



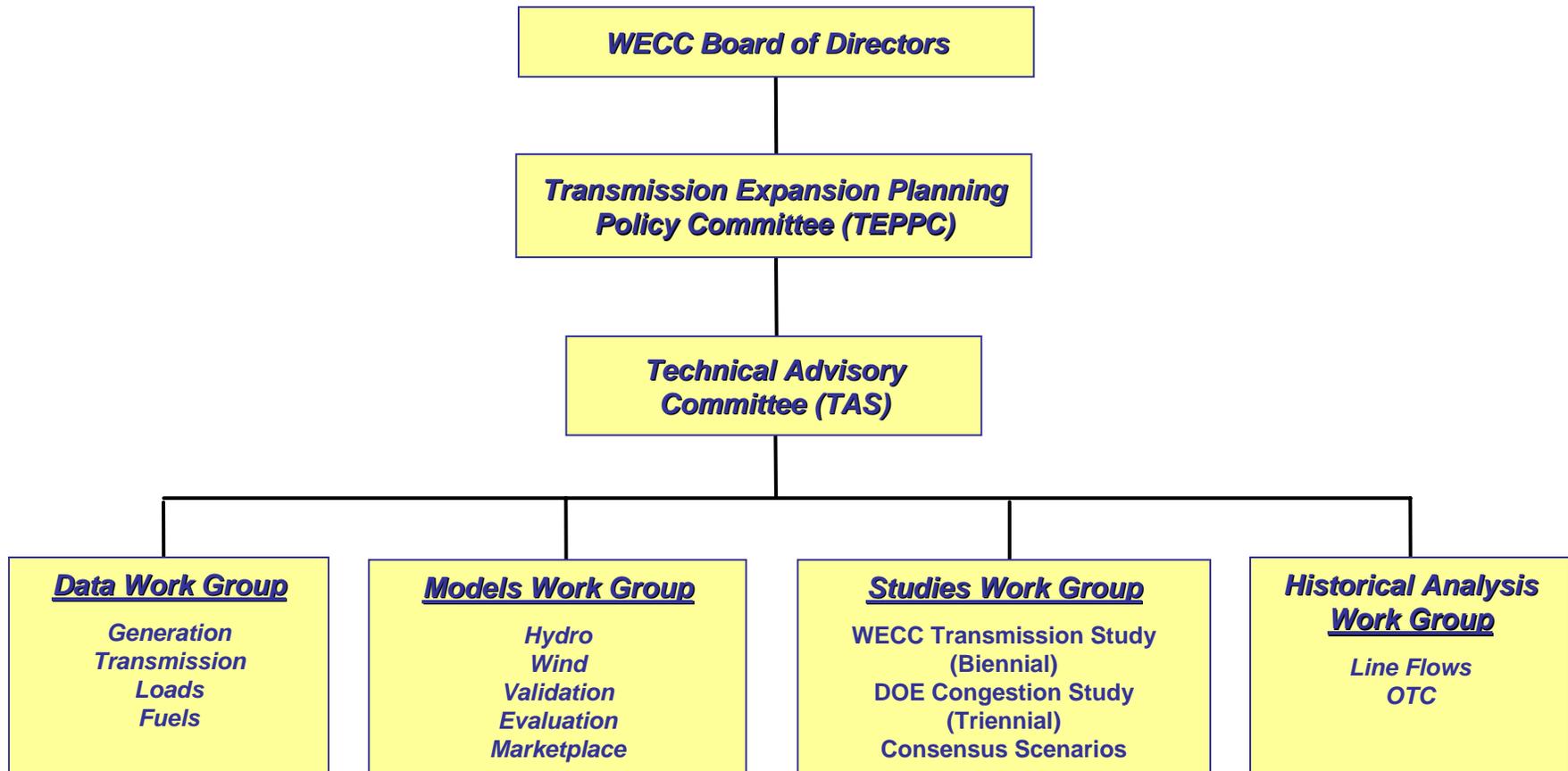
WECC - TEPPC

TEPPC Transmission Planning Protocol: An Overview

**Presented at FERC Technical Conference by
Steven L. Walton, TEPPC Facilitator
October 23, 2007 – Denver, CO**



Committee Structure





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TEPPC Protocol Purpose and Objective

- ***To govern the process used by WECC/TEPPC to support transmission providers Attachment Ks.***
- ***TEPPC's support includes:***
 - ✓ ***Preparing and making a transmission economic planning database available,***
 - ✓ ***Conducting transmission economic expansion studies as part of a Western Interconnection synchronized study cycle and***
 - ✓ ***Facilitating collaborative efforts among sub-regional planning groups within the Western Interconnection.***



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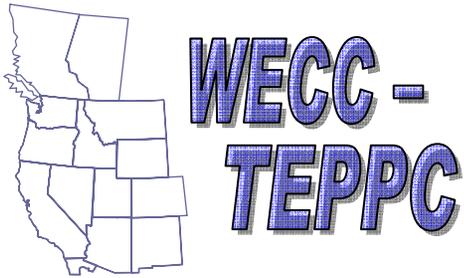
The Protocol Sections

- 1. Purpose and Objectives***
- 2. Conformance with Applicable Criteria***
- 3. WECC and TEPPC Organizational Descriptions***
- 4. Relationship to Sub-regional Planning Groups and Transmission Providers***
- 5. A Cohesive Approach to Congestion Studies***
- 6. TEPPC Activities in Support of Study Plan***
- 7. Communications and Collaboration***
- 8. Cost Allocation***

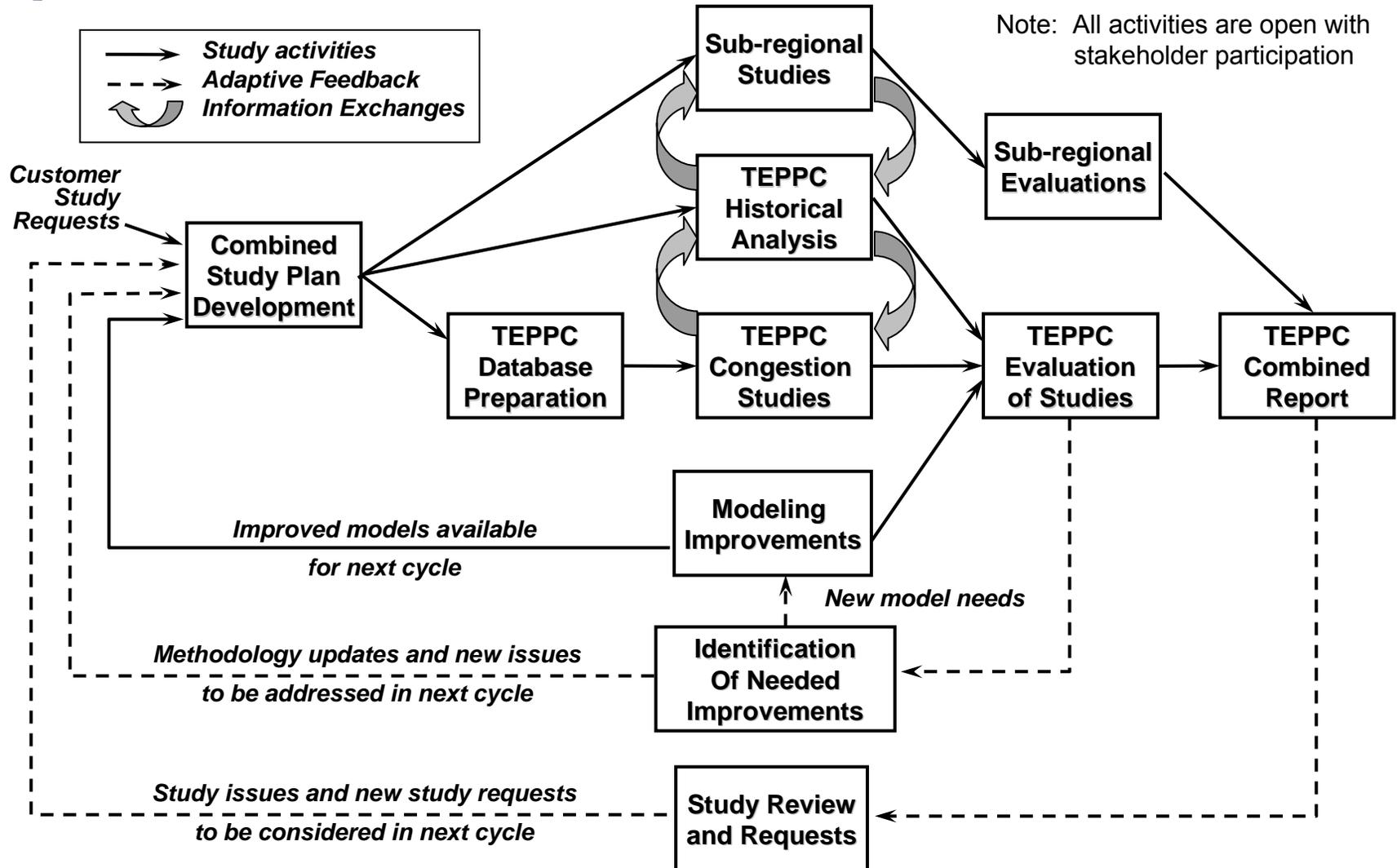


A Cohesive Approach to Congestion Studies

- ***Principle: Make best use of available resources through a synchronized study process that links TEPPC, sub-regional planning groups (SPGs) and transmission provider (TP) efforts.***
- ***Implementation using:***
 - ✓ ***TEPPC database for production cost simulation for congestion evaluations.***
 - ✓ ***Clustering, consolidation and prioritization of all stakeholder study requests.***
 - ✓ ***Division of responsibility for study completion with ongoing coordination of study efforts.***
 - ✓ ***An annual study cycle with a common timeline.***



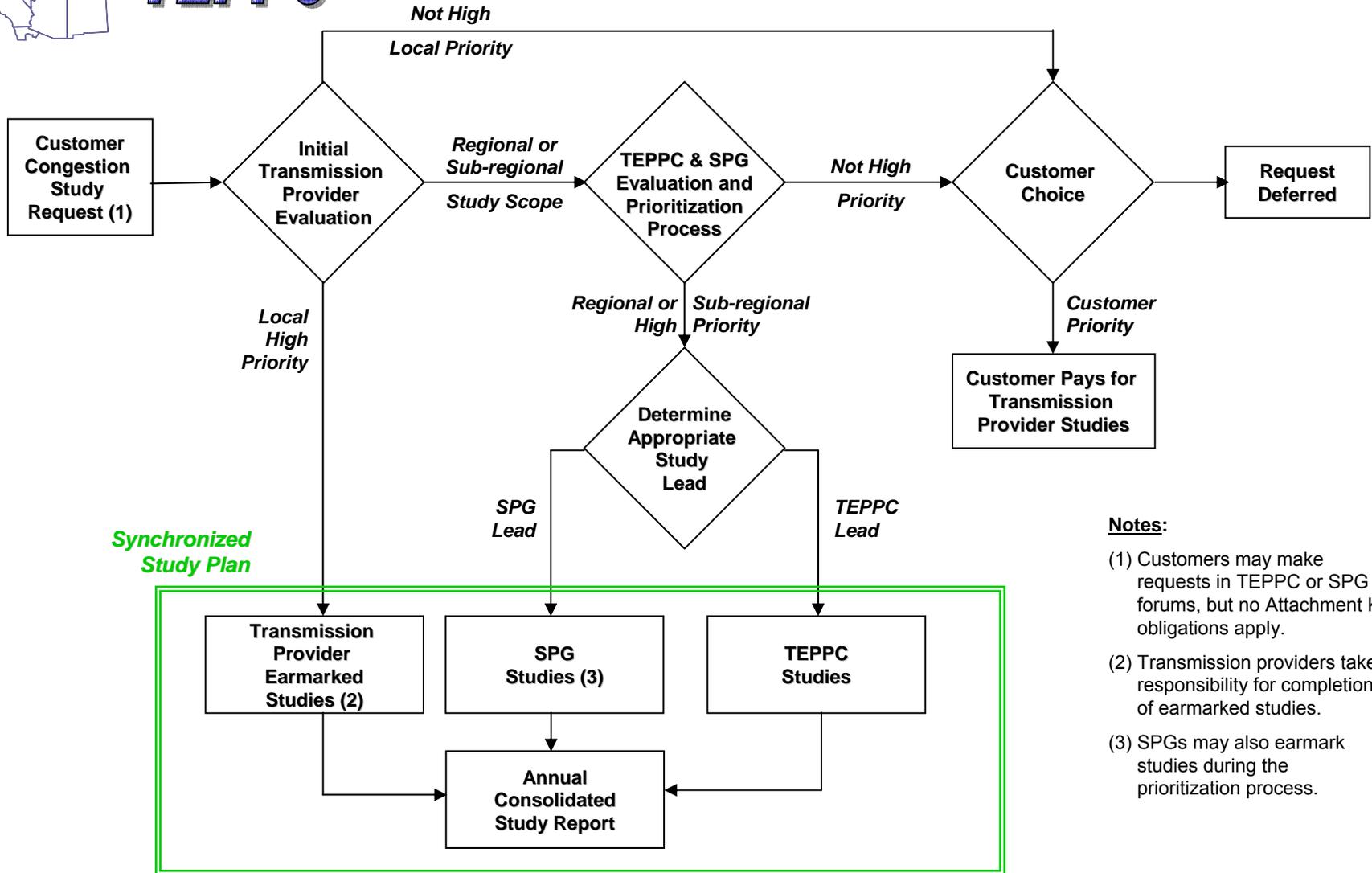
An Annual Synchronized Study Cycle





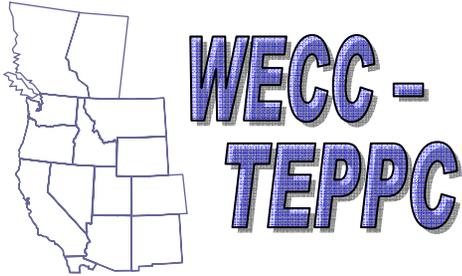
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Combined Study Plan Development and Congestion Study Request Process



Notes:

- (1) Customers may make requests in TEPPC or SPG forums, but no Attachment K obligations apply.
- (2) Transmission providers take responsibility for completion of earmarked studies.
- (3) SPGs may also earmark studies during the prioritization process.



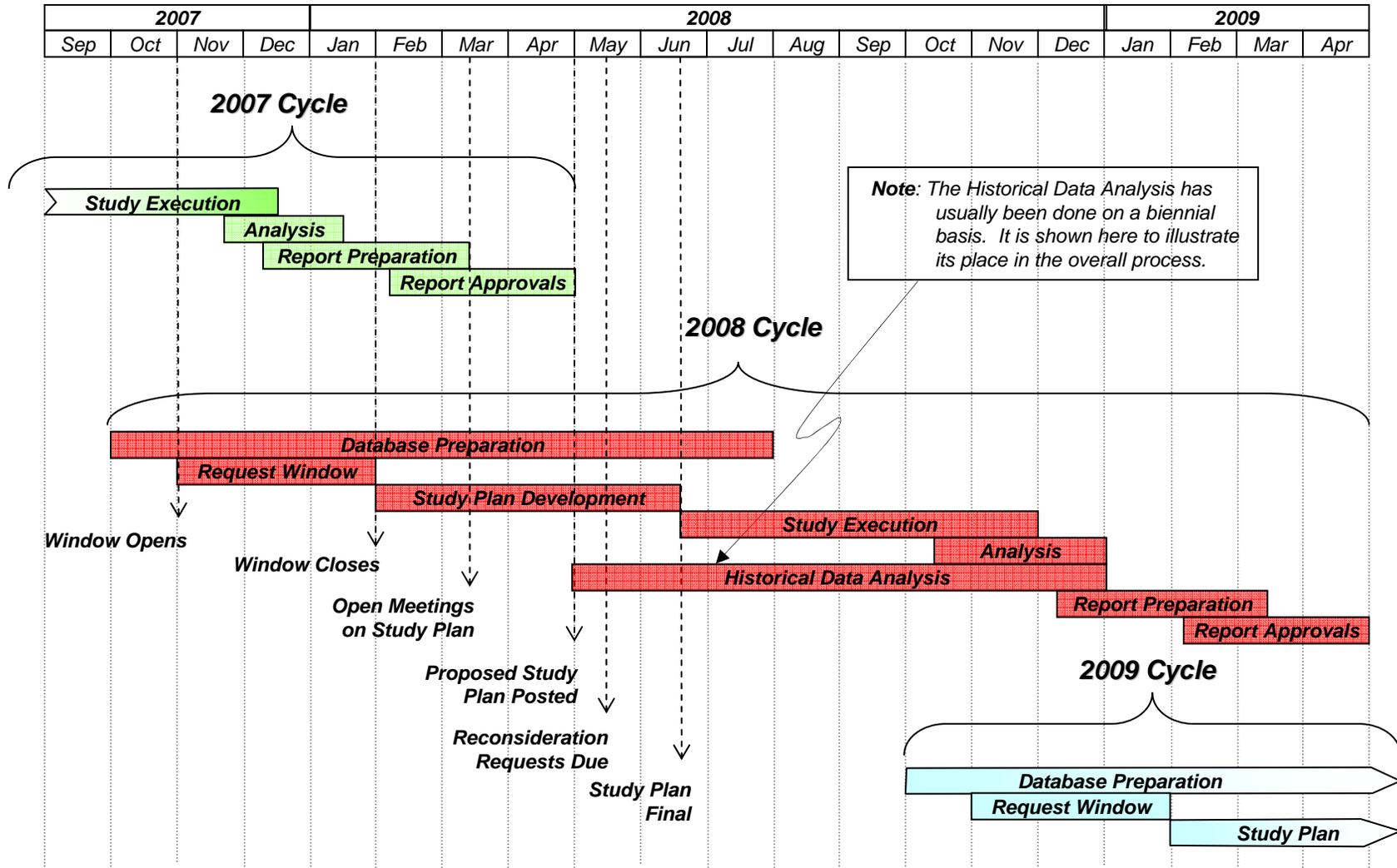
Clustering, Combination and Prioritization of Study Requests

- **All requests received by TPs are submitted to TEPPC:**
 - ✓ *Requests reviewed by TPs or SPGs prior to submission and earmarked as appropriate.*
 - ✓ *Completion of earmarked studies become the responsibility of the entity who applied the eartag but results will be included in TEPPC reports.*
- **TEPPC's Technical Advisory Subcommittee (TAS) forms single combined study request list:**
 - ✓ *Potential clustering or consolidation identified.*
 - ✓ *Combined list distributed for review.*
- **Public meeting(s):**
 - ✓ *Potential TAS clustering presented.*
 - ✓ *Discussion among all stakeholders of proposed clustering, consolidation and study priorities.*
- **TEPPC posts proposed study plan using input received:**
 - ✓ *Interval allowed for stakeholders requests for reconsideration.*
 - ✓ *Final plan posted by TEPPC.*
 - ✓ *Parties dissatisfied with final plan may used WECC dispute resolution process for mediation or arbitration of a dispute.*



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Synchronized Study Timeline





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WECC Regional Planning Process Sequence

Stages	Needs	Formation	Technical Studies	Licensing	Construction
Synchronized Study Plan	Screening Studies				
Project Planning Review		Regional Planning Guidelines Assessment			
Project Path Rating Review			Phase 1 Proposed Rating	Phase 2 Planned Rating	Phase 3 Accepted Rating
Progress Reports		Annual Reports Required Throughout Planning Process			

Column Heading Notes:

Needs = Examination of potential long-term transmission needs.

Formation = Development of proposals of specific project proposals by sponsors.

Technical Studies = Power flow and dynamic stability studies.

Licensing = Project sponsor activities to obtain rights-of-way, certificates of purpose and necessity, etc.

Construction = Building of foundations, towers, conductor, substations, etc.



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The Four Part WECC Regional Planning Process

1. Synchronized Study Plan (TEPPC)

- ✓ ***Long range focus on congestion and economic expansion of transmission – screening studies.***

2. Project Planning Reviews (PCC)

- ✓ ***Project specific forums that provide interaction between transmission project sponsors and stakeholders with an interest in a given project.***
- ✓ ***Project review guidelines provide for consideration of benefits, impacts on operational constraints, alternative approaches, efficient use of corridors, etc.***

3. Project Rating Review (PPC)

- ✓ ***Phase 1 – Proposed Rating***
- ✓ ***Phase 2 – Planned Rating***
- ✓ ***Phase 3 – Accepted Rating***

4. Annual Progress Reports (PPC)

- ✓ ***Ongoing process for tracking project from initial planning through construction to operation.***



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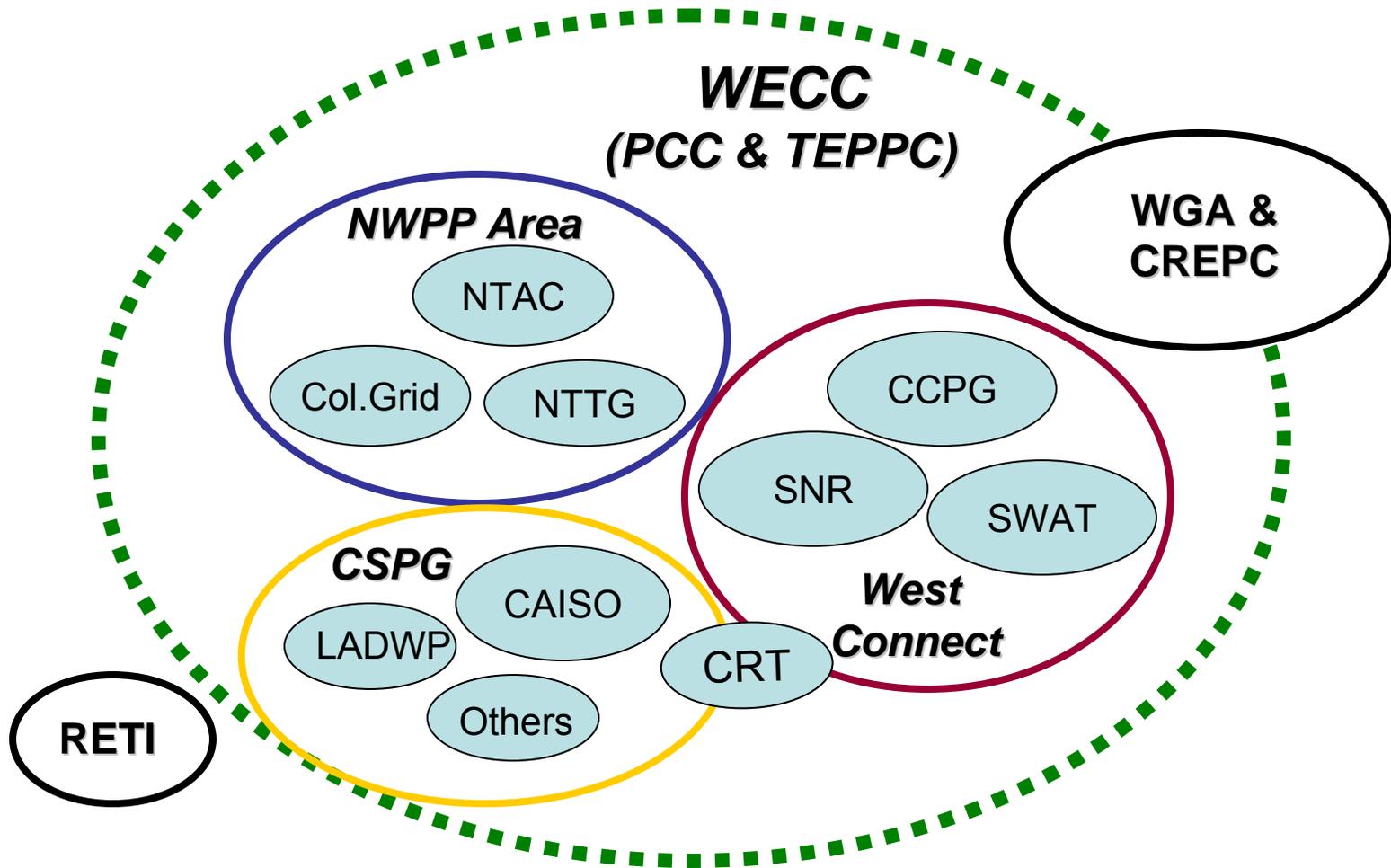
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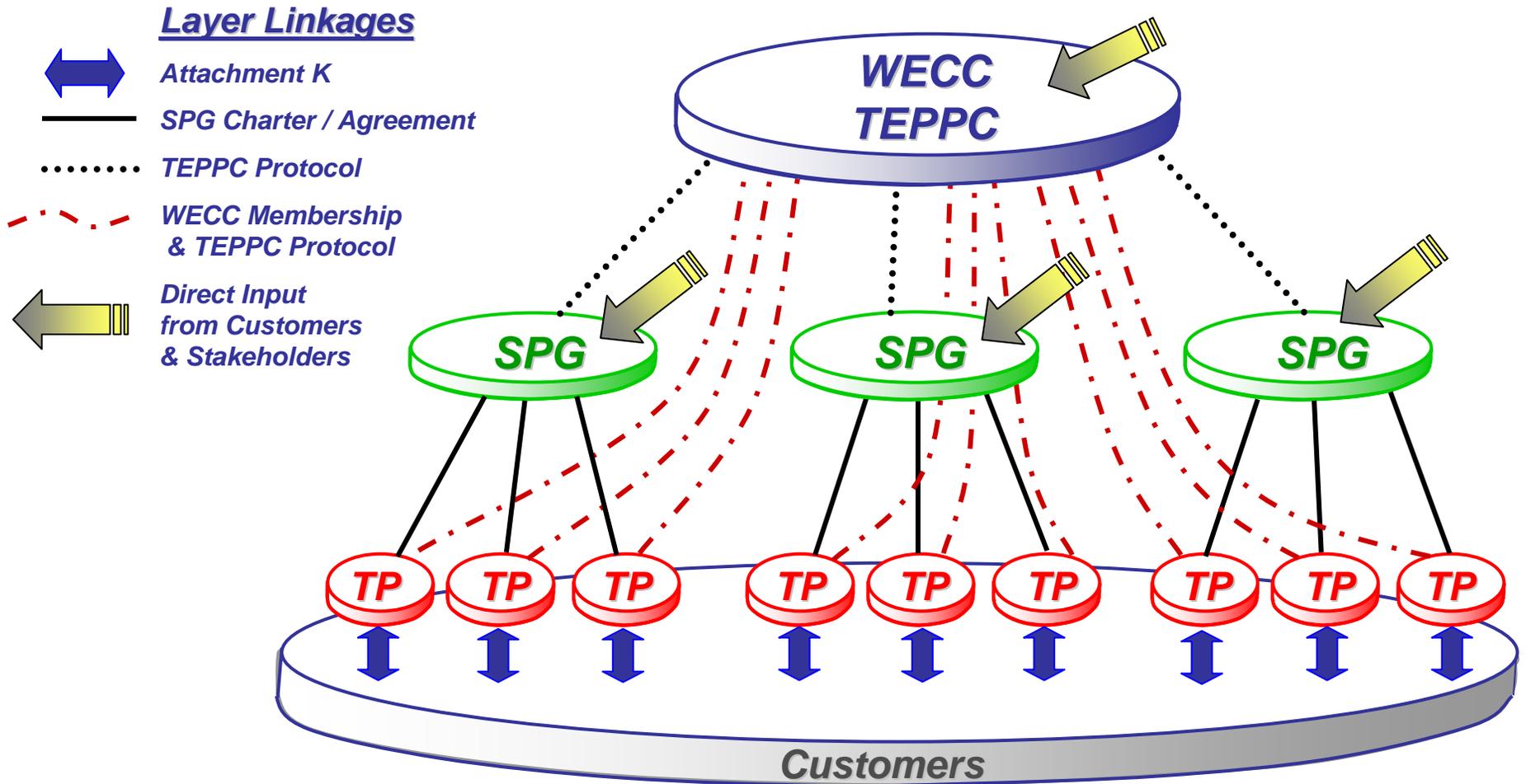
Western Interconnection Transmission Planning Groups





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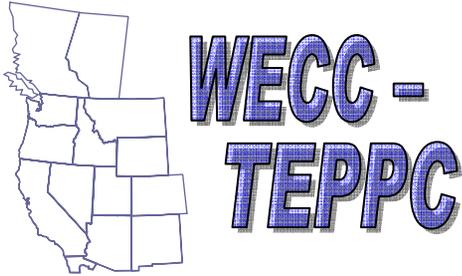
A Layered Approach Using Existing Organizations





Relationships Among TEPPC, SPGs and TPs

- ***TEPPC provides support to TPs in meeting their Attachment K obligations:***
 - ✓ ***Database.***
 - ✓ ***Studies.***
 - ✓ ***Coordination.***
- ***SPGs and TPs adopt the TEPPC Protocol:***
 - ✓ ***Meet standards of the TEPPC Protocol for sub-regional planning .***
 - ✓ ***Coordinate study efforts among themselves with monthly coordination reports during TEPPC meetings and calls.***
 - ✓ ***Provide support to collection and verification of data.***
- ***TPs have ultimate responsibility for meeting their obligations. If process isn't working they can:***
 - ✓ ***Use the TEPPC annual improvement process review to propose necessary changes.***
 - ✓ ***Use their SPG representative on TEPPC to initiate change.***
 - ✓ ***Use their rights under the WECC Bylaws to alter the planning process to meet needs of their customers.***



Stakeholder/Customer Participation Options

- ***Through Attachment K study requests:***
 - ✓ ***Submit request to TPs who forward to SPGs and TEPPC for prioritization and consolidation into synchronized study plan.***
 - ✓ ***After requests are submitted chose to either —***
 - Directly participate in development of the synchronized study plan or
 - Rely on their TP to represent their interests in plan development.
 - ✓ ***Request reconsideration of final study proposal.***
 - ✓ ***For studies not deemed “high priority” for regional or sub-regional studies, requestor may make arrangements to pay TP for a study .***
 - ✓ ***Participate in annual TEPPC process improvement review.***
 - ✓ ***Use WECC ADR as needed.***
- ***Through WECC Membership:***
 - ✓ ***Members of the six WECC classes members of their class to fill seats for the class on the WECC Board.***
 - ✓ ***The WECC Board appoints 18 TEPPC members who represent areas of expertise, the stakeholder groups and the geographic diversity of the Western Interconnection.***



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Organizational Description: TEPPC Charter

- ***Overseeing development and management of a common economic performance data base for use in transmission planning studies and analysis.***
- ***Providing policy guidance and management of the regional planning process across the region.***
- ***Guiding analyses and modeling for Western Interconnection economic transmission expansion planning.***



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Providing Policy Guidance and Planning Process Management

- ***TEPPC process is open to all stakeholders.***
 - ✓ ***Committee membership is diversified with stakeholder group representatives appointed by WECC Board.***
 - ✓ ***Meetings are open to all interested parties.***
- ***Technical Advisory Committee has open membership.***
 - ✓ ***Any stakeholder can join TAS or its workgroups lending their time and expertise to the combined effort.***
- ***The TEPPC process is designed to be adaptive:***
 - ✓ ***An annual evolution of performance.***
 - ✓ ***Useful and needed improvements to be made from year to year.***



Common Database for Economic Analysis of Transmission Needs

- ***TEPPC data base initiated by SSG-WI transfer.***
 - ✓ ***Utilizes existing WECC data sources for load, generation and transmission.***
 - ✓ ***Publicly available data used for economic factors.***
- ***Annual update planned for TEPPC database***
 - ✓ ***Database preparation is a complex and challenging undertaking.***
 - ✓ ***Current version released for review Oct 1-22, 2007.***
 - ✓ ***Database is an open, transparent starting point of TEPPC's studies and for others studies as well.***
 - ✓ ***Data available in a public database format usable by multiple economic modeling software vendors.***



Guiding Analysis and Modeling for Economic Transmission Expansion Planning

- ***Conduct annual economic studies for transmission expansion planning:***
 - ✓ ***Make assessments of congestion and congestion costs.***
 - ✓ ***Evaluate congestion relief alternatives, both wire and non-wire options.***
 - ✓ ***TEPPC's focus is on region-wide screening studies to encourage project development.***
- ***Provide improved tools and models for conducting economic transmission expansion studies.***
- ***Provide coordination among SPGs and TPs through annual synchronized study plan.***



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Acronym List

CAISO	= California Independent System Operator
CCPG	= Colorado Coordinated Planning Group
ColGrid	= ColumbiaGrid
CREPC	= Committee on Regional Electric Power Cooperation
CRT	= Colorado River Transmission (a SWAT subgroup)
CSPG	= California Sub-regional Planning Group (considering name change)
LADWP	= Los Angeles Department of Water and Power
NTAC	= Northwest Transmission Assessment Committee
NTTG	= Northern Tier Transmission Group
NWPP	= Northwest Power Pool
OTC	= Operating Transfer Capability
PCC	= Planning Coordination Committee
RETI	= Renewable Energy Transmission Initiative (California)
SPG	= Sub-regional Planning Group SWAT = Southwest Area Transmission
SNR	= Sierra Northern Region
TAS	= Technical Advisory Committee
TEPPC	= Transmission Expansion Planning Policy Committee
TP	= Transmission Provider
WGA	= Western Governors Association
WECC	= Western Electric Coordinating Council