ISO NEW ENGLAND INC
RESPONSE TO HEARING EXAMINER ORAL DATA REQUEST NO 3.

DOCKET NO. 2008-255

December 15, 2008

ODR-03-08

Q: Produce documents explaining planning process as a result of the Operational Excellence program.

A: Two documents discussing the planning process as a result of the Operational Excellence program, draft_transmission_planning_process_rc070213.doc and transmission_planning_presentation_rc070213.ppt, provided to the Reliability Committee for the February 13, 2007 meeting are attached. The ISO planning process is reflected in Attachment K to the ISO Tariff.

Response Prepared and Submitted By:
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ODR-03-08
Attachment 1

Transmission Planning Process

Purpose

The purpose of this process is to define the means to ensure that reliable, efficient and regionally cost-effective backstop transmission solutions consistent with the long term plan can be put in place by the time they are needed for the entire New England network. Also, the process will provide the structure for effective and efficient determination and acceptance of plans to support various requests for OATT transmission services.

Success of the transmission planning process is dependant on consistent and coordinated transmission planning efforts by all parties involved.

This process is designed to meet all applicable regulatory requirements, as well as NEPOOL and other stakeholder expectations. OATT tariff requirements have been met by providing important information to stakeholders and developing the obligatory back-stop transmission plan. Special emphasis was given to clearly defining all points of engagement with stakeholders and collaborators.

The 10-year transmission plan and comprehensive system assessment are the outputs of the transmission planning process. These outputs satisfy the transmission planning requirements of the Regional System Plan.

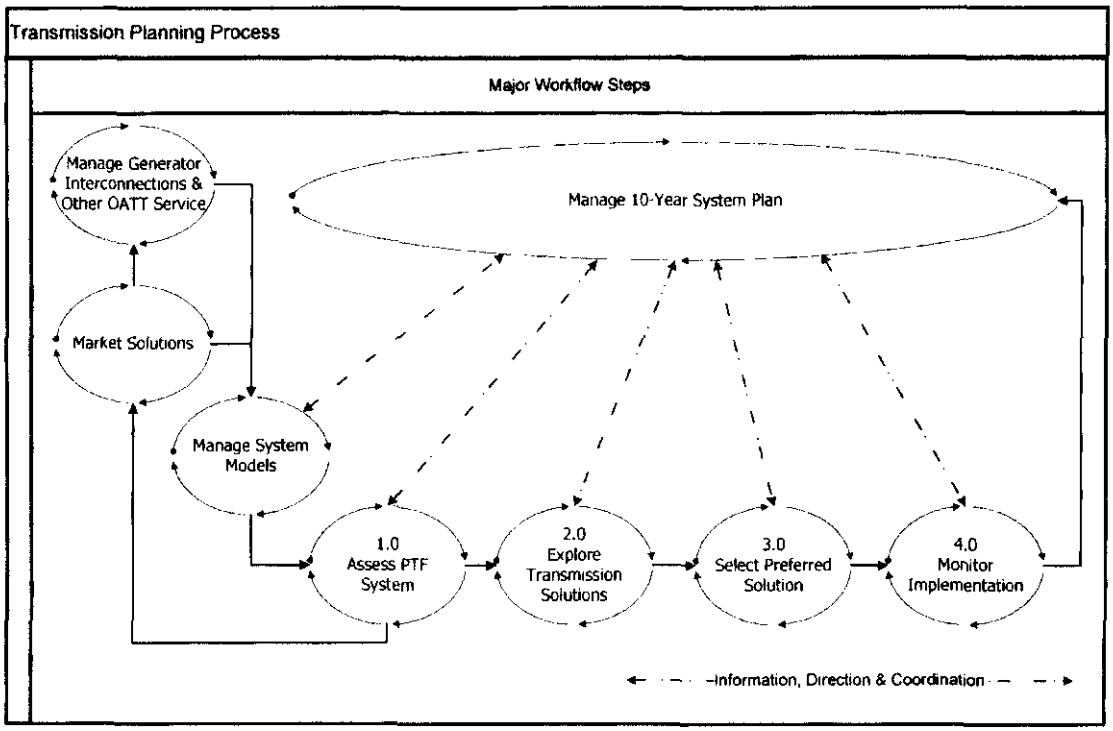
Overview

The process overview on the following page identifies the 4 core elements of the transmission planning process, as well as the interaction of key sub-processes necessary for consistent transmission planning activities.[1] The 10-year transmission plan is produced through the administration and coordination of sufficient executions of the transmission planning process to assure comprehensive assessment and planning for the entire New England PTF system. OATT transmission service requests, such as generator interconnection, follow the same core steps, although the information exchange may be somewhat more limited.

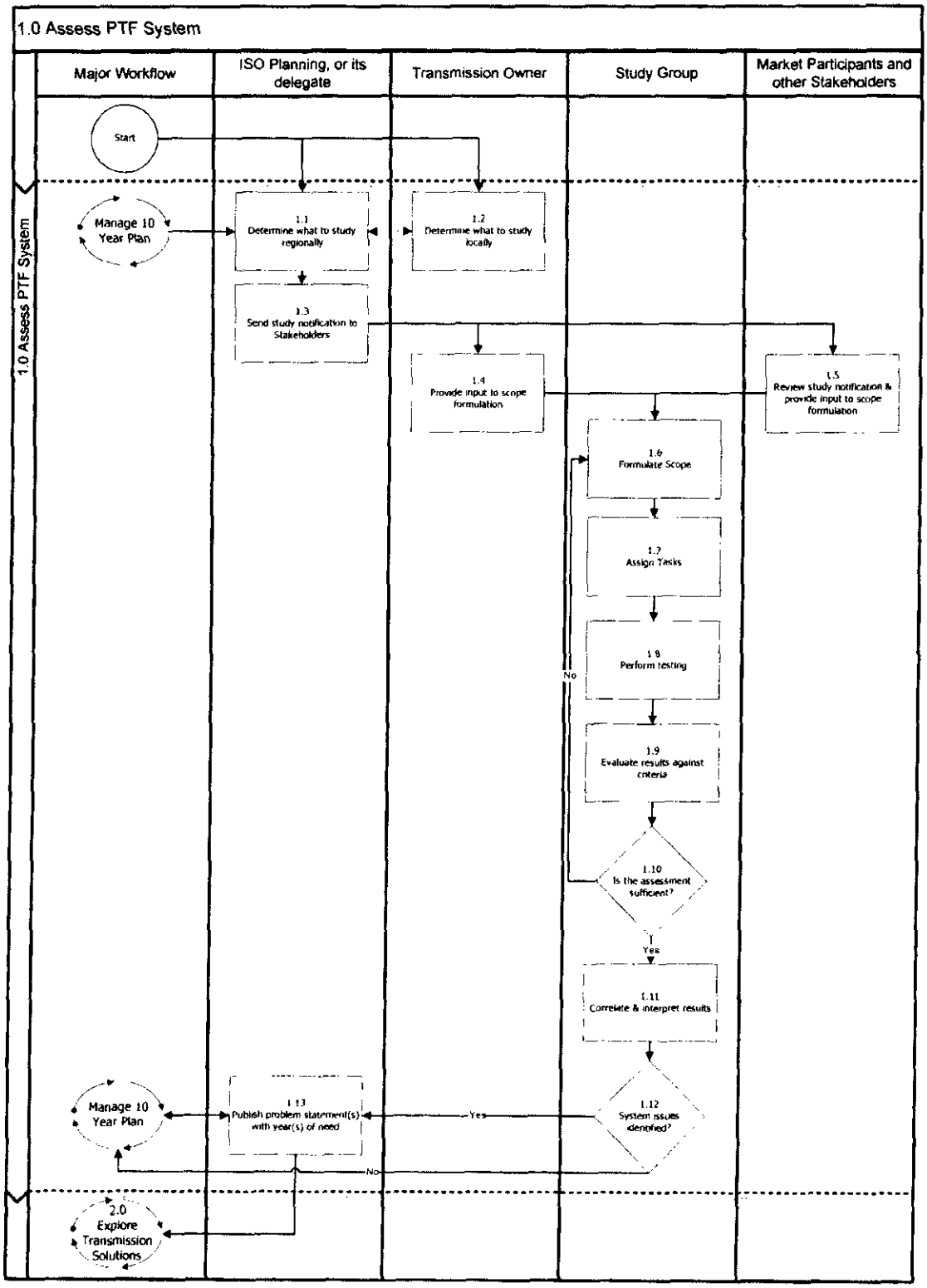
Roles and responsibilities are clearly defined within individual sub-process maps, but primary responsibility for all regional (PTF) planning efforts falls to ISO New England (ISO-NE). ISO-NE shall lead the collection of all study groups assembled to define transmission solutions ensuring consistent study coordination. The process seeks to proactively engage all affected parties as a means to efficiently establish support for Tariff, Section I.3.9 approval and agreement that the most regionally cost-effective transmission solutions have been identified.

[1] Not all sub-processes have been mapped within this process document. It should be recognized that the process for developing system models needs significant improvement in order to gain maximum efficiency with this process. This will be addressed through the development of the "Managing System Models" sub-process.

This process recognizes mature market solutions and their impact on the transmission planning process through their inclusion in system models and updated assessments.



1. Assess PTF System



1.0 Assess PTF System - Additional Guidance

Additional information for specific process steps is provided below and is numbered to match the process steps.

The purpose of this sub-process is to define the steps required to study all or part of the PTF system to identify potential or existing problems within the defined study period.

Study groups will form to focus on a specific study effort and disband when the effort is complete. Study groups move and replace the functionality of the task forces to a more focused and proactive position. These groups will be created by ISO-NE and membership will contain representation from ISO-NE and Transmission Owners (TO), consistent with the Transmission Owners Agreement (TOA) and ISO-NE tariff. Other directly affected parties may be invited to participate by ISO-NE. Participation is voluntary and is intended to provide an opportunity for adequate NEPOOL-participant involvement early in the process. The Reliability Committee can form effort-specific study groups in coordination with ISO-NE.

Study groups may assemble a working group with limited participation for specific tasks due to information policy constraints.

ISO-NE is directly responsible to lead and coordinate activities of all active study groups. A "study group coordination" team will be formed and shall be lead by ISO-NE. Leads from individual study groups will also participate on the coordination team. Further details and responsibilities for this group have yet to be determined.

1.1 Determine what to study regionally

All assessment studies conducted shall be relative to the PTF system. Inputs needed to determine what to study include criteria, planning methodology and the current 10-year system plan.

Various "triggers" may indicate the need to begin an assessment study. The following list identifies most of these triggers, however, other triggers may indicate the need to initiate an assessment study:

- Periodic assessment (includes service to network customer loads)
- Customer requests (generator interconnections, elective expansion, etc.)
- Unanticipated system changes
- Need to proceed further on detailed assessment/solution development

Transmission Owners shall determine their assessment study needs at a local level and information sharing between these two activities is crucial to the overall success of the process. Clear communication reduces the risk of redundant studies and identifies the most efficient method to conduct the assessment studies.

1.2 Determine what to study locally

Transmission owners shall determine what assessment studies are needed relative to the non-PTF system.

1.3 Send study notification to stakeholders

ISO-NE, or its delegate will notify Stakeholders, including the Reliability Committee (RC) and its associated task forces, Planning Advisory Committee (PAC), ISO Operations and Local Control Centers that an assessment study is about to begin. The standard template shall include the assessment study objective, what is to be studied and critical dates.

1.4 Provide input to scope formulation (TO)

The TO will provide technical expertise on the area to be studied.

1.5 Review notification and provide input to scope formulation (Stakeholders)

Stakeholders may provide input on concerns/issues for consideration by the study group.

1.6 Formulate scope

The study group will consider input received from all parties and generate a written assessment study scope.

1.7 Assign tasks

Assessment study tasks shall be appropriately distributed among working group members.

1.8 Perform testing

The study group shall perform the analysis per the written assessment study scope.

1.9 Evaluate results against criteria

Assessment study results shall be compared against criteria and applicable standards.

1.10 Is the assessment sufficient?

The study group will determine if the results produced other issues that need to be studied. If so, the study group will return to step 1.6 to refine the assessment study scope to include these issues.

1.11 Correlate & interpret results

The study group documents a summary of technical results. Interpretation of these results shall identify root causes and the extent of the area/regional problem(s).

1.12 System issues identified?

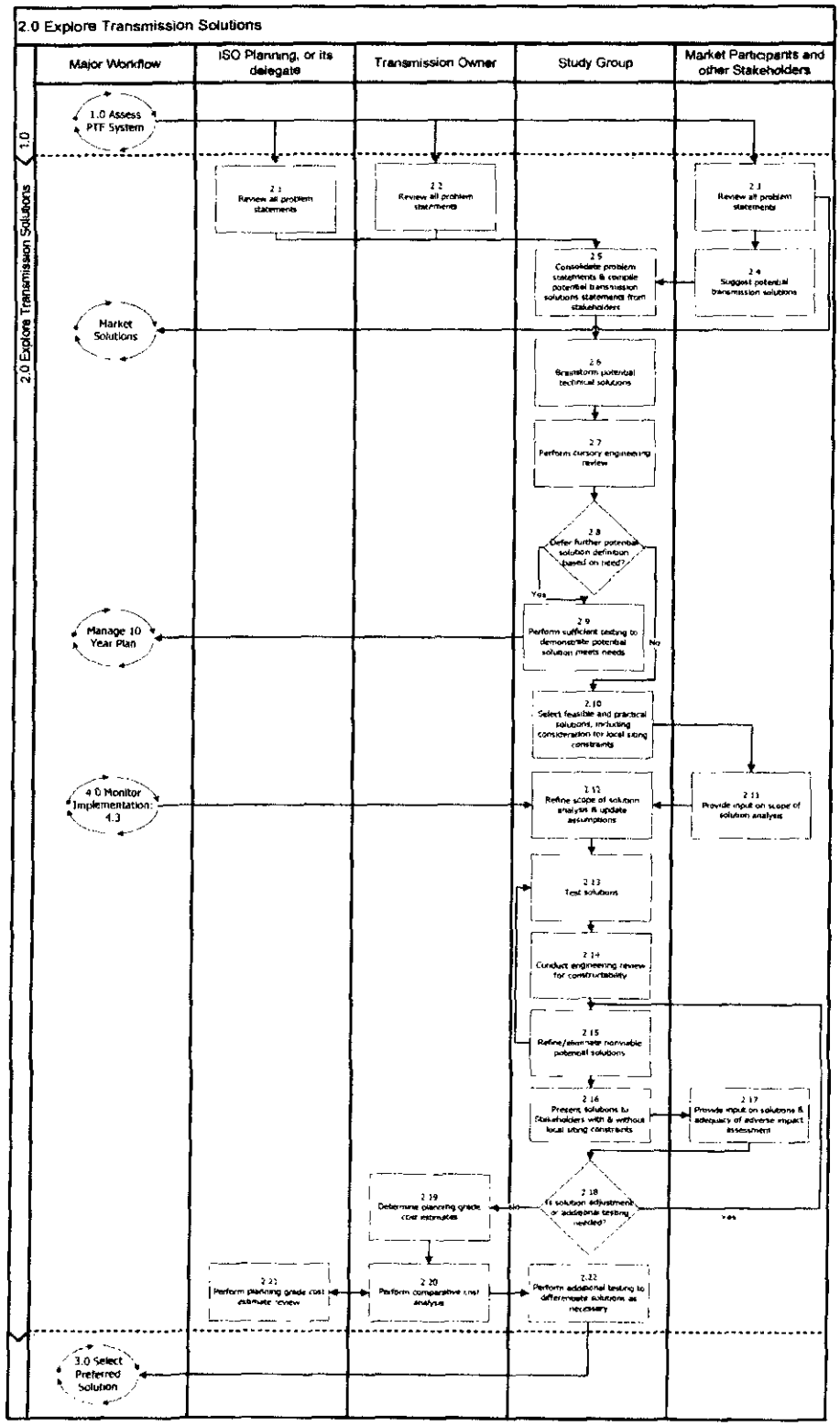
If no issues were identified during the study, the study group will report these results back to the stakeholder groups and update the 10-year plan database.

1.13 Publish problem statement(s) with year(s) of need

ISO-NE will publish the problem statements, with the year(s) of need to the stakeholder groups (PAC, RC). The standard template will be used to facilitate updating the 10-year plan.

The compilation of all problem statements produce the transmission adequacy and potentially the market efficiency needs assessment.

2. Explore Transmission Solutions



2.0 Explore Transmission Solutions Additional Guidance

Additional information for specific process steps is provided below and is numbered to match the process steps.

The purpose of this sub-process is to postulate, identify and refine potential transmission solutions.

In most cases, the assessment study group will continue to explore potential solutions. In other cases, the study group may change membership, or combine with other study groups as necessary.

2.1 Review all problem statements (ISO-NE)

ISO-NE will review all problems statements to better understand the problem in order to facilitate development of scope of study to pursue potential solutions.

2.2 Review all problem statements (TO)

Transmission owners will review problem statements within the context of the local system and the impact on their assets. They also review to better understand the problem to refine of scope of study in order to pursue potential solutions.

2.3 Review all problem statements (Stakeholders)

Stakeholders should carefully review problem statements in the context of individual impacts and concerns. These problem statements provide information and opportunity to develop market solutions to the stakeholder group.

2.4 Suggest potential transmission solutions

Stakeholders may provide suggestions for regulated transmission solutions. Market solutions shall be handled through a separate process.

2.5 Consolidate problem statements & compile potential transmission solutions from stakeholders

The study group will look across problems statements to determine if there are overlapping issues which could be solved by a single solution. They will also be able to identify problem statements which may need multiple solutions to resolve.

2.6 Brainstorm potential technical solutions

The study group will begin brainstorming potential solutions including the consideration of input provided by stakeholders. Depending in the year of need, solutions may be either conceptual or detailed.

2.7 Perform cursory engineering review

The TO, under the direction of the study group will perform a high-level engineering review to determine feasibility of potential solutions.

2.8 Defer further potential solution definition based on need?

The study group will assess potential solutions and determine when further refinement of potential solutions is necessary to meet the year of need. If further refinement can be postponed, continue to step 2.9, otherwise continue to step 2.10.

2.9 Perform sufficient testing to demonstrate potential solution meets needs

It is recognized that this testing does not ensure Tariff, Section I.3.9 compliance, however, the network analysis should be sufficient to verify the solution seems to meet the identified need.

2.10 Select feasible and practical solutions, including consideration for local siting constraints

The study group shall identify and provide the final list of potential solutions to the stakeholder group. Additional solutions may be identified by the TO to reflect local siting requirements.

2.11 Provide input on scope of solution analysis

Stakeholders may provide input to the study group on concerns and issues relative to the final list of potential solutions.

2.12 Refine the scope of solution analysis & update assumptions

The study group will adjust the solution study scope, if necessary to recognize comments and feedback from stakeholders. Testing may be adjusted to reflect status, maturity and impact of market solutions that are being implemented.

2.13 Test solutions

Each potential solution will be tested through appropriate network analysis to ensure the solution meets the identified need and has no adverse impact on the system.

2.14 Conduct engineering review for constructability

The study group will narrow the final list of potential solutions based on constructability constraints. An engineering assessment will be performed to ensure the solution can be built and reduce the risk of future, unanticipated costs. This evaluation may include:

- Conducting site visits for constructability
- Reviewing physical and environmental constraints
- Conducting right of way assessments

2.15 Refine/eliminate non-viable potential solutions

Based on test results or engineering issues, potential solutions will be refined to meet the identified needs and be Tariff, Section I.3.9 compliant. This may require returning to step 2.13. Solutions that will no longer be pursued due to technical/engineering reasons will be identified and discarded.

2.16 Present Solutions to Stakeholders with & without local siting constraints

Detailed technical performance results of viable solutions will be provided to stakeholders (RC, PAC). These analyses should be sufficient to demonstrate that solutions meet the identified needs and are Tariff, Section I.3.9 compliant.

2.17 Provide input on solutions & adequacy of adverse impact assessment

Stakeholders may provide input to the study group to confirm that assumptions and analyses are sufficient to demonstrate that identified needs have been met and that the testing is sufficient to demonstrate Tariff, Section I.3.9 compliance.

2.18 Is solution adjustment or additional testing required?

If stakeholder input identified substantative deficiencies in viable solution design or testing, return to step 2.15. Otherwise, continue to step 2.19.

2.19 Determine planning grade cost estimates

Transmission Owners will perform sufficient assessments to develop high quality planning-grade cost estimates on all viable solutions still under consideration. Additional engineering design and review may be required to support this effort.

2.20 Perform comparative cost analysis

Transmission Owners shall perform sufficient cost analysis to allow lifetime comparison of alternatives. This will include consideration of performance differences and technical merits and allow for determination of a regionally cost-effective solution which may or may not be the lowest cost solution.

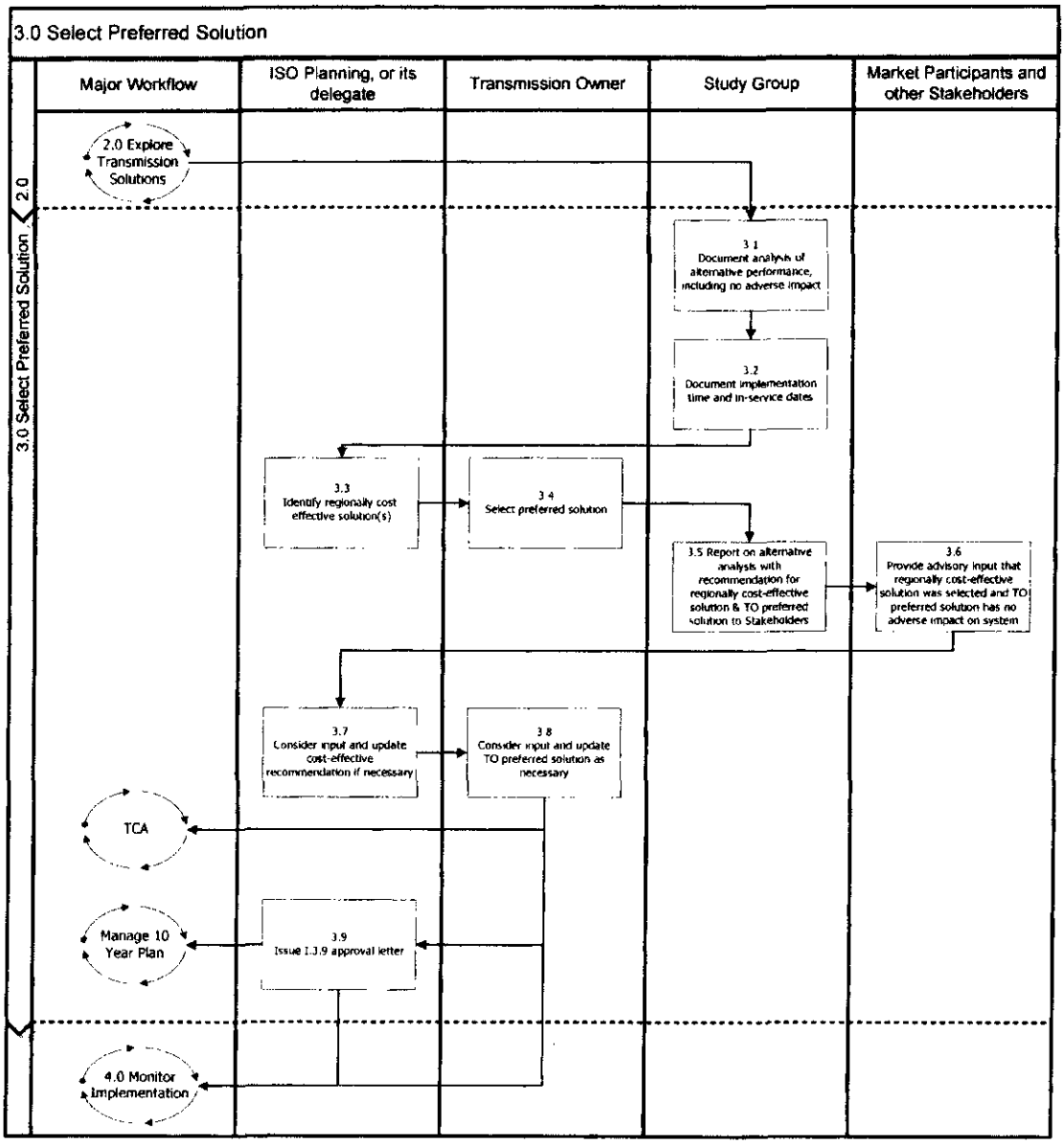
2.21 Perform planning grade cost-estimate review

ISO-NE shall review cost information to assure that cost estimates are complete, reasonable and sufficient for purposes of comparing the alternatives.

2.22 Perform additional testing to differentiate alternatives, as necessary

The study group will conduct additional analysis that is used to identify technical merits or advantages of reasonable cost-effective solutions when more than one potential solution exists.

3. Select Preferred Solution



3.0 Select Preferred Solution Additional Guidance

Additional information for specific process steps is provided below and is numbered to match the process steps.

The purpose of this sub-process is to identify the regionally cost-effective solution and, if different, the TO preferred solution.

The regionally cost-effective solution should be fully Tariff, Section I.3.9 compliant and supported by stakeholders. This solution becomes the essential basis for the Transmission Cost Allocation (TCA).

The TO may pursue a TO preferred solution that is different than the regionally cost-effective solution based on local requirements. This solution shall also be fully Tariff, Section I.3.9 compliant and subject to TCA review relative to the regionally cost-effective solution.

3.1 Document analysis of alternative performance, include no adverse impact

The study group shall provide a standard report summarizing the analyses of alternatives explored as potential solutions. This report shall include documentation supporting no adverse impact compliance.

3.2 Document implementation time and in-service dates

The study group will document estimated implementation time (includes permitting, construction, equipment ordering, and outages) and in-service date for each alternative as part of the report generated in step 3.1. These data are used in the comparative analysis for the selection of the preferred solution. The study group shall consider construction related outages for solution implementation as well as associated impacts and schedules.

3.3 Identify regionally cost-effective solution(s)

The team will review the comparative analysis, construction lead times, and high-level cost assessment to select the cost-effective solution(s). There may be more than one regionally cost-effective solution identified.

3.4 Select preferred solution

The TO will identify the TO preferred solution based on any relevant concerns and local requirements. This solution may be different than the regionally cost-effective solution.

3.5 Report on alternative analysis with recommendation for regionally cost-effective solution and TO preferred solution to Stakeholders[2]

The study group shall report their findings to Stakeholders. This report will include a comprehensive project description of the proposed plan (ratings, impedances, configuration, etc.). If the regionally cost-effective solution and the TO preferred solution are different, a comprehensive project description shall be completed for both.

The recommended regionally cost-effective solution becomes the basis for the cost allocation considerations.

3.6 Provide advisory input that regionally cost-effective solution was selected and TO preferred solution has no adverse impact on system

The stakeholder group will review the regionally cost-effective solution to acknowledge that the solution has no adverse impact and meets the stated goals by assessing the solution against the problem statement.

Stakeholders shall also review the TO preferred solution if it differs from the regionally cost-effective solution to acknowledge that the solution has no adverse impact and meets the stated goals by assessing the solution against the problem statement.

3.7 Consider input and update cost-effective recommendation if necessary

Stakeholder feedback will be considered and incorporated as necessary. Upon completion of this process step, the regionally cost-effective solution is considered approved and becomes the basis for the regional cost allocation.

3.8 Consider input and update TO preferred solution as necessary

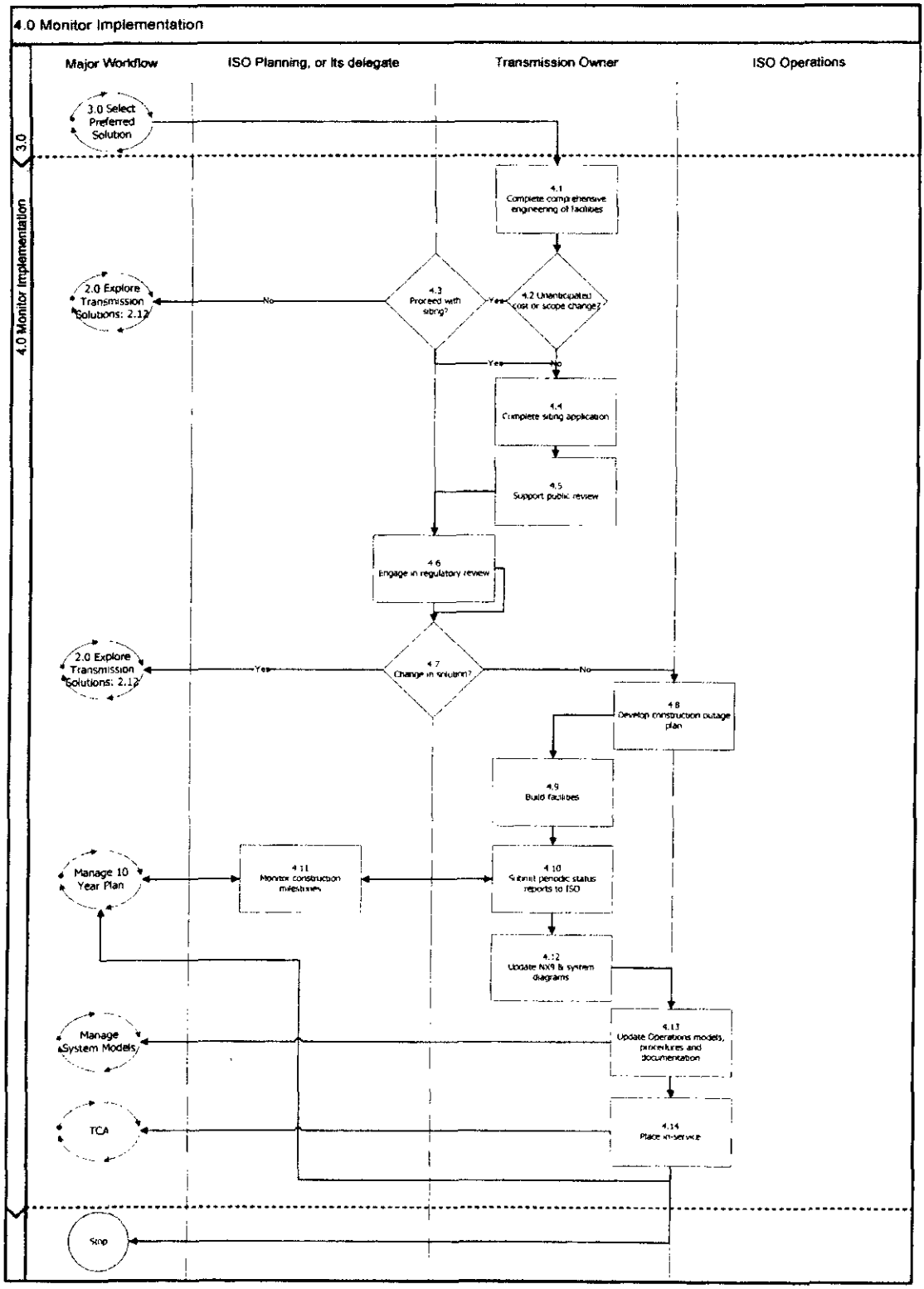
Stakeholder feedback will be considered and incorporated as necessary. Additionally, if the regionally cost-effective solution changed due to advisory feedback, the TO should review approved regionally cost-effective solution and update their preferred solution if necessary.

3.10 Issue I.3.9 approval letter

At this point in the process, ISO-NE will issue the Tariff, Section I.3.9 approval letter for the TO preferred solution.

[2] This process step includes replacing the current I.3.9 application process

4. Monitor Implementation



4.0 Monitor Implementation Additional Guidance

Additional information for specific process steps is provided below and is numbered to match the process steps.

The purpose of this sub-process is to obtain siting approvals, construct the selected solution, and prepare the solution for operation. This sub-process provides the means for ISO-NE to stay informed of construction progress and identify delays that may require mitigating actions.

4.1 Complete comprehensive engineering of facilities

The TO will complete design engineering as required for siting.

4.2 Unanticipated cost or scope change?

If engineering identifies significant issues, reconsideration or modification of preferred solution may be required.

4.3 Proceed with siting?

If issue(s) justify revisiting exploring solutions, it may be necessary to return to the 2.0 Explore Solutions sub-process to ensure solutions are properly tested.

4.4 Complete siting application

Information to complete the siting application should be contained in the report previously provided to stakeholders. This material may be used to facilitate completing the application in a timely manner.

4.5 Support public review

The TO will participate in municipal reviews or local reviews as required per state.

4.6 Engage in regulatory review

ISO-NE and the TO will provide testimony and response to interrogatories as necessary for the siting process.

4.7 Change in solution?

Siting decisions may alter the technical performance of the solution such that further testing is necessary. If this occurs, it may be necessary to return to the 2.0 Explore Solutions sub-process to ensure alternatives are properly tested.

4.8 Develop construction outage plan

The TO will work with the ISO-NE operations group and local control centers to develop a comprehensive construction outage plan with sufficient lead time in compliance with OP3, Transmission Outage Scheduling.

4.9 Build facilities

No additional guidance necessary.

4.10 Submit periodic status reports to ISO

The TO shall submit standard status reports to ISO-NE within agreed upon timeframes. Status reports will contain critical milestones related to project schedule, identified project risks, and other information as required to support the Forward Capacity Market (FCM).

4.11 Monitor construction milestones

ISO-NE will monitor the supplied information to prepare for implementation and/or implement contingency plans and market-related adjustments.

ISO-NE shall summarize all ongoing study status reports for stakeholder updates.

ISO-NE Operations will monitor updates to manage the outage schedule.

4.12 Update NX9 & system diagrams

The TO maintains the primary responsibility to update NX9 and system diagrams in a timely fashion consistent with ISO-NE operational requirements.

4.13 Update Operations models, procedures & documentation

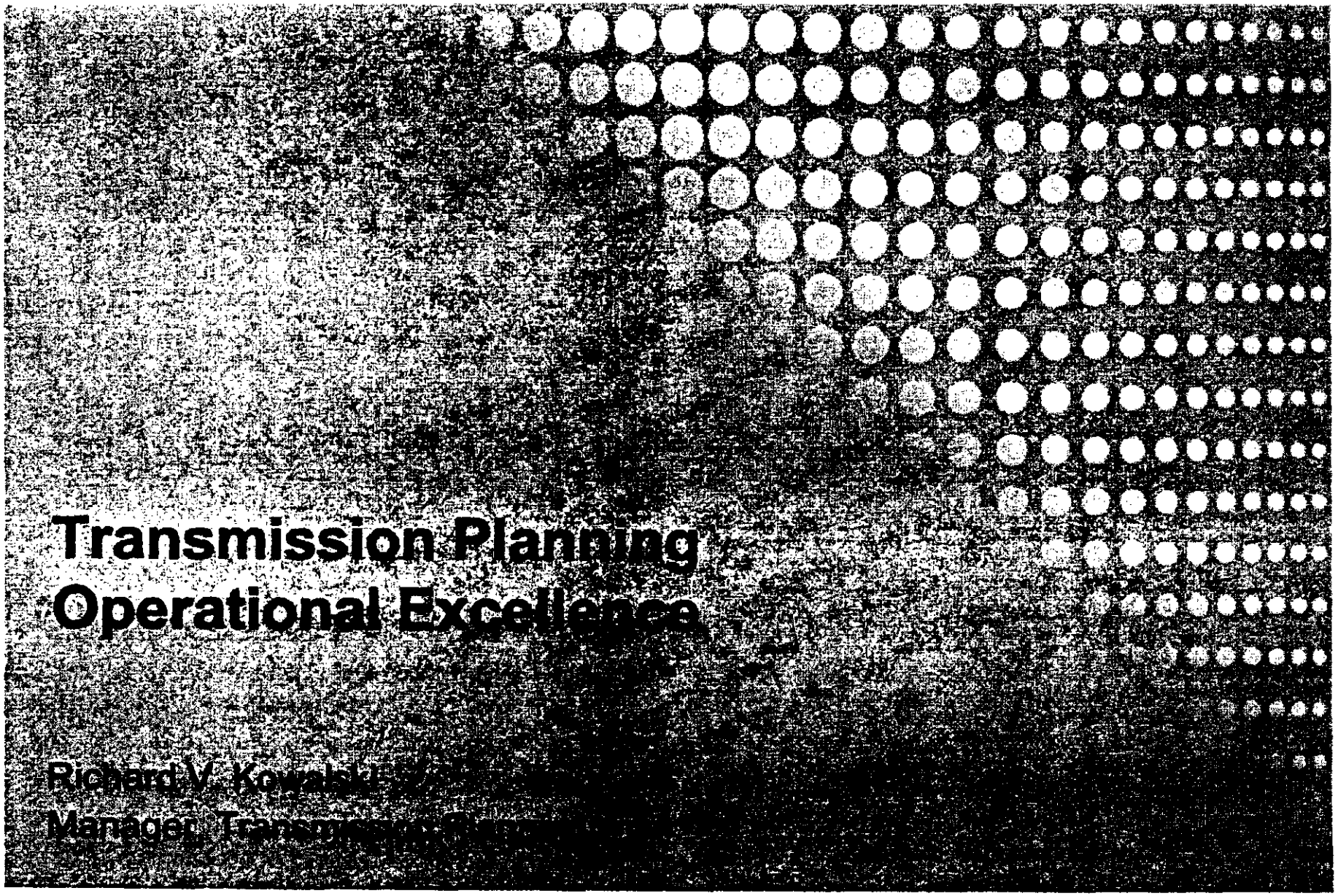
ISO-NE Operations and TO/LCC operations will update EMS models, market models, operating guides, and other operating procedures as necessary.

4.14 Place in-service

No additional guidance necessary.

Document History

Modify Date	Owner(s)	Description


Transmission Planning
Operational Excellence
Richard V. Kowalski
Manager, Transmission

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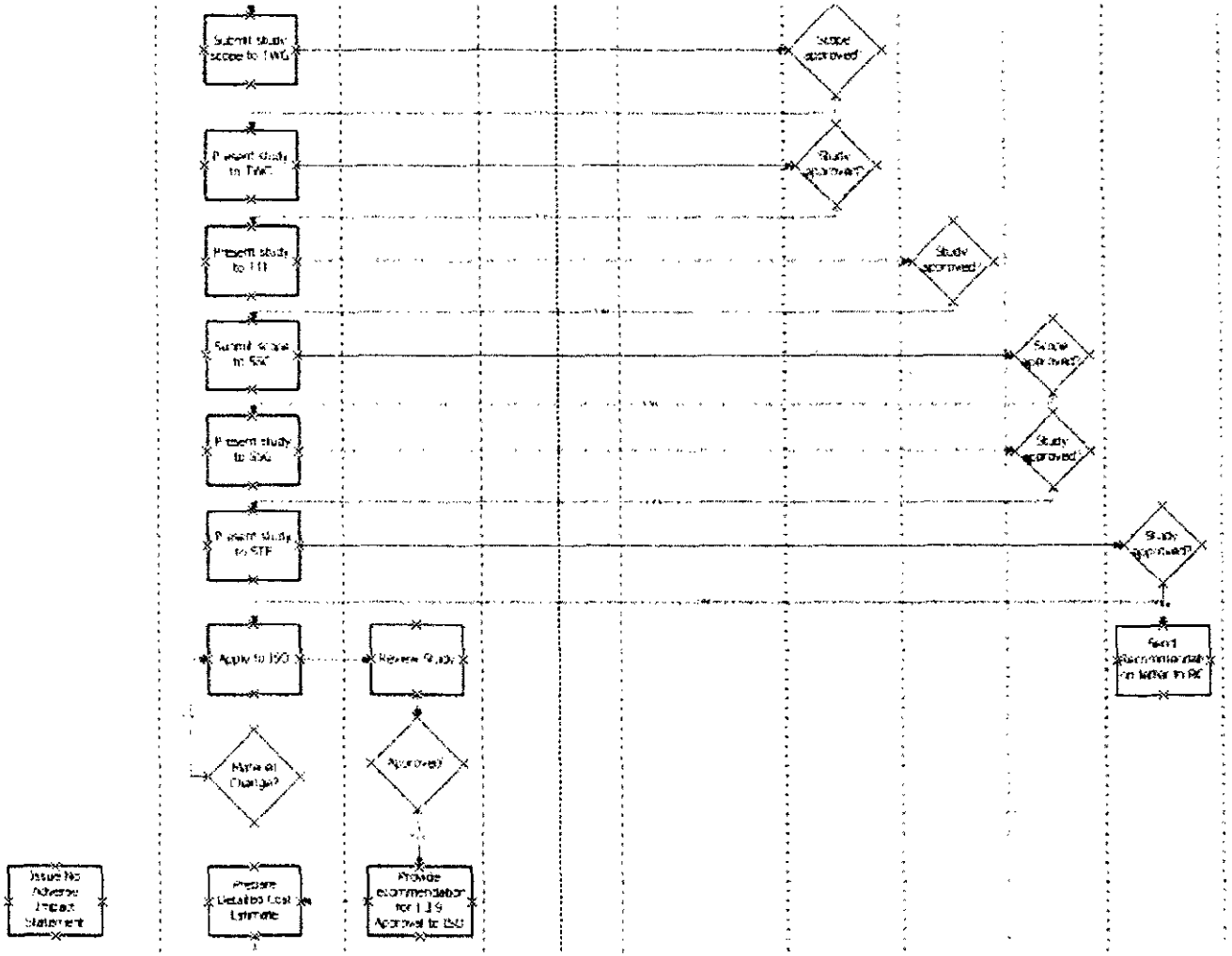
Objective

- Ensure that reliable, efficient and regionally cost-effective backstop transmission solutions consistent with the long-term plan can be put in place by the time they are needed for the entire PTF network
- Provide the structure for effective and efficient determination and acceptance of plans to support various requests for OATT transmission services
- Ensure consistency with obligations of the Tariff

Current Process Issues

- Process for coordinated development of a comprehensive, system-wide PTF transmission assessment and 10-year plan needs improvement
- Improvements need to assure consistent application of Tariff requirements
- Delays
  - Bottlenecks
  - Inefficient stakeholder interactions
  - Redundant stakeholder group forums
  - Uncertainty in task force deliverables & materials
- Improvements needed to assure consistent application of reliability criteria
- Models require significant effort to debug & update
- Need to develop a consistent and regular process to monitor project implementation

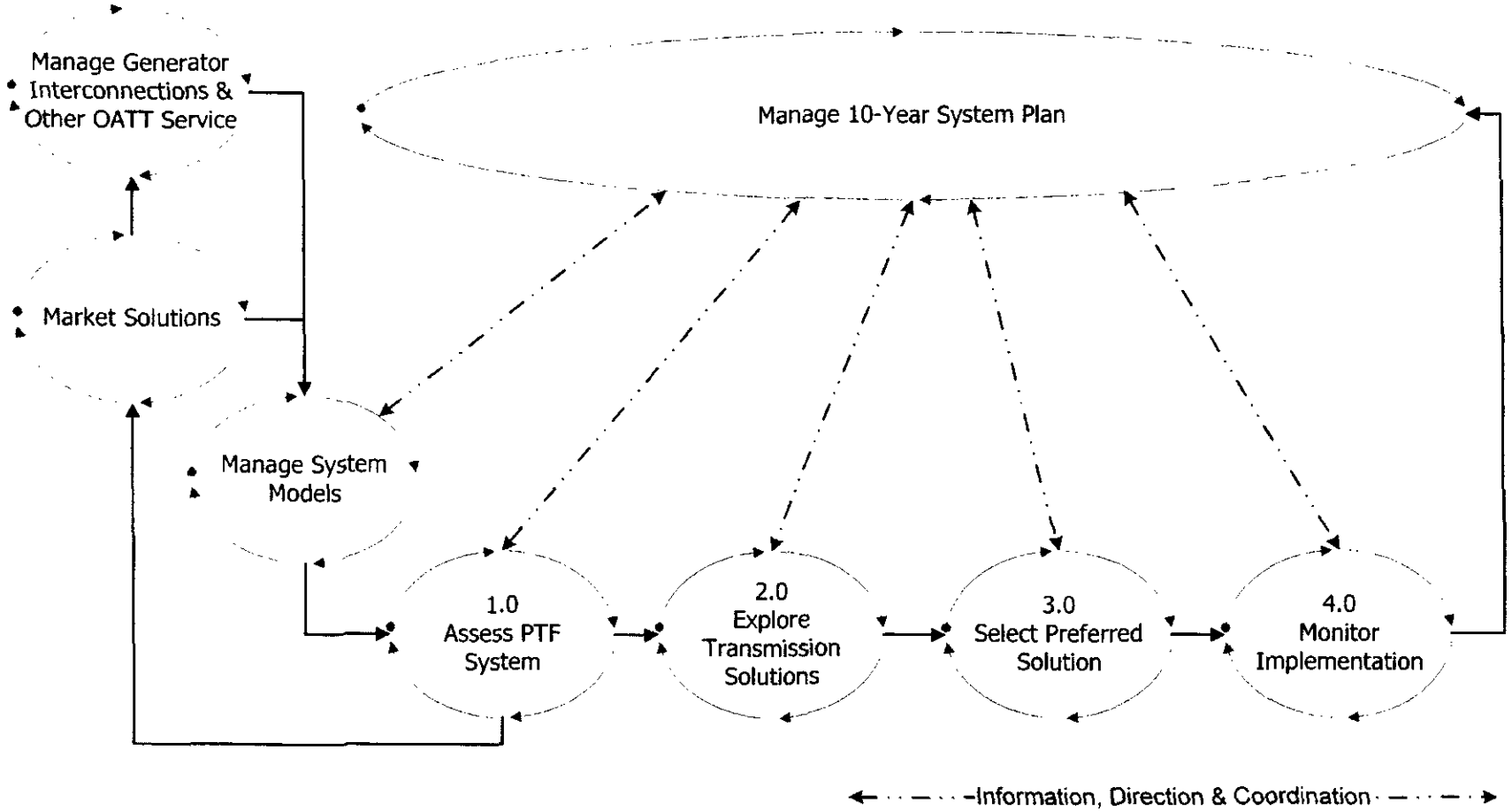
Sample of Current Task Force Interactions



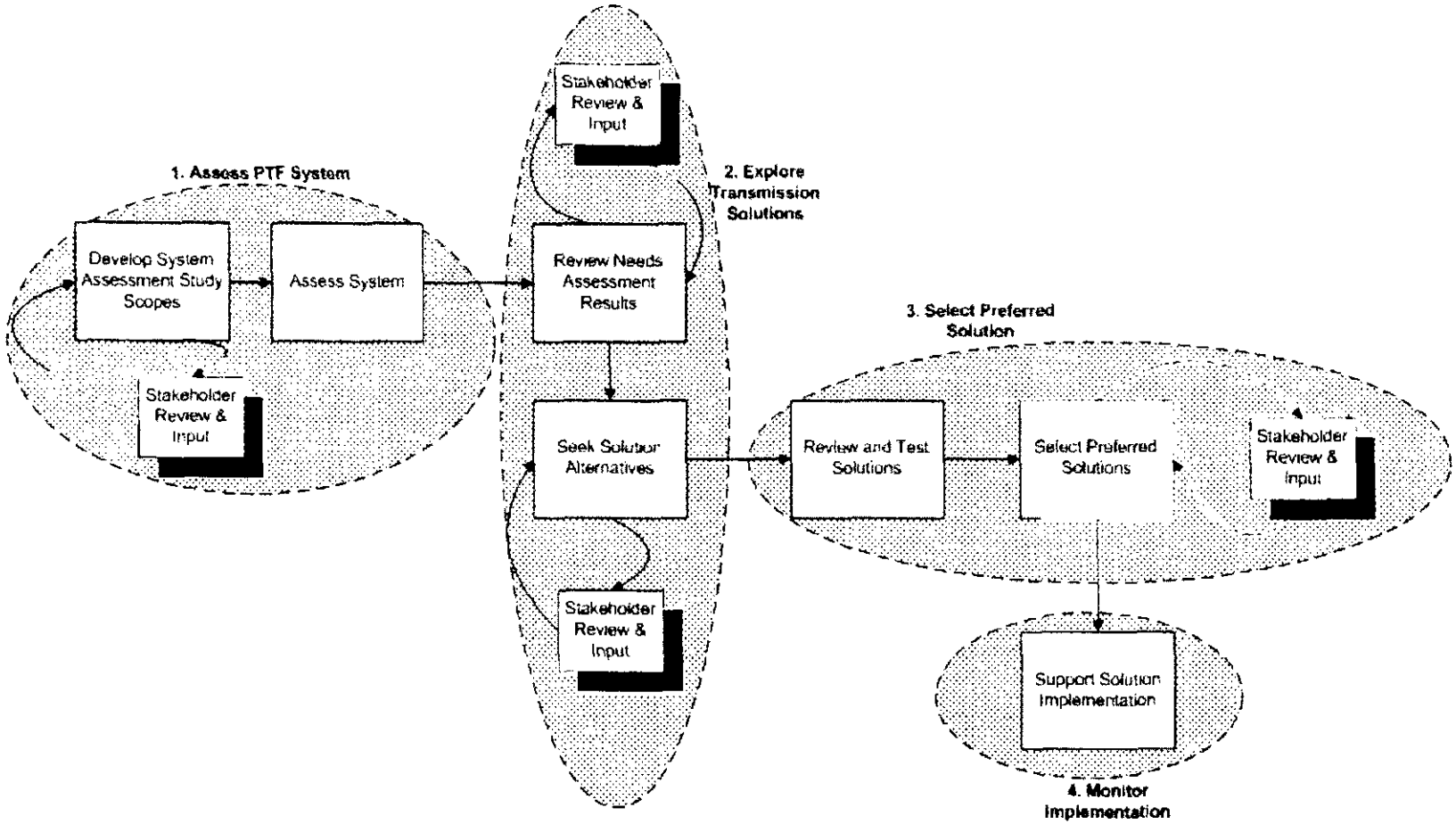
Proposed Transmission Planning Process

- Not introducing any Tariff changes
- Process describes efficient way to implement Tariff
- Core steps for all transmission planning and stakeholder engagement
- Multiple, coordinated passes through process generate 10-year plan

Transmission Planning Process



Core Transmission Planning Process Steps



How the Proposed Process is Better

- Delineates steps to ensure Tariff obligations are effectively met
- Assessment of system needs
  - Timely identification of potential problems
  - Consistent evaluation
  - Clear conveyance to market
- Improved solution development
  - Integrated amongst multiple needs
- Proactive
  - Stakeholder advanced engagement and acceptance
  - 10-year outlook
- Advanced availability of the basis for cost allocation
- Stronger position for TO to pursue siting

Next Steps

- Stakeholder process review
- Identify resource requirements & implementation timeline
  - Process
  - Studies
- Minor updates to Planning Procedures to clarify
- Create standard reports and communications protocols
- Training
  - Process
  - Roles & responsibilities, including Task Forces
- Begin transition
  - Possible full implementation in 12-18 months

Follow-up Development Efforts

- Consistent application of criteria (in progress)
- Modeling process
- Related processes
  - Managing Generator Interconnections
    - Remove unnecessary process steps
  - FCM
    - Ongoing evaluation as FCM develops
  - TCA
    - Proposed process should provide basis for regional cost allocation
    - Determine if further integration necessary
  - Non-PTF I.3.9
- Managing the Plan
  - ISO Board Involvement
  - Data Management
  - Study Scheduling
  - Study Coordination details

Tariff Roles & Responsibilities

- II.B - ISO provides regional network service
- II.B - Local network service will be provided, pursuant to Schedule 21
  - PTO Rates, Terms, Conditions for Local PTP & PTO Specific Local Service
- II.15.2 - Both will plan, construct, operate and maintain the PTF in accordance with Good Utility Practice
- II.48.1 - RSP shall be completed by the ISO. RSP identifies reliability and market efficiency needs. Identifies a regulated transmission solution to be built by one or more PTO
- II.48.3(a) - At least every three years, RSP reflects results of new comprehensive system planning and expansion study
- II.48.4(d) - ISO shall prepare needs assessment
- Attachment N.IV – Evaluate cost effectiveness of each upgrade and alternative

OATT requires 5+ and NERC/FERC requires 10-year planning horizon