

RTO West Internal Seams

Definition and Assignment of Tasks

Definition:

Internal seams represent the control, planning and cost recovery boundaries between RTO operated transmission facilities and facilities that are either: (a) local distribution, (b) transmission facilities that are not specifically provided for in a TCA, or (c) generator tie-lines (integration facilities).

Reasons for internal seams include: (a) established jurisdictional boundaries between wholesale and retail service (may apply to jurisdictional or non-jurisdictional utilities), (b) impediments that prevent a utility from including its transmission facilities in the RTO (e.g. private-use limits on tax exempt facilities), or (c) points of integration for non-RTO electric system devices.

Island service provides for resolution of a specific type of internal seams issue that involves a non-participating transmission owner.

Issues for Seams Working Group Resolution

1. Price Reciprocity for Island Service Customers and Local Distribution Systems

Because there is no TCA with island service customers or the operators of local distribution systems, cost recovery for their facilities does not occur through the RTO revenue recovery mechanism. The customers of the "island" or distribution utility bear the cost of these internal facilities and yet must pay the RTO for wheeling to/from their tie-lines.

Power flow interactions may be demonstrated by nomogram relations.

2. Dispute Resolution

When the existence of internal seams create operational problems or economic conditions that result in disputes, parties should initially attempt to resolve the dispute through the RTO dispute resolution procedure. For example, a non-participating transmission owner may affect RTO operations by its internal control actions. The dispute resolution process may be invoked to address this type of situation. Parties generally do not foreclose any option to take issues to FERC for resolution.

Issues for Resolution by other RTO West Working Groups

Control Hierarchy

To the extent that there might be multiple control areas within the RTO boundary, there will be internal seams issues related to generation control, does the RTO send AGC signals directly to the generators, or does the RTO control generators through existing control area facilities, will there be a single area control error or multiple area control area calculations within the RTO boundaries?

Legal and Implementation Working Groups need to solve this item. Bucket 2.

Planning

With respect to planning, the division of roles and responsibilities will need to be defined for planning of transmission facilities within the RTO boundary. How will conflicts between bulk transmission planning and facilities to maintain reliable local area service be resolved?

Make sure that Transmission Planning Group picks up this issue. Bucket 2.

Cost Recovery

With respect to tariffs, one issue will be agreements between the ITC (and other transmission owners) and the ISO to ensure the ITC (TOs) receives its revenue requirement.

Bucket 2 Transmission Pricing and Legal.

Other Operational Seams Issues

Emergency re-dispatch—Implementation working group

Disturbance/Restoration—Impl working group

Voltage control—Impl WG

Island Service Characteristics:

When internal seams create "island service" issues, the following may be true:

- Because there is no TCA, cost recovery for the "island" facilities does not occur through the RTO revenue recovery mechanism. The customers of the "island" utility bear the cost of these internal facilities and must pay the RTO for wheeling to/from their tie-lines. Price reciprocity question—Bucket 6. Also may have an interaction by nomogram relations.
- Parallel paths may affect power flows through the island. These can be monitored by the RTO for system security assessments, but the entity controlling the "island" controls the breakers and other devices that affect parallel flows. May need to differentiate by type of island/problem. Implementation, Planning and Congestion Management issues—Bucket 2. Monitoring—Implementation, protection coordination settings—planning, nomo interaction—CMWG.

- Losses inside the island cannot be assumed to either increase or decrease due to parallel flows caused by the external RTO controlled system. Not sure where off-system losses will be dealt with. Bucket 2-- Maybe Transmission Pricing and CM groups will deal with.
- In the case of small utilities with subtransmission systems, Remedial Action Schemes (RAS) may limit the contingency flows caused by the RTO controlled system. This is a rating issue that needs to be dealt with between the island and the RTO. Affects path ratings and planning. Bucket 2—Planning and CM.
- There may be situations where the "island" facilities are required by the regional network to carry significant power flows and/or enhance transfer capabilities across rated paths. In these situations a market power test may be required to determine whether the "island" facilities can be used to artificially raise prices in markets subject to FERC jurisdiction or create undue discrimination in transmission service markets. Market Monitoring. Entities located in the RTO may be able to manipulate prices by changing operations. Generators may be able to exercise market power (horizontal) or transmission (within) an island may create market power problem. Bucket 2 – market monitoring and ancillary services.
- "Islands" may be able to self-provide ancillary services needed for their internal and wheeling requirements. Not a seams issue, it's an attribute of an island that the ASWG needs to be aware of these characteristics.
- "Islands" may be able to provide ancillary services to the RTO market.

At one extreme, an island can be a small municipality that has one or more delivery point, yet has no measurable effect on the transmission system. At the other extreme, an island could be a control area that can measurably affect the regional transmission system by its internal control actions. Unlike the obvious characteristics of the external seams that separate an RTO from the rest of the Interconnection, the nature of the internal seams created by these two entities are vastly different.

16 control areas (8 are in the FU group). The world around them changes. What are the contractual issues that move
Break for lunch

Subgroup Discussions:

Non-jurisdictional transmission owners may not participate in an RTO. For that matter, jurisdictional transmission owners within the boundary of an RTO may file with FERC to not be included or to be included in a different RTO. These situations could cause problems for transmission users such that the RTO may not be beneficial, thus it may be opposed by some users. The RTO needs to be prepared to petition FERC on why an owner, within the boundary, should be a member of the RTO. The RTO is responsible to mitigate these problems.

Internally, the RTO could face all aspects of items #2, #3, #4, #6, #7, #10, #13 and #23 of the Draft Consensus Issues List if all transmission users within the boundary of the RTO are not participants.

If it is assumed that all owners are members of the RTO then seams issues arise if there is no agreement with regard to:

- facilities inclusion (distinction between distribution and transmission),
- control area functions (need to be looked at as they pertain to the current definition of ancillary services),
- firm transmission rights as well as existing contracts,
- transmission owners and users that operate in two or more RTOs will highlight the problems of RTO seams if not discussed as an internal issue.
- transmission losses throughout the RTO (e.g. how to avoid pancaking),
- Planning,
- Generation and load integration,
- Operations.

All of these items will be discussed by the various work groups. The RTO must recognize and manage the potential that the transmission owners within its boundary may not be participating members.