

Development Staging Table – Final Version

Acronyms Used:

IE = Independent Entity
 ADR = Alternate Dispute Resolution
 → = Steps and timing to be determined

TOs = Transmission Owners
 CAO = Control Area Operator
 A/S = Ancillary Services

DA = Day-Ahead
 HA = Hour-Ahead
 RT = Real-Time

<i>Functions and Features</i>	<i>Independence Important</i>	<i>Single Entity Needed</i>	<i>Stakeholder Identified Problems, Needs and Reasons to Improve</i>	<i>Beginning State</i>	<i>Interim State</i>	<i>Advanced Target State</i>
1. Transmission Service						
1.1 Reliability Coordination	X	X	Limited operational data available to reliability coordinator and CAOs. Since there is no day-ahead look, congestion becomes apparent and is managed in real-time. Difficult to coordinate operations between CAOs. Real-time congestion is managed only by ineffective curtailments, and parties are unsure of reasons for and fairness of curtailments.	PNSC continues to handle with revisions to address scope and effectiveness.	→	Reliability coordination integrated with operations.
1.2 Physical Interconnection	X		Long queues for interconnection requests and fairness concerns.	TO processes requests with IE providing coordination, oversight and IE ADR for disputes.	IE administered process with TOs working out physical detail and IE ADR for disputes.	IE administered process with TOs working out physical detail and IE ADR for disputes.

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1.3 Transmission Service Requests <i>(Single Access Platform or One-Stop Shopping)</i>	X	X	Difficult to arrange multiple reservations for transmission services, and no integration of multiple service requests. Long request queues with separate processing by each TO create transactional friction.	Requests go to IE, which integrates requests and facilitates processing by TOs.	Medium Term Transmission Right Auction added.	IE provides service and access to TO facilities. <i>(Expectation that the approach would reflect resolution of facilities inclusions issues.)</i>
1.4 Tariff Administration	X	X	Differences in practice and application between providers.	Modified individual TO Tariffs with an IE tariff for services provided.	→	Single IE Tariff.
1.5 Nature of New Transmission Rights and Management of TTC/ATC	X	X	The mismatch between contract paths and actual flows creates reliability problems and results in underutilized capacity. <i>(Path MW capacity allocated among owners.)</i>	Injection/Withdrawal Rights based on a single system evaluation. (These are not flow gate rights and existing rights are not converted.) <i>(IE arranges new service among TOs to include allocation of shares of service and \$'s among TOs.)</i>	Medium Term Transmission Right Auction added.	Financial rights with locational prices Transition to financial rights needs effective markets, and is subject to the TSC "Special Issues" vote. <i>(See discussion in Section 11 on Governance.)</i>

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1.6 DA Scheduling, Congestion Management and Redispatch (<i>Balanced Submissions</i>)	X	X	<p>The lack of a system wide view of reliability implications of combined schedules requires greater capacity margins and impedes best use of the transmission system.</p> <p>TOs manage congestion internally which produces inadequate price signals and a lack of transparency, so parties cannot make best decisions about deployment of resources.</p>	<p>Step 1 TO reviews pre-existing right schedules, IE takes added schedules, accepts inc/dec bids, tests feasibility for accepting bids which can be enabled by redispatch (enabling trades between willing buyers and sellers and de-facto transmission service which enables those trades).</p> <p>Step 2 IE begins to check in pre-existing schedule rights in parallel with TOs.</p> <p>Step 3 Inventory of rights by IE and TOs completed</p> <p>Step 4 IE takes over the review of pre-existing rights in scheduling process. (<i>Completed no later than 2 years after start of operation.</i>)</p>	→	<p>Manage congestion using market mechanisms. (<i>Congestion charges with financial right hedges.</i>)</p> <p><i>See Section 11 on Governance for discussion of transition to financial rights.</i></p>

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2. Planning and Expansion						
2.1 Planning	X	X	A single system viewpoint needed w/o commercial bias.	IE begins producing an annual plan, expanding upon the cooperative planning processes in place prior to start of IE operation. (See Stage 2 proposal for details.)	Continues with annual planning.	Continues with annual planning.
2.2 Expansion	X	X	Lagging infrastructure investment. Mismatch between ownership and solutions.	Injection/ withdrawal rights for new construction. (Convertible to financial rights if and when transition occurs. See Section 11 on Governance for details.) Backstop for reliability and TTC maintenance.	→	Backstop for Chronic Commercial Congestion when needed subject to TSC “Special Issues” voting process. (See Stage 2 Proposal for details.)
3. Control Area Operations (Services for Voluntary Consolidation)	X	Yes for consolidators	Opportunities for more efficient operations, and operational challenges with standards of conduct.	IE allowed to provide control area services to CAOs who voluntarily consolidate and operate markets needed in consolidated control area. (Moves from RTOW Stage 2 model with all PTOs consolidating to mixed model with some consolidating and others do not. The mixed approach has implications for many subjects (control area ops, trans. serv., A/S, fixed cost recovery, etc.) Added work needed for consistency between subject areas.)	→ Additional CAOs may choose to consolidate.	IE operates single control area for CAOs who choose voluntary consolidation.

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4. Energy Markets						
4.1 Real-Time Energy (Balancing Energy)	X	X	Internalized by CAO with limited ability of non-CAOs to participate.	Within consolidated control areas, balancing market initiated, with market opened to others who pay fees associated with cost of market operation. (Tariff rates apply to users' imbalances and penalties.)	Balancing market prices used as tariff rate for imbalances within consolidated control areas.	Integrated capacity and energy markets operated by IE with voluntary participation.
4.2 Hour-Ahead Energy		X	Difficult to find counter parties; geographically limited options.	Bilateral arrangements between parties. (Tariffs cover users' imbalances and penalties)	Voluntary HA market added. (Allows users to mitigate imbalance costs)	Voluntary HA market included in integrated markets
4.3 Day-Ahead Energy		X	Difficult to find counter parties; geographically limited options.	Scheduled bilateral transactions plus inc/dec redispatch auction market which is based on voluntary bids and facilitates willing buyer-willing seller trades.	→	Scheduled bilaterals and integrated energy and capacity markets with voluntary participation (with possible unbalanced schedule submissions)
5. A/S—Capacity Related (Operating Reserves, Regulation, Load Following, and Reactive Supply))	X	X	Market access to A/S is limited with technical barriers.	Within consolidated control areas, markets added as needed, with markets opened to others who pay fees associated with cost of market operation. (Section 4.1 RT Energy for discussion of balancing energy.)	General Capacity Related A/S Markets	Integrated capacity and energy markets

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6. Market Monitoring	X		Complaints to FERC with post-mortem remedies are ineffective.	Start examinations based on available data.	Expand monitoring activity to additional markets. Subject to TSC “Special Issues” voting process to impose penalties. (See Sec. 11 discussion)	Full market monitoring of capacity and energy markets.
7. Cost Recovery						
7.1 Fixed Cost Recovery		X	<u>Rate Pancaking:</u> <ul style="list-style-type: none"> • Volumetric recovery of fixed costs imposes barriers to efficient dispatch. • Adds complexity to transactions. • Lost buy/sell opportunities. 	Preference for authorizing Company Rate approach in beginning state. (<i>Depancaking volumetric charges of fixed costs with license plate rates and cost shift minimization. Need to consider how to modify to work with a mixture of consolidated and unconsolidated control areas.</i>)	Change to method other than Company Rates cannot be considered for eight years from start of operation and will require TSC “Special Issue” voting process	Company Rate unless modified.
7.2 Losses		X	Loss effects and the recovery of losses don't match, which causes economic inefficiency.	(1) Existing contracts – as defined in contract. (2) New long-term service – follows revenue allocation structure (3) Short-term auction sales – flow-weighted tariff loss factors for facilities affected for given injection/withdrawal points. (Subject to technical check and detail development). <i>(There is concern from one group about continuing with pancaked loss recovery.)</i>	IE develops new loss methodology within three years whose adoption is subject to the TSC “Special Issues” voting process.	Loss methodology matching cause and effect and consistent with energy and capacity market operation.

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7.3 Entity Cost Recovery				(1) IE has a tariff for grid management fee. (2) Contract services (e.g. for consolidating control areas) paid by contracting parties.		
8. Regional ADR			Need commitment to settle disputes within the Region rather than take disputes to FERC or 9 th Circuit.	ADR included in the IE's provisions.	ADR included in the IE's provisions.	ADR included in the IE's provisions.
9. Regional Data Repository	X		Under current conditions, complete relevant data cannot be collected because parties are unwilling to share commercially sensitive data with competitors. Contracts do not require data exchange or disclosure.	Data repository initiated for planning, operations and for transmission auction—inc/dec market.	Data repository expanded for additional markets.	Full data repository for market monitoring, planning and operations.
10. Coordination						
10.1 Inter-Regional Coordination		X	Difficult to make interconnection-wide transactions. No consolidated way to deal with CAISO, Southwest, etc.	SSGWI as the forum for resolving external seams issue.	→	→
10.2 Intra-Regional Coordination			Multiple parties, rules and organizations are unable to deal with above problems.	Process to be developed.	→	→

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11. Governance of Independent Entity	X	X	Independence needed to implement above indicated features and a single regional entity to implement other features; desire for greater regional accountability.	Stage 2 governance (e.g., region elects board through TSC with limited, staggered terms) with modifications: <ul style="list-style-type: none"> • TSC “Special Issues” voting process for identified transitions. • Mandatory consultation with states, provinces (and tribes with applicable regulatory jurisdiction.) 		
11.1 TSC “Special Issues” Voting			Concern about regional accountability before key changes in authority are made.	<ul style="list-style-type: none"> • The Board must vote by at least a simple majority to approve an issue on the “Special Issues” List. • Advance notice provided to the TSC and stakeholders. • After the Board votes, the TSC votes on whether it supports the Board’s decision. • A TSC vote can remand the issue to the Board for a second Board vote, without regard for the number of yes votes on the initial Board vote, if either of the following tests is satisfied, <ul style="list-style-type: none"> ○ At least 16 TSC members vote to reject the Board’s decision AND at least one class votes unanimously to reject the Board’s decision (six class votes) OR ○ At least 20 of the TSC members votes to reject the Board’s decision • THEN the Board must vote again on the matter and obtain at least seven Board member votes before it can implement the decision. 		
11.2 “Special Issues” List			Concern about regional accountability before key changes in authority are made.	<ul style="list-style-type: none"> • <i>Issue 1</i> – Authorization to exercise “backstop” measures with respect to “chronic, significant commercial congestion” (<i>See Stage 2 Proposal for details</i>) – a one time vote to grant authority. • <i>Issue 2</i> – Departure from using Company Rate approach to recover fixed costs – a one time vote to grant authority. • <i>Issue 3</i> – Authorization for the IE to convert the transmission rights of the transmission owners to financial rights and to issue new financial rights (<i>See Section 11.3 for details on votes</i>). • <i>Issue 4</i> – Authorization for the IE’s Market Monitor to impose penalties or actively intervene in markets – a one time vote. • <i>Issue 5</i> – Authorization for the IE to adopt and enforce loss methodology that overrides individual company loss methodology – a one time vote. 		

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11.3 TSC Vote Timelines			Concern about regional accountability before key changes in authority are made.	<p><i>Issue 1 (Authorization to exercise congestion “backstop” measures) – No sooner than when congestion management with transparent pricing is in place; after that, as needed (i.e., Board decides).</i></p> <p><i>Issue 2 (Shift away from Company Rates) – at eight years following operational start-up, the Board must propose whether to change or not (mandatory review).</i></p> <p><i>Issues 3 (Authorization for the IE to convert the transmission rights of the transmission owners to financial rights and to issue new financial rights).</i></p> <p>By no later than the end of three years following operational start-up, the Board must complete an evaluation of whether it is feasible and it makes sense to transition to financial rights congestion management. <i>[Guidance to the Board: Part of this evaluation should include assessing whether the markets necessary to support financial transmission rights (such as voluntary bidding to redispatch generators and dispatchable loads) are in place, thoroughly tested, and functioning well at the time of the proposed transition, and whether both the IE and system users have sufficient experience with the markets to understand how they work and how to use them.]</i></p> <p>No later than six months following its initial evaluation, if the Board finds that the transition is feasible and makes sense, it must propose to make the transition.</p> <p>If the Board finds that it is either not feasible or does not make sense (or both), the Board does not propose to make the transition, but it must review its decision every two years thereafter.</p> <p><i>Issues 4 (Market monitor gets authority to impose penalties or actively intervene in market) – as needed (Board decides).</i></p> <p><i>Issue 5 (IE can adopt and enforce a loss methodology that overrides individual company methodology) – No later than three years following operational start-up.</i></p>		