affairs

JF:MH:kle:jac DL:01958434

Attachment: Commission Memo

PUBLIC SERVICE COMMISSION OF WISCONSIN
Memorandum

August 21, 2023

FOR COMMISSION AGENDA

TO: The Commission

FROM: Joe Fontaine, Administrator
Tara Kiley, Deputy Administrator
Joe Pater, Director Office of Energy Innovation
Mitch Horrie, Performance Manager, Focus on Energy
Division of Digital Access, Consumer and Environmental Affairs

RE: Quadrennial Planning Process IV 5-FE-104

Suggested Minute: The Commission approved a Quad IV starting point market-based carbon value of ($24.77 per ton/$23.19 per ton/$22.93 per ton) for purposes of evaluating Focus' cost-effectiveness.

The Commission approved a Quad IV market-based carbon value escalation rate of (2.0 percent annually/ 5.0 percent annually/ 7.0 percent annually/ 11.0 percent annually/ 15.0 percent annually) for purposes of evaluating Focus' cost-effectiveness.

The Commission (approved/approved with modifications/did not approve) the Evaluation Work Group's proposed low-income benefits adder for purposes of evaluating Focus' cost-effectiveness.

In its Final Decision of November 14, 2022, the Commission set the goals, priorities, and measurable targets for Focus on Energy's (Focus') 2023-2026 quadrennial period (Quad IV). (PSC REF#: 453081.) This memorandum addresses two cost-effectiveness issues where, in its Quad IV Final Decision, the Commission ordered the Focus Evaluation Work Group (EWG) to review and provide further information and guidance for the Commission's consideration. The two issues addressed in this memorandum are: 1) alternatives for an appropriate market-based carbon value and, 2) options and a proposed approach for applying a benefits adder to programs and offerings targeting customers at or below 60 percent of statewide median household income (SMI).

The EWG was established by the Commission during the Quad I Planning Process to advise the Commission on Focus evaluation issues. The EWG consists of a Commission staff representative that serves as the chairperson of the Work Group, a representative from the Focus Program Administrator, a representative from the Focus Evaluation Contractor, a utility representative, and an industry expert representative. (PSC REF# 137129.)

Background – Market-Based Carbon Value

Wisconsin Admin. Code § PSC 137.05(12) states that "the program administrator shall delivery energy efficiency and renewable programs that pass a portfolio level test of net cost-effectiveness, as determined by the commission." The choice of Focus' primary cost-effectiveness test has been treated as a policy decision for the Commission in each of Focus' four quadrennial planning processes. In each quadrennial planning process, the Commission has determined the appropriate test to be used as the program's primary cost-effectiveness test is a modified Total Resource Cost test (mTRC). (PSC REF#: 141173; PSC REF#: 215245; PSC REF#: 343909; and PSC REF#: 453081.) Focus' mTRC includes the avoided utility cost benefits of the TRC and is modified to also include, among its measured benefits, the value of emissions (carbon dioxide, sulfur oxides, and nitrogen oxides) avoided through the program's offerings.

The EWG previously advised the Commission on an appropriate market-based carbon value in Quad II. In Quad II of Focus, the EWG performed an analysis to review available market-based carbon values and developed valuation options for the Commission's consideration. The EWG set a starting point value based on the most recent market prices in

California's regulated cap-and-trade market. From this starting point value, the EWG developed multiple growth rate scenarios that considered future projections of market-based values. (PSC REF#: 279042.) The EWG's proposed approach of establishing a stream of annual carbon values over the entire life cycle of Focus' measures converted to a single, levelized present-value figure was recommended to be consistent with Focus' life cycle savings framework and the approach used for calculating avoided electricity and natural gas costs. The Commission approved a value of $15 per ton, rationalizing that the EWG's analysis confirmed there is no single accepted figure for the value of avoided CO_2 emissions and a value of $15 per ton was consistent with a temporary value already used by the program and within the range of values identified by the EWG's analysis. (PSC REF#: 279739.) The Commission elected to maintain the $15 per ton market-based value for Quad III in its Final Decision of June 6, 2018. (PSC REF#: 343909.)

During planning for Quad IV, the Commission was presented with decision alternatives on the appropriate value of carbon in Focus' primary cost-effectiveness test. (PSC REF#: 442095 at 87-97.) In its Final Decision of November 14, 2022, the Commission directed the EWG to provide a report on alternatives for an appropriate market-based carbon value for the Commission's consideration. (PSC REF#: 453081.) The sections below summarize the EWG's review of carbon markets and present the Commission with alternatives for its consideration.

Review of Active U.S. Carbon Markets

Currently, in the U.S., there are three regulated carbon cap-and-trade markets:

1) The California Air Resource Board (CARB) Cap-and-Trade Program covering California and Quebec. CARB has operated since 2012.

2) The Regional Greenhouse Gas Initiative (RGGI) currently comprised of eleven northeast and mid-Atlantic states.[1] RGGI has operated since 2009.

3) Washington State's cap-and-invest program operated by the Washington State Department of Ecology. Washington's program began operation in 2023.

Each of the existing carbon markets operates differently and the number of allowances (short tons) traded differs among them. In the CARB and Washington cap-and-trade markets, one allowance gives the owner the right to emit one metric ton of CO_2 equivalent emissions, based on the 100-year global warming potential. For RGGI, one allowance represents a limited authorization to emit one short ton of CO_2 from a regulated source.[2] In each market, allowances may be purchased directly at auctions or through resale on secondary markets. Carbon offset credits may also be used to meet a small amount of an emitter's compliance obligation. Revenues from CARB's quarterly auctions fund activities that further the state's climate goals. In RGGI, auction proceeds are allocated to states and can be used to support various state policy objectives with at least 25 percent dedicated to efforts supporting consumer benefit or strategic energy purposes.

Nearly two-thirds of the total allowances traded across all three U.S. markets in Quarter 2, 2023 were in CARB; RGGI accounted for 24 percent, and Washington 10 percent.

[1] States participating in RGGI include Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, Pennsylvania, Rhode Island, Vermont, and Virginia. In 2022, Pennsylvania joined RGGI, but it has not yet participated in any auctions due to ongoing lawsuits. Virginia passed legislation in 2020 to join RGGI and participated in its first RGGI auction in 2021. In July 2023, the state of Virginia published a regulatory action to remove the state from RGGI effective at the end of 2023, which was subsequently appealed.

[2] A short ton, also known as a US ton, is 2,000 pounds. A metric ton is equal to 1,000 kilograms, or approximately 2,204 pounds.

All three markets include price ceilings and floors to minimize price volatility. [3,4,5] Entities can purchase price ceiling allowances when they are unable to meet compliance and can only buy enough to meet compliance for the next period.[6] In each of the three markets, the number of allowances auctioned decreases over time. This is to reduce the reduce the overall emissions in the state or region, which is the main goal of the programs.

The CARB and Washington markets operate similarly with respect to the price ceiling and floor values and their annual adjustments. Price ceiling and floor values are nearly identical in both markets. The CARB price ceiling in 2023 is $73.94 per short ton equivalent allowance; the 2023 price ceiling value in Washington's market is $73.91 per short ton allowance. The CARB price floor in 2023 is $20.15 per short ton equivalent allowance; the 2023 price floor for Washington is $20.14 per short ton. In both the CARB and Washington markets, the price ceiling increases annually at five percent plus inflation as measured by the Consumer Price Index (CPI). The price floor also increases annually at five percent plus inflation.

In RGGI, there is a Cost Containment Reserve (CCR) composed of allowances held in reserve and released only if the allowance settlement prices exceed predefined levels. If that occurs, the CCR allowances are released at the capped price. This CCR mechanism acts as a price ceiling for the RGGI market. The RGGI CCR price increases annually by seven percent. There is also an emissions containment reserve (ECR) which acts as a price floor. RGGI states

[3] California Air Resources Board. Accessed June 8, 2023. "Cost Containment Information". https://ww2.arb.ca.gov/our-work/programs/cap-and-trade-program/cost-containment-information.

[4] The Regional Greenhouse Gas Initiative. Accessed June 8, 2023. "Elements of RGGI". https://www.rggi.org/program-overview-and-design/elements.

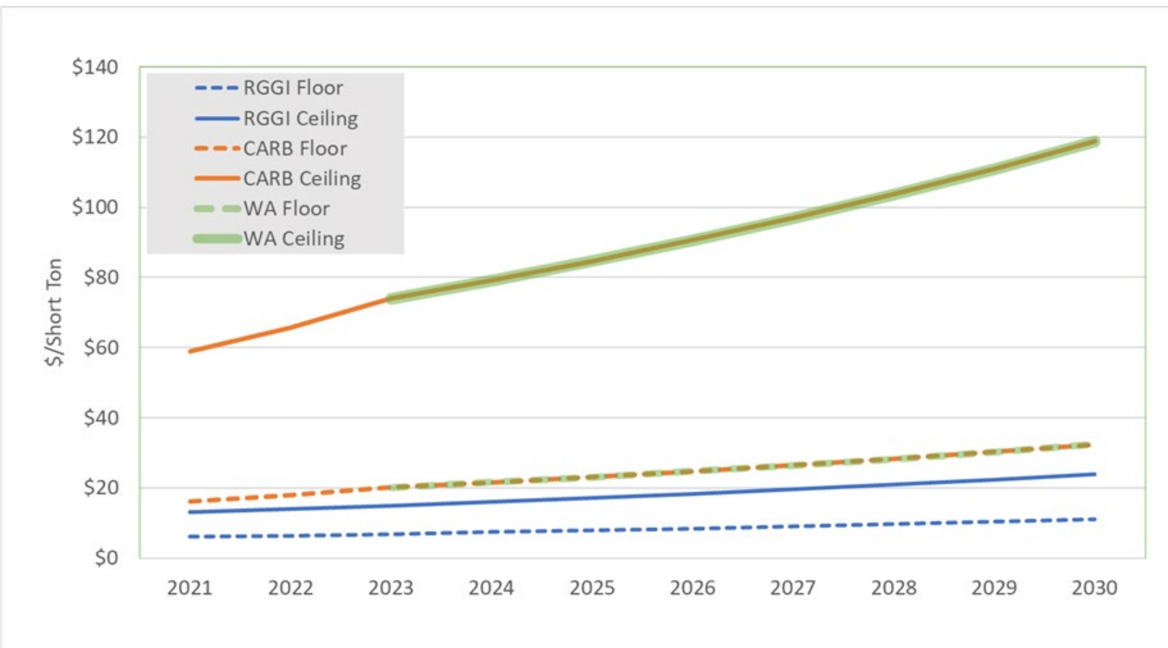
[5] Department of Ecology, Climate Commitment Act Program Rulemaking Presentation on January 11, 2022. Accessed June 8, 2023. https://ecology.wa.gov/DOE/files/f9/f9d224f5-7c9d-42d6-9f30-a48e0c06411e.pdf.

[6] California Air Resources Board. Accessed June 8, 2023. "Detailed Price Ceiling Sale Requirements and Instructions". https://ww2.arb.ca.gov/sites/default/files/cap-and-trade/pcs_requirements.pdf.

will withhold allowances from circulation if prices fall below an established price floor. The ECR also increases seven percent per year. The ECR size is 10 percent of the emissions allowance budgets of the states implementing the ECR.[7] Currently all RGGI states other than Maine and New Hampshire are participating in the ECR. The CCR (price ceiling) and ECR (price floor) are $14.88 and $6.87, respectively in 2023.

Figure 1 shows the forecasted, permitted price ranges per short ton in each of the aforementioned markets. The forecasts assume a two percent inflation rate in projecting the price ceiling and floor for Washington and CARB. Washington and CARB have a similar permitted price range while RGGI's ceiling is below the floor for the other markets.

Figure 1. Carbon Market Price Range per Short Ton



The EWG also reviewed the European Union's (EU's) Emissions Trading System for additional context to inform its report to the Commission. The EU's market has operated since

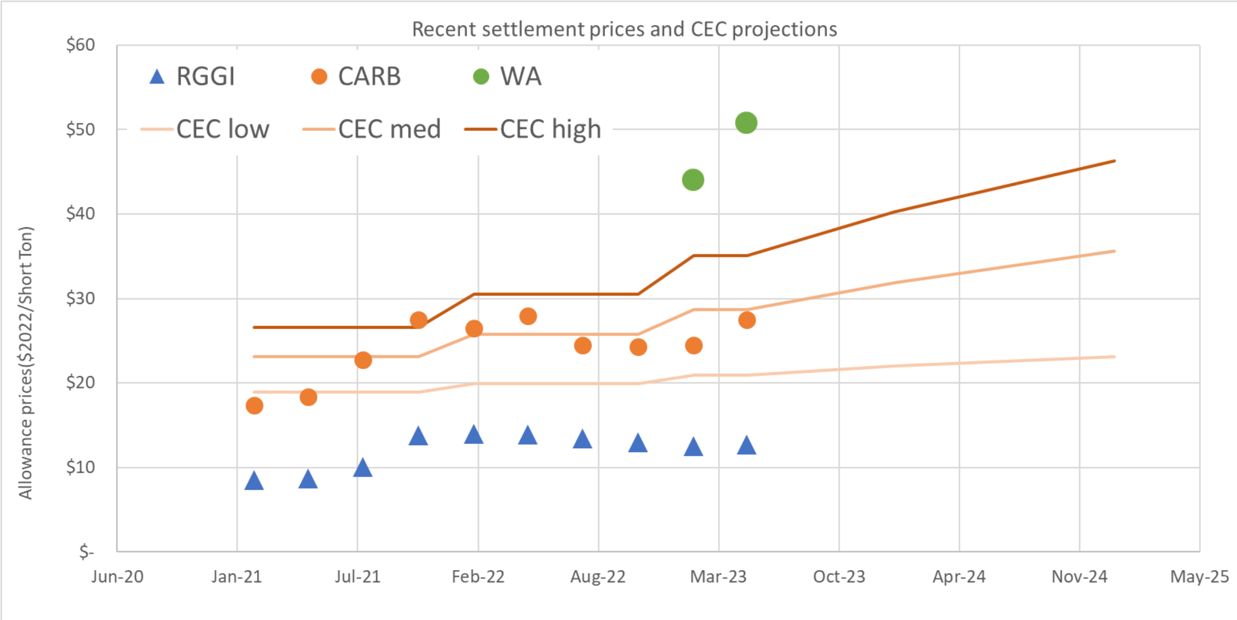
[7] The Regional Greenhouse Gas Initiative. December 19, 2017. "RGGI 2016 Program Review: Principles to Accompany Model Rule Amendments". https://www.rggi.org/sites/default/files/Uploads/Program-Review/12-19-2017/Principles_Accompanying_Model_Rule.pdf.

2005 and, like the U.S. markets, is designed to support carbon emissions reduction policies of participating governments. Auction settlement prices in the EU market are substantially higher than any of the U.S. markets reviewed. Moreover, the number of allowances traded in the EU market is greater than the combined number of allowances traded in U.S. markets. The average carbon emissions allowance price in 2022 was $75.83 per short ton.

Price Trends

Figure 2 shows observed auction prices over the past few years for each of the three U.S. markets reviewed. Washington held its first auction in February 2023, with 100 percent of available allowances selling for $44.00 and its second auction in May 2023 with 100 percent of available allowances selling for $50.81. The figure also includes projected California market prices published in 2016 by the California Energy Commission's (CEC) Energy Assessment Division for three scenarios: a low price, a mid price, and a high price. These price projections, included as solid orange lines are used by CEC staff in electric generation production cost simulation modeling, transportation demand modeling, and in retail electric rate projections used in demand forecast models. CARB prices are within the range of CEC's forecasts, while RGGI and WA are outside the CEC's forecasted values. Previous auction prices shown in Figure 2 below are adjusted to 2022 dollars using the CPI.

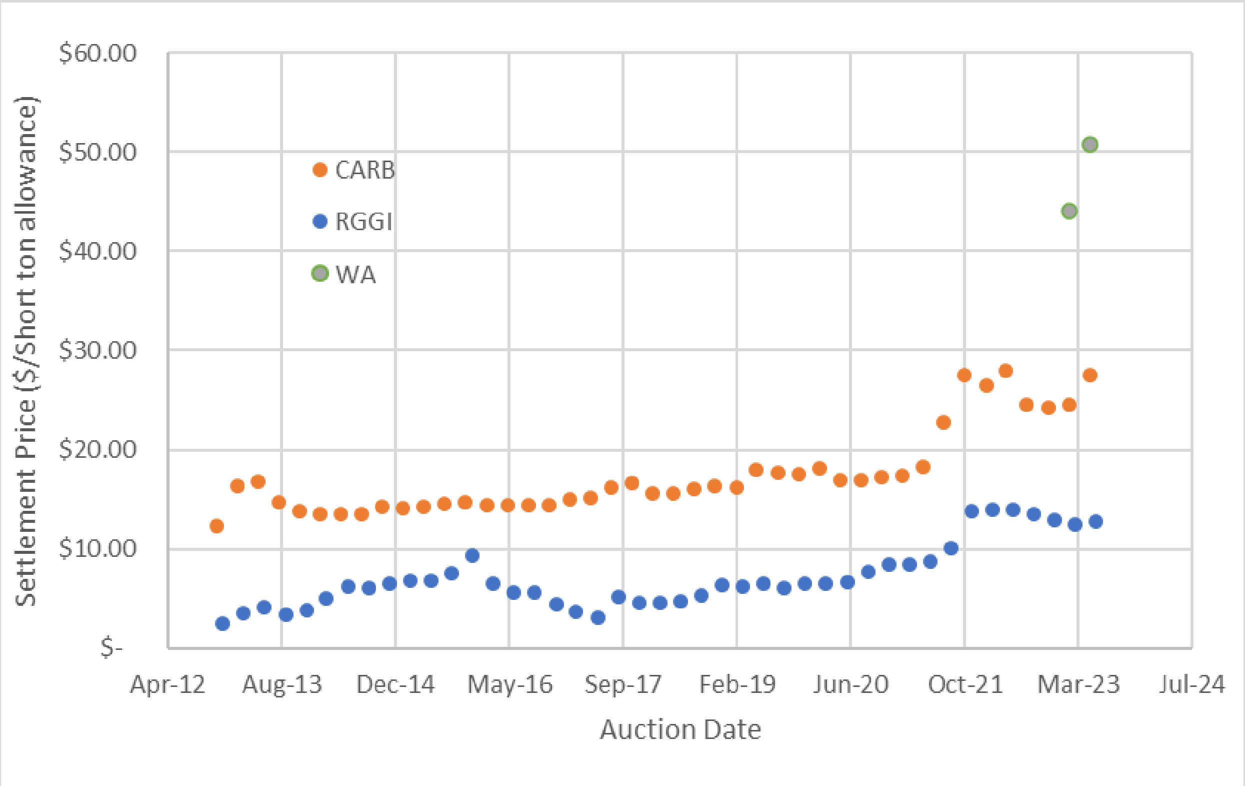
Figure 2. US Carbon Auction Settlement Prices



At the time of writing this memorandum there had been two auctions held for each of the three markets in 2023. The weighted average price across all markets for 2023's two auctions was $24.77 per short ton equivalent, with CARB accounting for 67 percent of the total volume of allowances traded, RGGI representing 24 percent of allowances traded, and Washington accounting for nine percent.

Auction settlement prices extending back to 2012 for CARB and RGGI are shown in Figure 3 for additional context. Following a period of relatively flat market prices, both the CARB and RGGI markets experienced price increases during the COVID-19 pandemic that have sustained into 2023.

Figure 3. Carbon Auction Settlement Prices per Short Ton Equivalent Allowance



EWG Discussion and Guidance

After reviewing the information summarized above, the EWG has several observations. Since Wisconsin does not participate in any of the regulated U.S. carbon cap-and-trade markets reviewed in this report, a choice of a single market to best represent an appropriate value of avoided carbon emissions for Wisconsin is challenging. The markets reviewed by the EWG were established to meet the specific goals of the participating states and province and none of the markets were set up to estimate the value of carbon avoided by Wisconsin emitters. The best existing sources to inform a market-based carbon value for Focus are the three U.S. carbon allowance markets discussed above, but having examined these markets closely, the EWG acknowledges that the auction settlement values observed tend to signal values relative to local or regional climate policies. Unless or until Wisconsin emitters are active participants in a carbon allowance market such as those reviewed for purposes of this analysis, selection of an accurate market-based value of carbon to apply to a Wisconsin program will carry uncertainties.

With those uncertainties acknowledged, in the EWG's assessment, a weighted average of the CARB, RGGI, and Washington markets represents a reasonable approximation of a market-based value of carbon from available data. A weighted average, whereby the number of allowances purchased at auction serves as the weighting factor, provides some protection against selecting a value driven by the unique aspects of any specific carbon market included in the analysis. Additionally, the EWG finds that a weighted average value representing settlement prices across multiple auctions is preferred in order to mitigate impacts that may influence the auction price for any single auction (e.g., policy changes, economic conditions, or other externalities such as the impacts of the COVID-19 pandemic).

In fulfilling the Commission's order from Quad IV Planning to provide the Commission with alternatives for an appropriate market-based carbon value, the EWG has developed two decision points for the Commission's consideration: 1) decision alternatives for the appropriate starting point market-based carbon value for Quad IV of Focus and 2) decision alternatives for the escalation rate to be applied to the Quad IV starting point market-based carbon value.

Starting Point Quad IV Market-Based Carbon Value

The decision alternatives below offer options for a starting point market-based carbon value that represent the weighted average auction settlement price for the CARB, Washington, and RGGI markets with number of allowances sold serving as the weighting factor. The range of starting point values presented vary by the number of quarterly auctions included in the weighted average.

Alternative One is a Quad IV starting point value of $24.77 per ton. It represents the weighted average auction settlement price from the two most recent auctions held as of the time of this memorandum: Quarter 1, 2023 and Quarter 2, 2023. All three of the U.S. markets reviewed were active during this period. For these two auctions, CARB accounts for 67 percent of the total allowances traded, RGGI accounts for 24 percent and Washington accounts for nine percent.

Alternative Two is a Quad IV starting point value of $23.19 per ton. It represents the weighted average auction settlement price over the most recent one-year period (four quarters). CARB and RGGI were both active for the entire one-year period analyzed. Washington's market was active for two of the four quarters accounted for in this weighted average value. For these four auctions, CARB accounts for 71 percent of the total allowances traded, RGGI accounts for 25 percent and Washington accounts for five percent.

Alternative Three is a Quad IV starting point value of $22.93 per ton. It represents the weighted average auction settlement price over the most recent two-year period (eight quarters). CARB and RGGI were both active for the entire two-year period analyzed. Washington's market was active for two of the eight quarters accounted for in this weighted average value. For these eight auctions, CARB accounts for 73 percent of the total allowances traded, RGGI accounts for 25 percent and Washington accounts for two percent.

Commission Alternatives – Starting Point Quad IV Market-Based Carbon Value

Alternative One: Focus' cost-effectiveness tests shall value avoided carbon emissions in Quad IV using a starting point value of $24.77 per ton.

Alternative Two: Focus' cost-effectiveness tests shall value avoided carbon emissions in Quad IV using a starting point value of $23.19 per ton.

Alternative Three: Focus' cost-effectiveness tests shall value avoided carbon emissions in Quad IV using a starting point value of $22.93 per ton.

Alternative Four: Focus' cost-effectiveness tests shall value avoided carbon emissions in Quad IV using a starting point value identified by the Commission.

Alternative Five: Direct the EWG to return to the Commission with additional information consistent with its discussion.

Forecasted Escalation of the Starting Point Market-Based Carbon Value

The EWG reaffirms its recommendation proposed to the Commission in 2015 to apply a growth rate scenario to the starting point market-based carbon value to reflect the stream of benefits over the life cycle of Focus measures. In acknowledgement of the Commission's policy objectives established in Quad IV planning to prioritize long-term energy savings and to play a larger role in cost-effectively reducing carbon emissions, the EWG finds it reasonable for the Commission to consider an approach that incorporates the forecasted avoided emissions values over time. This methodology would be consistent with prior Commission decisions for establishing the methodologies for calculating avoided electric energy (PSC REF#: 166932), avoided electric capacity (PSC REF#: 390566), avoided transmission and distribution (PSC REF#: 406591), and avoided natural gas costs (PSC REF#: 232431) in the Focus mTRC. It is also important to note that a 2.0 percent discount rate is applied to all of the benefits accounted for in Focus' cost-effectiveness tests consistent with the Commission's decision in Quad IV Planning. (PSC REF#: 453081.)

EWG believes existing market experience and available projections of future market prices support the assumption that the value of emissions reductions is likely to increase in future years. The decision alternatives below offer scenarios for the rate of growth to be applied to the starting point Quad IV market-based value selected by the Commission. The EWG offers five scenarios for the Commission's consideration.

Alternative One is a choice to increase the starting point value by two percent per year. The EWG developed this option to represent a flat annual growth scenario since the avoided carbon emissions benefits would also be discounted at a rate of two percent per year per the Commission-established discount rate for Focus.

Alternative Two is a choice to increase the starting point value by five percent per year. This scenario is consistent with the growth rate for the CEC's low price scenario as shown in Figure 2.

Alternative Three is a choice to increase the starting point value by seven percent per year. This scenario is consistent with the annual growth rate for the price ceiling and price floor in the CARB, Washington, and RGGI markets as shown in Figure 1. The EWG prefers this alternative because it is rooted in the policy framework for the markets used to derive the weighted average starting point value, whereas the other scenarios presented are derived from CARB market simulation modeling whose underlying assumptions are less well understood by the EWG.

Alternative Four is a choice to increase the starting point value by 11 percent per year. This scenario is consistent with the growth rate for the CEC's mid price scenario as shown in Figure 2.

Alternative Five is a choice to increase the starting point value by 15 percent per year. This scenario is consistent with the growth rate for the CEC's high price scenario as shown in Figure 2.

Commission Alternatives –Market-Based Carbon Value Rate of Growth

Alternative One: Focus' Quad IV market-based carbon value shall be escalated at a rate of 2.0 percent annually.

Alternative Two: Focus' Quad IV market-based carbon value shall be escalated at a rate of 5.0 percent annually.

Alternative Three: Focus' Quad IV market-based carbon value shall be escalated at a rate of 7.0 percent annually.

Alternative Four: Focus' Quad IV market-based carbon value shall be escalated at a rate of 11.0 percent annually.

Alternative Five: Focus' Quad IV market-based carbon value shall be escalated at a rate of 15.0 percent annually.

Alternative Six: Focus' Quad IV market-based carbon value shall be escalated at a rate identified by the Commission.

Alternative Seven: Direct the EWG to return to the Commission with additional information consistent with its discussion.

Background – Low-Income Benefits Adder

In its Final Decision of December 16, 2021, the Commission established the scope for Focus' Quad IV Planning Process to include the topic of Focus programs and offerings for low-income customers. The Quad IV Phase I memorandum provided analysis on the topic. (PSC REF#: 432286 at 80-103.) The Commission's decisions in Phase I of Quad IV Planning included direction for Focus to expand its efforts to coordinate and assist with the Department of Administration's (DOA's) Weatherization Assistance Program (WAP), to convene a stakeholder group that includes community-based organizations that work with marginalized communities to gather input on effective methods to reduce barriers to participation in Focus' programs and offerings, and to explore developing community-based pilot(s) in one or more targeted communities in the state. (PSC REF#: 453081.)

The scope for Phase II of Quad IV Planning included, among other topics, whether and how the Commission wanted to account for Focus programs and offerings targeting income-qualified and low-income customers in cost-effectiveness testing. In its Quad IV Final Decision of November 14, 2022, the Commission determined it was appropriate to apply a benefits adder to Focus programs and offerings targeting customers earning below 60 percent statewide median income (SMI) and directed the EWG to review options and propose an approach for the Commission's consideration. *Ibid*. The choice to include a benefits adder was made to reflect the Commission's interest in providing equitable opportunities for participation for low-income customers, while recognizing the programs serving those customers may tend to be more expensive to offer. The following sections describe the methodology used to review available options, the results of the review, and the EWG's proposed approach for applying a low-income benefits adder for purposes of evaluating Focus' cost-effectiveness.

Review of Low-Income Adders

Cadmus, Focus' independent evaluation contractor, performed a review in spring 2023 of publicly available documentation of low-income adders implemented by statewide, regional, or utility specific cost-effectiveness analyses across the U.S. Cadmus focused its search on resources published in Public Utility Commission dockets, secondary sources compiling state program information such as evaluation reports, and various working group documents. Resources were reviewed to identify the size of the adder applied, the main cost-effectiveness tests where the adder was used, the first year implemented, and any available rationale or justification to support the choice of the adder value used.

Cadmus compiled the information from its review, focusing on states with definitive percentage adders applied within their primary cost-effectiveness tests.[8] Percentage adders are the predominant approach to incorporating low-income non-energy benefits into cost-effectiveness testing due to several factors including simplicity of implementation and the complexity associated with attempting to define precise dollar values to apply to low-income related concepts. Table 1 presents a summary of findings for those states where concrete adder information was available and is arranged by implementation year. As shown in the table below, Colorado has periodically increased its adder value over time and states with more recent implementations of a low-income adder tend to have slightly higher adders on average.

Table 1. State Low-Income Adder Summary

State	Primary Test	Year Implemented	Adder
Maryland	Societal Cost Test	2022	20% (+10%*)
New Jersey	New Jersey Cost Test	2020	10%
Nevada	Total Resource Cost Test	2020	25%
Colorado	Total Resource Cost Test	2018	30%
Idaho	Utility Cost Test	2013	10%
Vermont	Societal Cost Test	2012	15%
Colorado	Total Resource Cost Test	2011	25%
Colorado	Total Resource Cost Test	2008	20%
Median Adder			**20%**

*Maryland applies the additional 10% adder for specific HVAC/Weatherization/Building Shell measures installed in low-income homes.

[8] At least two states, Delaware and New Hampshire, apply dollar value adders per low-income weatherization project to reflect participant non-energy benefits; $236 per project in the case of Delaware and $406 per project for New Hampshire. These monetary adder values have been derived from primary research in each state.

Table 2 shows state-by-state rationale used to inform the selection of each adder. A review of available public documents confirms that low-income adders lack detailed theoretical reasoning regarding what concepts each adder was designed to capture. Sources use general language regarding additional benefits to low-income customers and do not broadly expand on those benefits in monetary terms. However, Cadmus found that background research and considerations for each state often involved extensive discussions among different interest groups that were not captured in official documents. Among the states reviewed, only Vermont distinctly identifies the conceptual benefits their adder was intended to capture.

Table 2. Adder Rationales

State	Adder	Purpose of Adder
Colorado	20% 25% 30%	Reflects the higher level of non-energy benefits that are likely to accrue from DSM services to low-income customers
Nevada	25%	Reflects additional non-energy benefits to low-income customers
Maryland	20%	Non-specific economic and equity benefits that are unrelated to comfort health and safety benefits
Vermont	15%	"(1) any energy savings that accrue to the low-income sector have a greater benefit to that sector because its energy-bill-to-income ratio is higher relative to other sectors; and (2) there appear to be greater non-energy benefits from energy efficiency investments accruing to participants in the low-income sector (both single-family and multifamily housing), particularly with regard to comfort, health and safety."*
New Jersey	10%	Additional benefits (including health and safety)
Idaho	10%	Reflects additional non-energy benefits to low-income customers

*Source: Cost-Effectiveness Screening of Heating and Process-Fuel Efficiency Measures and Modifications to State Cost-Effectiveness Screening Tool. Vermont Public Utility Commission.

The Phase II Quad IV Planning staff memorandum discussed the utility of low-income adders in program cost-benefit tests as a way to account for participant and/or societal non-energy benefits that are difficult to quantify. (PSC REF#: 442095 at 71.) Staff's discussion presented similar rationale to adopt a low-income benefits adder as those identified in Cadmus' research and described in Table 2.

EWG Recommendations

Cadmus' research suggests that there is no generally accepted data-driven method of calculating the specific value for an adder and adders that are adopted are informed based on review of what other states have previously chosen. Based on these findings, the EWG concludes that the median adder value of the states shown in Table 1 of 20 percent appears to be a reasonable value for Focus and proposes this recommendation to the Commission for its consideration.

The EWG recommends that the 20 percent adder be applied to the following benefits currently quantified in Focus' primary cost-effectiveness test:

- Avoided electricity (generation and capacity)
- Avoided natural gas
- Avoided transmission and distribution
- Avoided emissions

Under the EWG's proposed approach, the net benefits in each of the categories listed above would be quantified for a Focus program or offering which targets customers at or below 60 percent of SMI. The sum of those net benefits would be multiplied by 1.20 to derive the total net benefits attributable to that program or offering. Those net benefits would be included in the Program Evaluator's portfolio test of net cost-effectiveness for Focus' primary cost-effectiveness test and secondary tests performed for informational purposes.

The EWG recognizes that, at this time, there are limited Focus programs and offerings specifically targeting customers earning at or below 60 percent of SMI. Nevertheless, the EWG acknowledges that new Focus programs and offerings intended to target low-income customers may be developed in the coming years. In its discussion, only one active offering was identified as specifically targeting this customer segment: Focus' coordinated efforts with the DOA's Division of Energy, Housing and Community Resources (DEHCR) to provide Community Action Agencies incentives for solar PV and heat pumps to serve low-income multifamily buildings. The EWG finds it appropriate to apply a low-income benefits adder to the benefits quantified for this offering.

To be consistent with the Commission's decision in Quad IV Planning, the EWG recommends that the application of this adder would be limited to programs and offerings that base participation eligibility on requiring verification of income at or below 60 percent of SMI or proof of eligibility for assistance programs where 60 percent of SMI is required for eligibility such as the state's Home Energy Plus Programs.

Commission Alternatives – Low-Income Benefits Adder

In response to the Commission's Quad IV Planning Order, the EWG recommends that Focus adopt a low-income benefits adder of 20 percent to be applied to programs and offerings targeting customers at or below 60 percent of statewide median income in Focus' primary cost-effectiveness test and secondary tests performed for informational purposes.

Alternative One: Approve the EWG's recommendation.

Alternative Two: Approve the EWG's recommendation with modifications.

Alternative Three: Do not approve the EWG's recommendation and direct the EWG to propose a different approach.

Alternative Four: Other action consistent with the Commission's discussion.

JF:TK:JP:MH:kle:jac DL: 01950643

Key Background Documents

Commission Memorandum – EWG's Recommended Carbon Value from 2015 – PSC REF#: 279042
Commission Memorandum – Quad IV Planning Process Phase I – PSC REF#: 432286
Commission Memorandum – Quad IV Planning Process Phase II – PSC REF#: 442095
Final Decision Signed and Served 11-14-22 – Quad IV Planning Process Final Decision – PSC REF#: 453081