Comments of the Western Power Trading Forum to the Washington Department of Ecology on Issues Raised at the Centralized Electricity Markets Workshop

July 30,2025

The Western Power Trading Forum[1] (WPTF) appreciates the opportunity to provide input to the Washington Department of Ecology (Ecology) on issues discussed at the June 26th workshop on electricity imports and centralized electricity markets (CEMs). Our comments below address issues in the order they were presented at the workshop. We also provide comments on several other issues not discussed during the workshop at the end of the document.

Non-Retail Load within a Multi-Jurisdictional Retail Provider (MJRP)

Ecology proposes that when electricity is scheduled via an e-tag to a load in an MJRP Balancing Authority Area (BAA) that is not served by that MJRP, that the responsible electricity importer would be identified in the same way that other tagged imports are identified – that is the Purchasing-Selling Entity (PSE) on the last segment of the tag's physical path with the point of receipt (POR) located outside Washington and the point of delivery (POD) inside Washington.

WPTF's supports the proposed approach. However, in our September 2024 comments to Ecology we recommended that Ecology provide additional definitions for "Electricity generated outside Washington", "First point of delivery in Washington" and "Final point of delivery in Washington. Our recommended definitions, which reflect the approach described in the Electricity Imports Whitepaper, are reproduced below. Given the continued uncertainty regarding imports via the multistate transmissions systems, and treatment of electricity originating from or sinking to the multistate BAAs, we strongly encourage Ecology to provide more clarity by better defining these concepts in the reporting regulation. Subparagraph iv of our definition of "Final Point of Delivery in Washington" addresses Washington load in MJRPs that are not served by the MJRP. Our language would also cover Washington load in any multistate BAAs that may arise in the future, without the need to further revise the rule.

> "Electricity generated outside Washington state" means, for purposes of identifying imported electricity, other than that imported via centralized markets, electricity sourced from a generating facility or unit, or storage facility that is physically outside of Washington state, or sourced from a point of receipt that is construed to be

outside of Washington state. The following electricity is considered to be generated outside Washington:

a) electricity sourced from a point of receipt in a balancing authority area located entirely outside Washington;
b) electricity sourced from an identifiable generating facility or unit, or storage facility located outside Washington;
c) electricity sourced from a composite source POR in a multistate BAA, unless that entity demonstrates that the electricity is wheeled through the state or is separately accounted for under the chapter.

“Final point of delivery in Washington” means points of delivery that are considered to be inside Washington state for the purpose of identifying imported electricity, other than balancing energy and electricity imported through a centralized electricity market, and exported electricity. Final points of delivery in Washington are limited to:

i. A POR/POD within a balancing authority area located entirely in Washington;
ii. a POR/POD associated with a generating facility or unit, or storage facility, inside Washington within the balancing authority area of a Federal Power Marketing Administration;
iii. a POR/POD associated with a public body or cooperative customer or direct service industrial customer located in Washington within the BAA of a Federal Power Marketing Administration;
iv. A POR/POD for a discrete Washington load inside a multistate BAA operated by a MJRP or other entity, but not served by that entity
v. A POR/POD associated with a Washington generating facility or unit or storage facility located within a multistate BAA.

"First point of delivery in Washington" means, for purposes of determining the responsible electricity importer for electricity imports to Washington, the first defined point on the transmission system construed to be located inside Washington state ~~at which imported electricity may be measured~~, consistent with defined points that have been established through the affiliated registry. A first point of delivery in Washington is limited to:

i. A transmission POR/POD within a multistate BAA associated with the Mid-Columbia electricity trading hub (currently MIDC Remote, NWH, MIDC);
ii. A transmission POR/POD located inside Washington that is an interconnection point between a BAA located entirely in Washington and a multistate BAA or a BAA outside of Washington (currently BPAT.CHPD, BPAT.DOPD, BPAT.GCPD, BPAT.PSEI, BPAT.TPU, BPAT.SCL, or SCL.SYS); and
iii. Any transmission POR/POD that is a Final Point of Delivery in Washington (currently PSEI.SYS).

We also reiterate our request that Ecology develop, publish and maintain a mapping of Washington source, sink and transmission points, as bilateral scheduling practices frequently change.

Regarding Ecology's request for feedback on whether imports to Washington load within the MJRP BAAs can be identified via an e-tag, our understanding is that, regardless of the pathway, an e-tag would always be created and would enable identification of the import and importer.

Federal Power Marketing Agency Backstop

WPTF supports the proposed language and approach to defining the electricity importer if the Bonneville Power Administration (BPA) has not elected to comply with the Climate Act (CCA). However, upon further review of the language, we believe that it would be useful to clarify what is meant by 'a pro rata attribution of electricity' in subparagraph (b). To this end, we suggest the following modification to this sub-paragraph:

> (b) Where the imported electricity is not contracted to a Washington retail provider, the electricity importer is the retail provided that receives a pro-rata attribution of electricity by the market operator's Greenhouse Gas Reporting and Accounting Framework.

Regarding Ecology's questions, the market operator's greenhouse accounting framework would calculate each entity's pro-rata attribution of any surplus BPA electricity attributed to Washington. This pro-rata attribution would be reflected in the reports provided to individual utilities.

The retail provider that receives a pro rata attribution could be any retail provider in Washington that has a shortfall of committed generation relative to its load in that interval. Because (b) above clearly states that the electricity is not contracted, it is not type 1a or 1b in the Market's+ design, nor electricity that bypasses the counterfactual in the EDAM design. Rather, it is surplus electricity that should be allocated to any entity with a shortfall.

Balancing energy for resources located inside Washington within multistate BAAs

Ecology proposes not to include provisions to account for balancing energy for resources in Washington withing multistate BAAs. WPTF recognizes the challenges with determining the appropriate importer for this energy and agrees that for most resources, the associated emissions for balancing energy would be small (i.e. below 25,000 tons annually.) We also

agree that the issue will go away once all Washington load participates in a day-ahead market.

We therefore support Ecology's proposal but encourage Ecology to ensure that this approach does not imperil linkage to California's cap and trade program. Additionally, because Ecology had previously endorsed the Electricity Imports Whitepaper approach[1] and now proposed something different, Ecology should provide clarity in the regulation. Specifically, we suggest addition of a new subparagraph (v) to the definition of imported electricity:

> "Imported electricity does not include balancing energy provided to Washington resources located within a multistate BAA."

Lastly, for parity, Ecology should also clarify that the lesser-of calculation is not required for energy attributed to Washington by any non-emitting resources located outside Washington that participate in the day-ahead markets. (Since the lesser-of calculation specifically addresses the difference between scheduled delivery (e-tag) and metered output, this is consistent with the existing rule.)

Wheel throughs

WPTF supports Ecology's proposed definition of "common point", as well as clarification that wheel-throughs are only applicable to unspecified imports and exports.

We are, however, concerned that the calculation of the emission factor for Asset-Controlling Suppliers and MJRP's common system pool do not enable these entities to net their unspecified purchases and sales (e.g. the unspecified wheels through their respective system.) This inconsistent treatment is not fair to those entities or their customers, and it undermines the accuracy of the calculated emission factors and thus, emissions associated with electricity imported from these systems. We recommend that Ecology modify the regulation's emission factor calculations for ACS and MJRP's to provide for netting of unspecified purchases and sales within an hour.

We note that the concept of wheel-throughs is rooted in a bilateral contract/tagging practices; we do not believe that the wheel through concept will be applicable for transactions that occur fully within the day-ahead markets once Washington BAAs are participating in these markets. However, it may be necessary to consider wheels for

[1]The White Peper recommended that emissions associated with balancing energy provided to Washington resources within multistate BAAs should be reported, and that the PSE on the tag from the resource to the first Washington POD be considered the importer.

electricity that enters and leaves the market footprint once these market design features are adopted.

Options for EIM/EDAM treatment in 2026

Ecology has proposed 4 different options for the treatment of electricity imports via the EIM and EDAM in 2026. WPTF supports option (c) – no emergency rulemaking, and Ecology directs CAISO not to implement GHG design changes to enable specified attribution of imports to Washington in 2026. Our recommendation is based on our assessment that the EIM imports to and associated emissions are relatively small, and while imports and emissions associated with EDAM imports have the potential to be much larger, 2026 will only be a partial year, and currently Seattle City Light is the only BAA wholly in Washington that has signaled an intention to join that market. However, we encourage Ecology to confirm with CARB that maintaining a reporting only approach for both EIM and EDAM through 2026 will not hinder linkage to the California program.

Emissions Leakage

WPTF has significant concerns with Ecology's comparative assessment of the leakage risk of the Markets+ and EDAM GHG design, which we explain in the appendix. Our comments below address approaches to address leakage in the regulation.

Defining Legitimate Surplus Clean Imports

The GHG Design features of both day-ahead markets represent a significant improvement over the EIM design for the prevention of emissions leakage. However, the ultimate success of both of these markets in minimizing leakage will depend on clear regulatory guidance on when non-emitting energy can legitimately and appropriately be attributed to Washington. If electricity is attributed to Washington in accordance with Ecology regulations, then such attribution should be considered appropriate and not causing any emissions leakage.

WPTF considers that there should be two legitimate avenues for non-emitting electricity from resources outside the state to be attributed to Washington via the centralized markets: the electricity is contracted to a load-serving entity or the electricity is surplus to the obligations of the entity that offers the electricity. When electricity attributed to Washington meets either requirement, no emissions leakage should be considered to have occurred. We do not support making a distinction between type 1a and type 1b committed capacity in the Markets+ framework, as both types of energy must be owned or under contracted to a Washington load-serving entity. To give effect to the two types of legitimate

attribution of clean energy to Washington, we suggest that Ecology modify the definition of specified source:

> "Specified source of electricity" or "specified source" means a facility, unit, or asset controlling supplier that is permitted to be claimed as the source of electricity delivered. The reporting entity must have either full or partial ownership in the facility or a written power contract to procure electricity generated by that facility or unit or from an asset controlling supplier at the time of entry into the transaction to procure electricity. For electricity from a resource dispatched by a centralized electricity market, the reporting entity must indicate in the offer of the electricity to the market that the electricity is available to serve load in Washington. Electricity reported as specified source must be owned or contracted to a Washington load-serving entity or must be surplus electricity, as determined by Ecology.

Both SPP and CAISO have incorporated these two concepts within their market design. Both markets enable committed electricity (i.e. from owned or contracted resources) to be attributed into the GHG pricing zones. Markets+ provides several options for participating entities to designate and offer surplus electricity to the GHG Zone. While the EDAM design does not use the word surplus, per se, the counterfactual GHG reference pass and the BAA export constraint do in fact yield a crude (and costly) approximation of surplus electricity. SPP's model assumes that Ecology will define surplus clearly so that participating entities in that market can choose the appropriate way to designate surplus electricity. It also presumes that the approach used by entities to designate surplus is valid and in line with regulatory requirements.

In contrast, the EDAM design has already implicitly imposed a definition of surplus – electricity is surplus only when it is both in excess of the energy needed to serve load in the *entirety* of the market footprint outside of the GHG Zone, and in excess of the load of the BAA in which the resource is located. As WPTF has repeatedly stated, the EDAM design's implicit definition will raise costs for electricity consumers in Washington, because it means that the market footprint outside of Washington (and California) has first rights to any low-cost, non-emitting generation. So for instance, during periods when there is a glut of solar energy in the southwest, if those resources are fully dispatched in the GHG reference pass, none of that truly surplus electricity would be available to be attributed to Washington. The EDAM definition of surplus may also treat energy from resources that are cost-allocated to states other than Washington as serving Washington load, when they were intended to serve load in other parts of the BAA.

Ecology should not defer to CAISO's definition of surplus electricity, but should instead define it for Washington in the regulation and guidance documents. WPTF recommends that Ecology define surplus relative to the obligations on a resource or generation system,

and should take into account the different types of potential obligations on a resource, specifically:

- For IPP owned renewable resources, surplus electricity should be determined relative to the contractual obligations on the resource. Designation of surplus electricity should not be contingent on an export from a host BAA, as this makes the resource's ability to have energy attributed to the GHG zone beholden to the supply-load balance of the host BAA, which the resource owner does not control.
- For utility-owned renewable resources, the appropriate obligation should be any regulatory RPS/clean energy requirement or voluntary goal of the load-serving entity. Note that this should not be construed as requiring any test of surplus energy offers in any given market interval. Rather, the utility should be expected to be able to demonstrate to a verifier's satisfaction that it is adequately retaining renewable energy (i.e. by not offering surplus energy) to meet any applicable clean energy mandate or goal.
- For utility-owned hydroelectric systems, surplus should be considered relative to the utility's own load obligations and any specified sales to other entities.

We suggest that Ecology adopt this definition, define additional documentation requirements to support verification, and provide separate guidance to EPEs on the meaning of existing obligations.

> "Surplus electricity" means an amount of electricity generated by a resource or system in excess of the resource or system's existing obligations to provide electricity to purchasing entities. These obligations may include load, contractual obligations, or regulatory mandates.

No changes to the Market+ design would be needed to give effect to this definition within that market, as we anticipate that entities that offer surplus renewable electricity would designate the volume of surplus in their energy offers, and utility hydro systems could use the merit order determination of the surplus threshold. However, CAISO would need to modify the EDAM GHG Reference Pass to accommodate the Ecology rules. The simplest approach would be to allow entities that offer renewable electricity to indicate the volume of surplus energy. The BAA export constraint could support a load obligation text on hydro utilities but may need to be able to differentiate between hydroelectric and thermal resources in the utility portfolio.

Determining the appropriate emission factor for use in the market dispatch for unspecified imports

Ecology's presentation rightly recognized that the extent of emissions leakage due to unspecified imports depends on the emission factor used in the market dispatch to determine the volume of unspecified electricity imports. WPTF recommends that Ecology direct SPP to use a 'shaped' emission factor to calculate the GHG adder for unspecified electricity. Specifically, Ecology should request that the market operator determine three or four different emission factors (i.e. low, mid and high) that are representative of the marginal emission factor of dispatched resources during different supply/load conditions. SPP should select the emission factor to be used in each market interval based on forecast market conditions. We believe that the SPP GHG Taskforce will soon provide an opportunity to have an initial conversation on this topic.

Outstanding Emission Calculation

WPTF does not support adoption of an outstanding emission calculation at this time. The outstanding emission calculation was a response to deficiencies in the ability of the EIM to prevent emissions leakage. Because the approaches adopted in both EDAM and Markets+ are a significant improvement over EIM, it may not be necessary to adopt any additional measures to ensure that emissions are fully accounted. Instead, Ecology should monitor the performance of the markets in preventing emissions leakage after go-live and revisit this issue if necessary.

Defining the GHG Zone

WPTF agrees that there are likely economic efficiencies to be gained by delineating the Washington load of the MJRPs (or customers of BPA) within the centralized markets to enable the markets to dispatch and attribute specified or unspecified electricity to serve all Washington load. However, we are not convinced that it is feasible for the MJRPs to do this currently because of the need for the market operators to have the MJRP's metered Washington load or relatively accurate and granular (e.g. hourly) load forecasts. Further, it is not clear that the EDAM's current GHG design would enable the MJRP's to comply with their cost-allocation requirements between the states. Specifically, the EDAM design provides limited functionality to enable a resource owner to partially offer the output of the resource to a GHG zone, while ensuring that the remaining portion of the resource's output will not be attributed. (The Markets+ model has far more functionality in this regard.)

For this reason, we suggest that Ecology leave it up to the individual market participant as to whether to define Washington load within the GHG Zone. While this might miss some market efficiencies in the short term, allowing the MJRP's to continue to use the MJRP after

the fact reporting calculation would not result in any undercounting of emissions. (As an aside, we do not believe that this approach would be inconsistent with the statutory requirement. The statute directs that MJRP imports to Washington load must be regulated, but it says nothing about how these imports and associated emissions should be determined.)

Other Issues

WPTF would also like to reiterate our views on several other matters that have not yet been addressed in the workshop series. While Ecology's 2023 endorsement of the White Paper for reporting by EPEs was important in reducing uncertainty regarding transactions that are considered electricity imports and the entity responsible for the imports, this endorsement does not have the same weight as the reporting regulation. We therefore request that Ecology plan to address these issues at a future workshop, so that the concepts can be reflected in the revised reporting regulation.

Composite Source Import Accounting

The Electricity Imports White Paper attachment presented an example of how an entity that imports electricity to Washington from what the paper referred to as a "composite source POR" in a multistate BAA can demonstrate that a portion of the energy and associated emissions supporting that import has been separately accounted due to that energy being generated by a resource in Washington. Enabling entities importing from composite source PORS to deduct electricity and associated emissions from Washington resources is important to ensure that emissions are not overcounted and allowance retirement obligations are not imposed twice.

While the White Paper referred to this demonstration/calculation as a "lesser-of analysis" because it is analogous to how any emissions from imported non-emitting resources is calculated, we recognize that term may be confusing. For this reason, we instead suggest the term "composite source accounting". To enable entities to make this calculation, we recommend inclusion of the following in the revised reporting regulation.

- A new definition "Composite Source Point of Receipt or composite source POR" means a Point of Receipt at which electricity generated by multiple facilities or units is aggregated."
- A new subparagraph in the imported electricity definition that exempts electricity provided from Washington resources: "Imported electricity does not include electricity generated from a resource located in Washington and sourced from a composite source POR located within a multistate BAA."

- A new provision requiring documentation of composite source accounting:
  "Additional information to document electricity separately accounted for under this chapter. The EPE must separately report for each hour of the reporting year in a format designated by Ecology:
  1) The volume of electricity imports from a common source POR;
  2) The volume of electricity on the e-tag generated by a generating facility or unit, or storage facility located in Washington in the same hour, and
  3) The net volume of electricity imported from a common source POR after deduction of the volume of electricity in (b) above"

Direction to Market Operators to address electricity from Washington resources that is committed outside the state

WPTF remains concerned that the GHG pricing design in the centralized markets does not yet take into account any electricity from Washington resources that are committed outside of Washington. This includes both energy from resources that may be under specified contracts to load-serving entities in other states, as well as MJRP resources that are cost allocated to other states. Failure of the markets to deduct this energy from the supply that is considered to serve Washington load means that dispatch and attribution of energy may undercount both energy, and potentially emissions, needed to serve Washington load. This may in turn undermine accurate GHG price formation.

While SPP has indicated that it plans to address this concern in its upcoming work, we have not yet received such a commitment from CAISO. Ecology should encourage both market operators to develop means to ensure that MWs that are committed outside Washington are not considered to serve Washington load.

Define Electricity Importers at the most upstream point possible

The Electricity Imports White Paper flagged the inconsistent determination of the electricity importer to designated scheduling points within BPA (subparagraph viii of the electricity definition) with the overall First Jurisdictional Deliver approach of assigning the import obligation upstream where possible, and the recommendation of the White Paper that the MID-C scheduling points be considered the point of import for electricity that sinks in Washington and passes through those scheduling points. We have the same concern with subparagraph x of the electricity imports definition pertaining to consumer-owned utilities. Placing the compliance obligation on the downstream buyer (the utility or commercial and industrial load within BPA's BAA, or the consumer-owned utility) means that those entities will essentially be paying carbon costs twice when they purchase at the Mid-C hub. This is

because entities that offer electricity at Mid-C can be expected to include their anticipated carbon compliance costs in their offer price. The buyer could then incur additional compliance costs for the same energy.

To rectify this, we suggest that Ecology revise the regulation to provide that when these entities purchase electricity that has been scheduled via an upstream Point of Delivery (POD) in Washington, the entity to that first POD is the electricity importer, not the downstream buyer. We suggest the following revisions to the electricity importer to clarify this, and note that our proposed additional definition of first POD also supports this approach.

> (viii) For electricity that is imported into the state to a designated scheduling point inside the balancing authority area of a federal power marketing administration, and there is no POD in Washington earlier on the physical path of the e-tag, the importer is the purchasing-selling entity on the e-tag at the last point on the physical path that is not the sink;
>
> (x) For electricity from facilities allocated to a consumer-owned utility inside the state of Washington from a multijurisdictional consumer-owned utility, and there is no POD in Washington earlier on the physical path of the e-tag, the electricity importer is the consumer-owned utility inside the state of Washington.

Appendix: Response to the Assessment of Emissions in the Markets+ and EDAM GHG Design

WPTF provides this appendix to clarify and respond to assertions that we consider incorrect in Ecology's assessment of the ability of the Markets+ and EDAM GHG designs to address emissions leakage. Before providing our comments on specific points, we wish to make two general points. First, any assessment of the ability of either market's design to prevent emissions leakage should be made holistically, rather than with respect to individual features of the market design. Second, while WPTF does not favor one market over the other (and anticipate that our individual members will participate in both markets), we believe the SPPs Market+ GHG Design is far preferable to that of EDAM for several reasons:

1) the Markets+ design provides market participants with greater functionality to control the disposition of energy from resources (i.e. whether the electricity can, must, or must not be attributed to the GHG Zones),

2) we believe that because EDAM embeds GHG costs in the energy offers of resources located in the GHG zone that it will not provide accurate GHG shadow price formation,

3) the EDAM counterfactual approach will raise costs for electricity consumers in the GHG pricing states (see discussion of surplus electricity in main body of comments), and

4) the possibility of unspecified imports to the GHG Zone in Markets+ can reduce costs for Washington, and potentially emissions.

We strongly disagree with several of the assertions on slide 58 and 59.

- While the concept of committed energy exists in both markets, type 1a energy does not have a direct analogy in EIM/EDAM as the EIM/EDAM design does not require transmission to a GHG Zone BAA.
- Type 1b energy is no more subject to emissions leakage than 1a, as both types require that the energy is committed to Washington load. The limitation on attribution of 1a energy based on projected load was not intended to address emissions leakage in any way, nor will it. Rather, it was intended to help ensure that any carbon costs included in the 1a energy offers do not bleed into the external market in the event that the GHG zone exports energy.
- The ability of the mechanism for a resource operator to designate surplus to constrain emissions leakage is dependent on Ecology's adoption of clear

requirements for surplus energy, and verifiers checking that resource operators' procedures for determining surplus conform to Ecology requirements. It was intentionally developed as an approach that supports more nuanced considerations of what should be considered surplus, and to be applicable to resources owned by independent power producers. We see absolutely no analogy between this mechanism and the WEIM counterfactual of base schedules.

- The Market+ merit order surplus determination is also completely different than that of EDAM. In Markets+ the merit order determination compares a resource's projected dispatch to that needed from a utility's collective resources to meet its own load. In EDAM the surplus determination compares a resource's projected dispatch to that needed to meet the load of the *entire market footprint outside of the GHG zones*. The Markets+ merit order approach is more analogous to the export constraint within EDAM, but not identical, because the EDAM approach would also apply to IPP-owned resources within a BAA.
- If by 2-part surplus optimization, Ecology means the 'enhanced floating surplus, we again consider this far superior to EDAM's approach. In EDAM the attributable quantity of energy from a resource is the difference between the GHG reference pass dispatch and the resource's upper economic level. If this difference is say, 30 MW for a 100 MW resource, and the resource's actual output in real time is only 35 MW, EDAM could still attribute the full 30 MW to the GHG Zone. The Market+ enhanced floating surplus was developed explicitly to address this problem. While not perfect, WPTF is confident that it will do a better job of constraining leakage due to inappropriate attribution of energy below the surplus threshold of a resource than the EDAM design.
- There is no "gross GHG attribution limit" in EDAM. We suspect that Ecology is referring to the BAA export limit. This limit additionally constrains the attributable output of a particular resource to the export transfer from the host BAA.
- We acknowledge that CAISO currently calculates a secondary dispatch volume for use by CARB in the outstanding emissions calculation. However, we believe that this calculation is extremely crude, as it merely compares emissions associated with attributed MW to what would have occurred if emissions were assigned to all the attributed energy at the unspecified emission rate. Thus, the calculation does not in any way consider whether the attributed MW were appropriately attributed, due to being either committed capacity or legitimate surplus.