Comments of the Western Power Trading Forum to the California Air Resources Board on 2016 Amendments to the Cap and Trade Regulation

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The Western Power Trading Forum[1] (WPTF) welcomes the opportunity to provide input to the California Air Resources Board (CARB) on its proposed amendments to the Cap and Trade program for the third compliance period and the post-2020 program, including those for California's Compliance with the Clean Power Plan (CPP).

WPTF's comments are in two sections. The first section addresses amendments to the cap and trade program related to electricity imports. The second section addresses other amendments to the cap and trade program.

Electricity Import Issues

CARB staff are proposing regulatory amendments to the cap and trade regulation that will remain in effect through 2030. During this period, electricity markets and carbon regulations in the west are expected to evolve rapidly. WPTF believes that it is therefore timely to reevaluate program rules for treatment of electricity imports to ensure that they are coherent and workable for the post 2020 program. Changes to the program rules should remain focused on achieving the following objectives:

- ***Electricity Import rules should be consistent across power markets***. Rules for the treatment of electricity imports into California have already been changed to accommodate the Energy Imbalance Market. (EIM). This has led to disparate treatment of imports across the electricity markets: For non-EIM imports, the emission obligations are assigned on the basis of NERC e-tags, and contracts for energy, whereas emission obligations for energy imported via the EIM are attributed to specific resources based on a computer algorithm. Ongoing efforts to develop a regional ISO will create additional challenges for tracking and assigning GHG emissions to imports.

  CARB and the CAISO should work to ensure consistent and equitable treatment of electricity imported into the state across all markets in order to provide appropriate carbon price signals, avoid electricity market distortion, and avoid incentives for external resources to participate in one market instead of another to reduce carbon obligations.

- ***Import rules should not create barriers to electricity market integration***. WPTF believes that integration of the power markets will yield significant GHG benefits within the West. However, uncertainty about carbon compliance obligations in California, the inability of market participants to manage carbon costs, or the imposition of carbon costs on load outside of California would hinder participation of external resources, utilities and states in an integrated market. CARB should seek to avoid imposition of GHG accounting rules that would hinder integration of the electricity markets.

- ***Electricity import rules should be durable as power markets and carbon regulations in the west evolve***: The cap and trade program will likely operate in a future where multiple energy markets co-exist (the existing CAISO day-ahead, fifteen minute and real-time markets, a regional ISO, the Energy Imbalance Market, and bilateral markets), and individual states will have different carbon and clean

[1] WPTF is a diverse organization comprising power marketers, generators, investment banks, public utilities and energy service providers, whose common interest is the development of competitive electricity markets in the West. WPTF has over 80 members participating in power markets within California and elsewhere across the United States.

energy regulations. CARB's regulatory construct for GHG accounting should anticipate these changes, and be able to accommodate evolving markets.

WPTF believes that changes to the rules for electricity import rules are needed in three areas to meet these objectives:

- Quantification of import volumes
- Rules for attribution of imports to resources and assignment of GHG emissions obligation
- Adjustment of compliance obligations when imports come from jurisdictions that price carbon

We provide more detailed comment on these in the following section

CARB should quantify electricity imports on a net interchange basis

The cap and trade and reporting regulation do not currently treat electricity transmitted through the state consistently; in some cases power transmitted through the state is not assigned an import obligation, while in other cases it is. CARB's proposal to eliminate the qualified export adjustment (QEA) after 2020 would further exacerbate the disparate treatment.

Consider three difference scenarios where an entity uses the CAISO system to move power from the California Oregon Intertie (COI) to Eldorado to serve load in Nevada:

1. An entity schedules a 50 MWh wheel-through in the CAISO from COI to Eldorado,
2. The EIM dispatches 50 MWH from an EIM participating resource in PAC west to serve a load imbalance in NV Energy, and
3. An entity submits an import bid at COI for 50 MWH in the day-ahead market and an export bid for the same interval at Eldorado. Both bids are awarded.

In each scenario, the dispatch and power flow through the state is identical and does not reflect any increase in electricity consumption by California. However, CARB's current cap and trade regulation treats the three scenarios differently. Under scenario one, the 50 MWH is reported as a wheel, but not assigned a carbon obligation; under scenario two, the 50 MWH is not reported and not assigned a carbon obligation; under scenario three the 50MWh is reported as an import and export, with a carbon obligation assigned to the import.

CARB's assignment of an import obligation for the third scenario is problematic for two reasons. First, it does not reflect actual electricity that serves California load. The statutory framework for emission obligations in Assembly Bill (AB) 32 directs CARB to account for all electricity *consumed* in the state. In all of the above scenarios, California's consumption of electricity is unchanged, as the import at COI is balanced by an export at Eldorado. The EIM dispatch algorithm and regulation's provisions for wheel-throughs appropriately result in the export flow being netted against the import flow. However, because the regulation currently only allows for a limited netting via the QEA for power scheduled via the day-ahead market (and CARB proposed to eliminate the QEA provision), the accounting would inappropriately attribute 50 MWh as being consumed in the state. The over-statement of consumption will be exacerbated in the future as more and more solar is added within the CAISO footprint, and California becomes a net exporter in certain hours: E-tag schedules may still show imports into California to reflect utility contracts and RPS obligations, even in conditions where net imports are negative.

Second, the disparate treatment of power flows that are dispatched through EIM versus other CAISO markets may alter incentives for entities to participate in these markets. If an entity is not assessed a

carbon obligation for electricity transferred through the state in the EIM market, but does in the CAISO markets (or in a regional ISO in the future), this could discourage participation in the CAISO markets.

WPTF supports elimination of the QEA, but recommends that CARB modify its regulation to account for the quantity of power consumed in the state on a *net-interchange* basis for all CAISO markets. This would require a change to how the quantity of imported power is calculated for imports via the CAISO markets:

- CAISO would calculate the ratio of net imports to final scheduled imports, exclusive of EIM, for each hour[2] and provide this information to scheduling coordinators and to CARB.
- The cap and trade and reporting regulation should be modified to provide that the calculation of MWH of electricity imported via the CAISO markets be adjusted by the ratio of net to scheduled interchange in each hour.
- In preparing annual reports, Electric Power Entities would multiply the net import ratio for each hour by each scheduled import for that hour, so that each import (specified and unspecified) would be reduced by the same amount.

This approach avoids the need to net particular electricity exports against particular imports or to net emissions associated with exports, but instead simply corrects the quantity of imported power to match California load. If discussions regarding GHG accounting in the EIM and regional ISO (see comments below) result in changes to how import flows are assigned to specific resources, then such an approach could also be considered for determining which scheduled imports actually serve load in the CAISO markets.

CARB should develop consistent rules for attribution of imports and GHG emissions to California

CARB staff have raised concerns that the EIM algorithm is not completely accounting for GHG emissions associated with serving California load. To address this emission leakage, CARB proposes to calculate emissions leakage resulting from the EIM algorithm using the default emission rate and to assign an additional emissions obligation to California load-serving entities proportional to their EIM purchases. Additionally, CARB has proposed a new regulation that would exclude electricity imported via the EIM from the resource-shuffling exemption for short-term transactions.

WPTF agrees that the way the EIM is currently dispatching and assigning generation to CAISO load is distorting dispatch and in some cases results in increased emissions in the combined CAISO/EIM footprint. This appears to be a result of the EIM's displacement of California gas generation by a low-emission EIM imports, and the 'secondary dispatch' of a higher emission EIM resource. However, we do not support the proposed regulatory amendments because they will not fix the underlying problem associated with the EIM dispatch and the treatment of associated GHG emissions; instead they merely impose additional costs on California load-serving entities.

WPTF also strongly opposes the new language that excludes power deemed delivered through the EIM from the resource-shuffling exemption for short-term contracts. As discussions around the EIM GHG

[2] Quantification of this ratio could be done on a more granular basis. We believe that an hourly interval would provide for sufficient accuracy and conform with CARB's current practice for reporting of schedules on an hourly basis.

accounting clearly illustrate, the assignment of generation to California and associated emissions is a function of the algorithm and market conditions – not the actions of any particular market participant. To suggest that EIM market results constitute resources shuffling is therefore completely inappropriate, and will hinder participation of external resources in the EIM.

Rather than the proposed regulatory amendments, WPTF believes that further work is needed by both CARB and the ISO, along with stakeholders, to develop modifications to how the EIM algorithm treats carbon costs in the dispatch and allocation of generation to serve CAISO load. WPTF does not yet have a view on the correct solution, but notes that the distortionary effect of the EIM's current algorithm results from a combination of three factors: 1) the fact that the EIM optimizes for least-cost dispatch across the combined EIM and CAISO footprints, 2) the fact that carbon costs are not assigned uniformly to generation and dispatch within this footprint, and 3) the ability of the EIM algorithm to assign output from EIM resources to California even where the output of the resource was previously scheduled to serve load in an EIM entity. Changing any one of these three factors may result in GHG accounting that is more in line with the AB32 goals, but may be have other consequences that make the solution impractical or politically unacceptable.

Many of the same GHG accounting issues that have arisen in the EIM will also need to be resolved for a regional ISO. To this end, WPTF suggest that GHG accounting in both the EIM and a regional ISO should conform to the following principles:

- Attribution of electricity to California load should not discriminate between California and external resources in providing opportunity to serve California load.
- The assignment of carbon compliance obligations to California resources and to imported electricity that serve California load should reflect actual emissions.
- EIM and Regional ISO market design should enable participating resources to accurately reflect carbon compliance costs in market bids for power that the resource offers to serve California load.
- Assignment of carbon costs and allocation of dispatched electricity to serve CAISO load in the market algorithm should not result in an increase in emissions in the market footprint due solely to displacement of generation from a California resources to a non-California resource.
- Market design should not impose carbon costs on resources that do not serve California load, nor on non-California load-serving entities.
- Market design should eliminate the potential for double-counting of electricity that is reported to CARB as an import on the basis of e-tags (e.g. the CAISO day-ahead and fifteen minute markets) and electricity that is reported to CARB as an export allocation via the EIM.

WPTF recognizes that these are complex issues. It is because of this complexity and the potential for unintended consequences for the energy market, that WPTF urges that the CAISO and CARB to work jointly to address these issues within the energy market design.

CARB should modify the regulation to avoid double imposition of carbon costs on imported electricity

Under the current program rules, imported electricity is exempted from a compliance obligation under the cap and trade program only if the resource is located in a jurisdiction that is fully (i.e. bilaterally) linked to California's program. CARB's proposed amendments address the possibility for more limited

(one-way) forms of linkage, but do not address the impacts of such linkages on emissions obligations for imported electricity.

WPTF anticipates that other jurisdictions in the west will impose carbon regulation over the coming decade. If generating resources in those jurisdictions participate in California power markets, they could incur duplicative carbon compliance costs – once at the generator level in the originating jurisdiction and again as an import to California. Indeed, this situation appears imminent if Washington proceeds with its proposed Clean Air Rule in 2017, and because Puget Sound Energy becomes an EIM entity, which is on track to occur as of October 1, 2016. Any double imposition of carbon costs will undermine the efficiency gains of electricity market integration, further distort dispatch and provide a strong disincentive for external resources to participate in the EIM or a regional ISO.

For these reasons, WPTF recommends that CARB develop provisions that enable electricity importers to reduce the emissions obligation associated with imported electricity by an amount commensurate to the carbon costs incurred for that electricity in the other jurisdiction, regardless of whether that jurisdiction is formally linked to California.

Clean Power Plan

WPTF supports inclusions of provisions for implementation of the Clean Power Plan (CPP) in the cap and trade program rules after 2020 and recommends that CARB include additional provisions to enable the California cap and trade program to be deemed 'trading-ready'. As we stated in previous comments[3], we believe that the additional changes needed to be trading-ready are minor, and would not in any way circumvent or prejudge the consideration of specific linkages as required by Senate Bill (SB) 1018.
We provide a more detailed discussion of these issues in separate comments on the proposed CPP compliance plan. With respect to the cap and trade amendments themselves, WPTF proposes 3 specific changes:

- Addition of a provision to allow electricity generating units (EGUs) to use allowances issued by other CPP states for compliance;
- Inclusion of the export/import adjustment parameter in the CPP backstop trigger; and
- Inclusion of a mechanism to adjust the quantity of CPP allowances under the backstop to account for any transfers of allowance between California and CPP states.

Addition of Provision to allow EGUs to use allowances issued by other CPP states

CARB has proposed new provisions in section 95943 that would enable entities to use compliance instruments issued by other programs pursuant to a 'Retirement-Only Limited Linkage" at such a time that the Board has approved such linkage.

WPTF recommends that CARB take the same approach to potential CPP linkages. Specifically, we recommend that CARB add language to section 95943 that would enable EGUs to use allowances issued by an external emission trading system to which the Board has approved a linkage under the CPP.

[3] https://www.arb.ca.gov/lists/com-attach/40-mrr-cpp-ct-amend-ws-U2BXfFRnUzlQewU0.pdf

Inclusion of the import/export adjustment parameter in the CPP Backstop Trigger

To be trading-ready, the backstop trigger would additionally need only to include consideration of the effect of net export/import adjustment on aggregated EGU emissions. WPTF therefore recommends that CARB modify the proposed language for section 95859(d) to include reference to the import/export adjustment:

> "By October 24 of the year after a compliance period ends, the Executive Officer shall compare the aggregate reported and verified emissions and assigned emissions for all affected EGUS for the compliance period, as modified by any allowance export/import adjustment, to the aggregate CPP backstop trigger established in Appendix D."

Mechanism to adjust the quantity of CPP allowances to account for trading with other CPP states

WPTF considers CARB's proposed backstop design that would require EGUs to comply with the broad cap and trade program and comply with an EGU-specific cap by also retiring CPP allowances, to be workable in the context of the broader California program. However, the proposed backstop design will require further modification to function if and when California's program is linked to other CPP trading programs.

If CARB approves linkage of the California cap and trade program to those of other CPP allowance trading states, then transfer of allowances between California and CPP states must be accounted through the allowance export/import adjustment. Because California would be operating as a state measures program, California's ongoing compliance with the CPP would be demonstrated by comparing glide path targets to aggregated EGU emissions, as adjusted by the export/ import adjustment.

If the backstop is triggered and in effect, California's compliance with the CPP would be demonstrated through individual EGU's retirement of EGU-only CPP allowances. (In effect, California's program would operate as an emission standard type program while the backstop is in place). The net allowance import/export adjustment would therefore not be applicable for tracking transfers during the backstop period. Instead, a mechanism would be needed to adjust the size of the CPP allowance pool to reflect transfers of allowances to and from other CPP states.

- Transfer of a California allowance by a California EGU to an EGU in another CPP state will reduce the quantity of allowances available in the overall cap and trade program, but will not reduce the quantity of CPP allowances available to California EGUs. CARB should therefore include a requirement that the transfer of allowances to a CPP state requires retirement of the equivalent quantity of CPP allowances by the transferring EGU.
- Similarly, acquisition of allowances from an EGU in another CPP state would result in additional compliance instruments for the EGU to comply with the broad program rules (thus freeing up allowances for use by other entities in the program), but would not increase the quantity of CPP allowances available for backstop compliance. CARB should therefore issue a corresponding CPP allowance for each allowance acquired by an EGU from another CPP state.

Other Proposed Amendments

Allocation of Allowances

The Staff Initial Statement of Reasons indicates that allocations to electric distribution utilities (EDU)will be adjusted after 2020 to account for elimination after 2020 of the Renewable Portfolio Standard

adjustment. WPTF supports this approach, *provided* that it results in equal treatment of all load-serving entities.

WPTF does not believe that the proposed framework for EDU allocation will result in equal treatment of energy service providers and community choice aggregators for the following reasons.

- **The process for determining the quantity of allowances allocated to EDUs collectively and individually is not transparent.** During the development of the current program, much of the allocation discussion happened in discussions between CARB and EDU behind closed doors. It was not clear how CARB accounted for different factors that impact costs for electricity ratepayers, nor how these factors relate to final EDU allocation quantities. The ISOR indicates that a similar approach will be taken for the post 2020 allocations: "staff proposes to continue allowance allocation to EDUs after 2020 using an approach based in part on the methodology used for 2013-2020 EDU allocations. Under such a proposal, the 2020 expected cost burden for each EDU would be the starting point for calculating post-2020 allowance allocations. Staff would propose to calculate the 2020 emissions cost burden for each EDU using load data from the California Energy Commission's (CEC) 2015 Energy Demand Forecast (CEC 2016) and resource data from 2015 S-2 forms, supplemented by additional data as needed."

- **It is not clear whether CARB's proposal to compensate EDUs via allocation for elimination of the RPS adjustment will also take into account ESP and CCA procurement.** The ISOR states that the regulation will be modified "to provide each EDU with an allowance allocation that accounts for RPS-eligible electricity that is purchased together with RECs but cannot be directly delivered to California, and eliminate the RPS adjustment from the Regulation." The ISOR does not indicate whether the allocation related to elimination of the RPS adjustment would also reflect impacts on ESPs and CCAs operating within EDU service territory.

If CARB provides any amount of allocation to EDUs to compensate for elimination of the RPS adjustment, then it is imperative that CARB provide equivalent allowance value to CCAs and ESPs. WPTF recommends that CARB take several steps to ensure that this outcome is achieved.

First, CARB must provide more transparency on the EDU allocation process and explain its methodologies for determining how factors such as changing load and renewable procurement are translated into collective and individual EDU allocations. CARB should also work with EDUs, ESPs and CCAs to quantify the allowance allocation needed to compensate for the elimination of the RPS adjustment.

Second, CARB should identify the proportion of allowances in each EDU allocation that represents compensation for RPS-eligible electricity that is purchased together with RECs but cannot be directly delivered to California.

Third, CARB should provide additional guidance to the CPUC to ensure that a proportional share of allowance value from the EDU allocation flows through to commercial and small industrial customers of ESPs and CCAs, which are not eligible for a direct allocation of allowances.

Alternatively, CARB should allow ESPs and CCAs to claim an adjustment equal to the amount/percent allowance allocation EDUs receive in lieu of the RPS adjustment.

Finally, given the complexity of these issues and the need to find a solution that is equitable for all LSEs, WPTF strongly encourages CARB to hold a dedicated workshop on the appropriate mechanism to compensate LSEs for costs incurred by the elimination of the RPS adjustment. If CARB cannot develop a solution to compensate for elimination of the RPS adjustment that is equitable across all LSEs, then ARB should not pursue it.

Allowance Price Containment Reserve (APCR)

WPTF supports CARB proposed consolidation of the existing three APCR tiers into a single tier. We also support limitation of the potential price spread between the allowance clearing price and the APCR price.

However, we are concerned that CARB has not provided any analysis to support $60 as the appropriate spread between auction and reserve allowance prices. Staff have also not provided an analytic basis for the proposal to place approximately 2% of the total 2021-2031 allowance budget into the APCR. WPTF requests that CARB provide its analysis and rationale for proposing these numbers. Additionally, we would like to better understand the implications, under a range of possible future market conditions, of the proposal that any allowances offered at auction that remain unsold 24 months be moved to the APCR.

Linkages

The proposed amendments maintain the linkage with the Quebec emission trading system, and anticipate linkage to the Ontario emission trading system. Additionally, CARB staff have proposed two new types of one-way linkages:

- A Retirement-only linkage that would enable compliance units generated by an external program to be used for compliance in California. This linkage would require an SB 1018 finding on stringency. This type of linkage would apply if and when CARB authorizes use of sectoral forestry offsets from programs such as the one in Acre Brazil.
- Additionally, CARB has proposed to allow Retirement-Only agreements that would enable California compliance instruments to be used by entities for compliance in external GHG programs, such as that being developed by the state of Washington. This type of agreement would not require a SB 1018 finding (since compliance instruments will not be coming into California), but would require a formal public process and board approval.

WPTF supports the inclusion of alternative models for linking of California's program to external emission trading programs. As we noted in our comments about the CPP above, we anticipate evolving carbon regulations and trading systems over the next decade. Some of these may be amenable to full linkage with California's program and others will not. Providing for different types of linkages creates more opportunities for harmonizing carbon regulations across jurisdictions. Although the "Retirement-Only Limited Linkage" is proposed as a vehicle for using tropical forestry offsets to be used in the California program, it could also be appropriate for other sectoral offsets.

With respect to the "Retirement-Only Agreement" WPTF also agrees with the proposed prohibition of use of California allowances for compliance by entities in external programs until and unless such a linkage is expressly approved following a public process. Because of the potential of such a linkage to

impact the availability and prices of allowances in California's program, the public process should give explicit consideration to these issues.