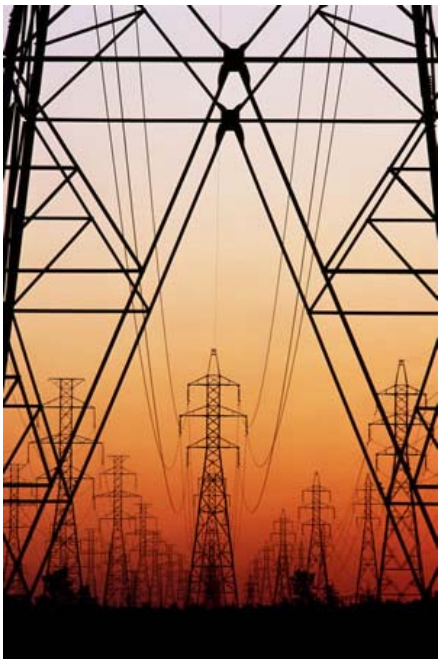

Program Implementation Plan for RTO West

Detailed Baseline Schedule for the Development, Implementation and Operational Start of RTO West

Presented to

The RTO West Board of Directors

Andersen
March 11, 2002

Program Implementation Plan for RTO West

About This Program Plan

Andersen was retained by RTO West to develop a Program Implementation Plan (the Plan). The purpose of the Plan is to provide a roadmap for progressing from the current market design process involving regional utilities and other stakeholders to full implementation and operation of RTO West as a FERC approved Regional Transmission Organization.

This document is a written description of the Program Implementation Plan that was prepared using Microsoft Project. The description of the Program Implementation Plan includes a discussion of key assumptions that drive the Plan and its outcome. It also includes a discussion of key issues that influence the Plan, such as the ability to remain on schedule, the ability to control costs, and the ability to ensure quality of outcome.

This document describes the baseline Plan. The Plan is structured to enable modifications for purposes of examining alternative critical paths, expanding the Plan into a Master Plan, and adjusting the baseline itself as events require a change in critical path milestone dates.

The MS Project file on which this document is based is attached in both hard copy form (Appendix I) and as a CD-ROM (Appendix XIII).

Andersen Team

Larry Oliva, Engagement Partner

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Program Implementation Plan for RTO West

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1. Introduction

1.1 Work Scope

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1. Introduction

1.1. Work Scope

Andersen was engaged in February 2002 to prepare a Program Implementation Plan that specifies the main elements that must be:

- Designed, developed, acquired, installed, coordinated, processed and otherwise executed in order to form, develop and bring RTO West to efficient operational status on a specific time line; and

- Consistent with needs and expectations of RTO West related filing utilities and the regulatory terms, conditions and requirements of state and Federal regulators and other important policy-makers.

1.2. Deliverables

Andersen has produced the following deliverables as a result of this work:

- Program Implementation Plan (in MS Project) that includes three content levels [Appendix I]
- An Executive Summary (MS Word) describing the Program Implementation [Section 2: Plan Summary]
- Cost estimates [Section 3.10.2]
- A summary critical path diagram [Section 2: Plan Summary and Appendix I]
- Other options papers and issues papers supporting the Plan [Appendices II-XII]
- Benchmarking report that compares the RTO West implementation Plan to other RTO implementation schedules [Appendix III and Section 3: Plan Management]

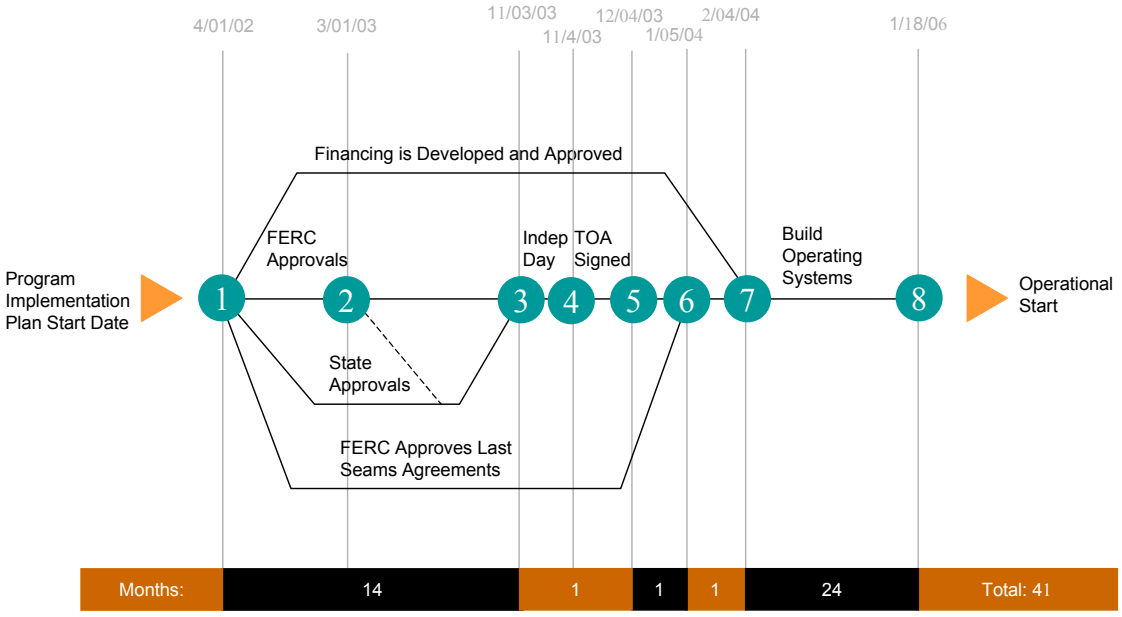
2. Plan Summary

2. Plan Summary

2.1. Overview of the Program Implementation Plan

There are seven critical path milestones that organize the Program Implementation Plan (the Plan) for RTO West implementation.

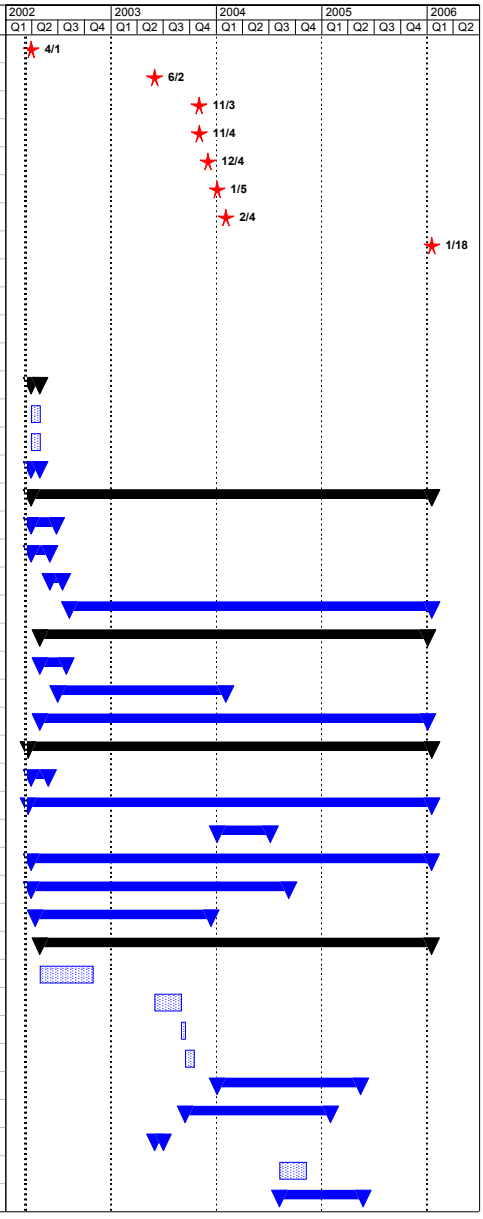
Chart 2.1 Critical Path Diagram



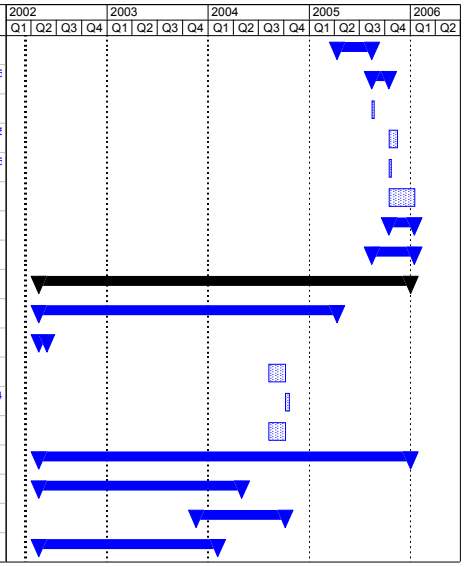
A more detailed look at the main elements follows.

Chart 2.2 Program Implementation Plan Details

ID	Task Name	Duration	Start	Finish
1	Interim Legal Operating Agreement	0 days	Mon 4/1/02	Mon 4/1/02
2	FERC Approval of Market Design	0 days	Mon 6/2/03	Mon 6/2/03
3	State Regulatory Approval	0 days	Mon 11/3/03	Mon 11/3/03
4	Independence Day	0 days	Tue 11/4/03	Tue 11/4/03
5	TOA Signed	0 days	Thu 12/4/03	Thu 12/4/03
6	FERC Approves Seams Agreement	0 days	Mon 1/5/04	Mon 1/5/04
7	Major Financing Approved	0 days	Wed 2/4/04	Wed 2/4/04
8	RTO Start	0 days	Wed 1/18/06	Wed 1/18/06
9				
10				
11				
12				
13	**Program Implementation Plan - Management Decisions**	**22 days**	**Mon 4/1/02**	**Tue 4/30/02**
14	Should Financial Advisor Develop Options Prior to Independence	22 days	Mon 4/1/02	Tue 4/30/02
15	Should As Is Mapping Be Definied and Initiated	22 days	Mon 4/1/02	Tue 4/30/02
16	Who Should Be Responsible For Executing The Plan	22 days	Mon 4/1/02	Tue 4/30/02
18	**Program Management Implementation Office (PMO)**	**995 days**	**Mon 4/1/02**	**Wed 1/18/06**
19	Establish RTO West Development Organization	64 days	Mon 4/1/02	Thu 6/27/02
28	Plan Program	47 days	Mon 4/1/02	Tue 6/4/02
37	Mobilize Program	32 days	Wed 6/5/02	Thu 7/18/02
48	Manage and Improve Program	900 days	Mon 8/12/02	Wed 1/18/06
58	**Financial/Business**	**963 days**	**Wed 5/1/02**	**Wed 1/4/06**
59	Business and Financial Planning	66 days	Wed 5/1/02	Wed 7/31/02
74	Financing	419 days	Tue 7/2/02	Wed 2/4/04
82	Public Information and Communication Program	963 days	Wed 5/1/02	Wed 1/4/06
130	**Legal and Regulatory**	**1002 days**	**Thu 3/21/02**	**Wed 1/18/06**
131	Legal Organization	44 days	Mon 4/1/02	Thu 5/30/02
134	FERC Filings	1002 days	Thu 3/21/02	Wed 1/18/06
212	Securities and Exchange Commission	132 days	Mon 1/5/04	Wed 7/7/04
217	Local Concurrence/Approvals	994 days	Mon 4/1/02	Tue 1/17/06
233	Internal Revenue Service	641 days	Mon 4/1/02	Thu 9/9/04
237	Other Legal Agreements	438 days	Mon 4/15/02	Mon 12/15/03
243	**Operations**	**972 days**	**Wed 5/1/02**	**Tue 1/17/06**
244	As Is Infrastructure Review/Interface Requirements Definition	132 days	Wed 5/1/02	Wed 10/30/02
245	Assess and Develop Requirements	66 days	Tue 6/3/03	Tue 9/2/03
246	Select Alternative Development Options	10 days	Wed 9/3/03	Tue 9/16/03
247	Develop RFP Shell(s)	22 days	Wed 9/17/03	Thu 10/16/03
248	Seams Dependent Infrastructure Development	355 days	Mon 1/5/04	Mon 5/16/05
261	Seams Independent Infrastructure Development	360 days	Wed 9/17/03	Tue 2/1/05
271	Prototype Workflow Development	22 days	Tue 6/3/03	Wed 7/2/03
305	RTO Officers Review and Approve Workflows	66 days	Mon 8/9/04	Mon 11/8/04
306	Business Infrastructure Implementation (PCs and LANs)	208 days	Mon 8/9/04	Wed 5/25/05



ID	Task Name	Duration	Start	Finish
333	Major System Tests	90 days	Wed 4/13/05	Tue 8/16/05
340	Integration Testing	44 days	Wed 8/17/05	Mon 10/17/05
343	NERC Certification Of Facilities	5 days	Wed 8/17/05	Tue 8/23/05
344	Audit/Certification of Settlements	22 days	Tue 10/18/05	Wed 11/16/05
345	System Security Certification	5 days	Tue 10/18/05	Mon 10/24/05
346	Gaming Simulations	66 days	Tue 10/18/05	Tue 1/17/06
347	Market Testing	66 days	Tue 10/18/05	Tue 1/17/06
351	Market Participant Training	110 days	Wed 8/17/05	Tue 1/17/06
354	**Administrative and Governance**	**962 days**	**Tue 4/30/02**	**Tue 1/3/06**
355	Infrastructure Development	772 days	Wed 5/1/02	Tue 4/12/05
368	Prototype Workflow Development	22 days	Wed 5/1/02	Thu 5/30/02
383	Officers Review and Approve Workflows	44 days	Mon 8/9/04	Thu 10/7/04
384	Perform Employee Procedures Training	10 days	Fri 10/8/04	Thu 10/21/04
385	Officers Select Financial Auditor	44 days	Mon 8/9/04	Thu 10/7/04
386	Human Capital and Organization Development	962 days	Wed 5/1/02	Tue 1/3/06
585	Stakeholder Process	526 days	Tue 4/30/02	Mon 5/3/04
640	Facilities	230 days	Fri 11/21/03	Thu 10/7/04
653	Telecommunications	465 days	Wed 5/1/02	Fri 2/6/04



(See Appendix I for more details.)

2.2. Work Tracks Shaping the Plan

All work tracks are organized within the framework of four areas: Finance and Business, Legal and Regulatory, Operations, and Administrative and Governance. Additionally, all these tasks fit within seven critical path milestones. They include:

FERC Approval of Market Design. These tasks provide various levels of FERC review of market design, before and after Independence is established, with and without incorporation of Seams Agreements.

"State" (or other non-FERC) Approval of Participation. Tasks for state, provincial, congressional, or other approvals needed for participating transmission owners to join RTO West.

Seating of an Independent Board ("Independence Day"). Tasks that precede "Independence Day," when an independent Board assumes responsibility for the development and operations of RTO West.

Signing of the Transmission Operating Agreement (TOA). Tasks that must precede completion and execution of the TOA that transfers operating control from existing investor-owned and other utilities in the Pacific Northwest to RTO West.

Approval of RTO West Financing. Tasks that prepare for major long-term financing that will enable RTO West to be self-sustaining and tasks that execute financing.

FERC Approval of Seams Agreements. Finalization and approval of all necessary Seams agreements that must be in place in order for RTO West to operate effectively.

Startup: Operations and Business Infrastructure. All tasks necessary to develop the operational systems and business processes, including all human resources requirements, and begin operating as a going concern.

Upon completion of these work tracks the Program Implementation Plan ends and RTO West operational start occurs.

2.3. Scheduled Outcomes

In preparing the Plan a "bottoms up" method was used with no pre-set end date to constrain the outcome.

Chart 2.3 Completion Dates of Critical Path Milestones

Critical Path Milestone	Scheduled Date of Completion
• Project Start Date	April 1, 2002
• FERC Approvals: OATT	March 1, 2003 (w/ Most Seams July 1, 2003)
• State Regulatory Approval	November 3, 2003
• Independence Day	November 4, 2003
• TOA Signed	December 4, 2003
• FERC Approves Last of Seams Agreements (post Independence, with Scheduling/OASIS)	January 5, 2004
• Major Financing Approved	February 4, 2004
• RTO West Starts Operations	January 18, 2006

2.4. Incorporation of a Program Management and Systems Integration Office in the Plan

Because RTO West has significant scale and scope, and associated complexity, implementation success will largely hinge on leadership. Certainly the selection of an RTO Interim Leader is a vital component in the leadership challenge. But the leader, whether interim or permanent, will need clear responsibilities and authority to be effective.

RTO West before Independence Day is capable of funding and directing implementation. Its nature requires an experienced industry executive and experienced project manager as the interim lead. Prior to an independent Board, FERC has specified that funds may not be spent on "activities that are significant to the future operation of the RTO," and that "binding decisions" require "full stakeholder process to *achieve* consensus."[1]

Operating within these guidelines requires skill to:

- Increase the likelihood of staying on schedule or within budgeted costs,
- Assure FERC that all stakeholders assisted RTO West as build out to operational start occured,
- Reduce conflict filing utilities may experience between federal and state directives.

Because the restrictions before Independence Day ("significant" activities, "full" stakeholder process) are subjective, the project manager will be required to exercise a great deal of judgment in moving ahead when dissent arises, without risking early termination.

The Plan incorporates a program management office and systems integration office (PMO, or "program management office") based on the discussion above and as part of the support structure for an interim leader. There are three main categories of work scheduled in the PMO:

- Time to plan and contract for the PMO's process, work plan, and team,
- Time to clarify the PMO's authority and communications procedures,
- Time to mobilize and put processes in place.

2.5. Plan Structure and Implications

2.5.1. Underlying Regulatory Context

The critical path milestones in the Plan minimize regulatory related risks that funds dedicated to developing RTO West will be stranded, i.e., not recoverable in rates or convertible to an RTO loan from the filing utilities.

Because of regulatory and governmental uncertainty, the preferred way to minimize risk is to minimize the expenditure of funds until critical regulatory approvals are achieved – notably FERC approvals and in particular state and

[1] Re GridSouth, mimeo., p.5, July 12, 2001, emphasis added, citing GridFlorida, 94 FERC 61,363 (2001).

other jurisdictional approvals. However this approach recognizes that to do only regulatory related work until approvals are achieved means that RTO West will not start operations until much later. The Program Implementation Plan is designed to load as many low cost activities into the years preceding state and regulatory approvals as possible, in order to help shorten the time from start of implementation to start of operations.

It is assumed that all regulatory approvals are important. Other RTOs or ISOs that have been approved by FERC have gone forward without specific state approvals. And although no other RTO or ISO has been either delayed or scrapped because of intervention by Congress, it is uncertain whether BPA's position in the Northwest will cause a unique outcome.

Because the assumptions in and associated constraints on the Plan make it somewhat inflexible – and because there may be higher cost implications as a result – a more extensive risk and tradeoff analysis may be merited. For example, how much risk would be involved with earlier funding and/or earlier independence? Or, if FERC approved a funding mechanism, such as recovery of funds spent on RTO West through wholesale transmission rates, would this be sufficient to increase the near-year implementation activities? Or, would BPA join later if RTO West is up and running?

2.5.2. Two Distinctive Structural Phases to the Plan

The Plan has two distinctive structural phases. State and Federal regulatory filings (as well as considerations of the Northwest Congressional delegation) are the primary drivers of the first 18 months of the Plan. The subsequent two years are wholly driven by hiring, operations and other systems build out.

Deferral of activities to the second phase places substantial pressure on builders to prudently spend significant amounts of money in a short time. Such build and spend patterns tend to yield delays and more costs than were planned. Delays and costs stem from higher system failure rates or the late arrival of permanent senior management. Once a Chief Executive becomes responsible for the institution, delays in this Plan are likely in order to avoid risks of failure at operational start, or undue conflicts with stakeholders over pace.

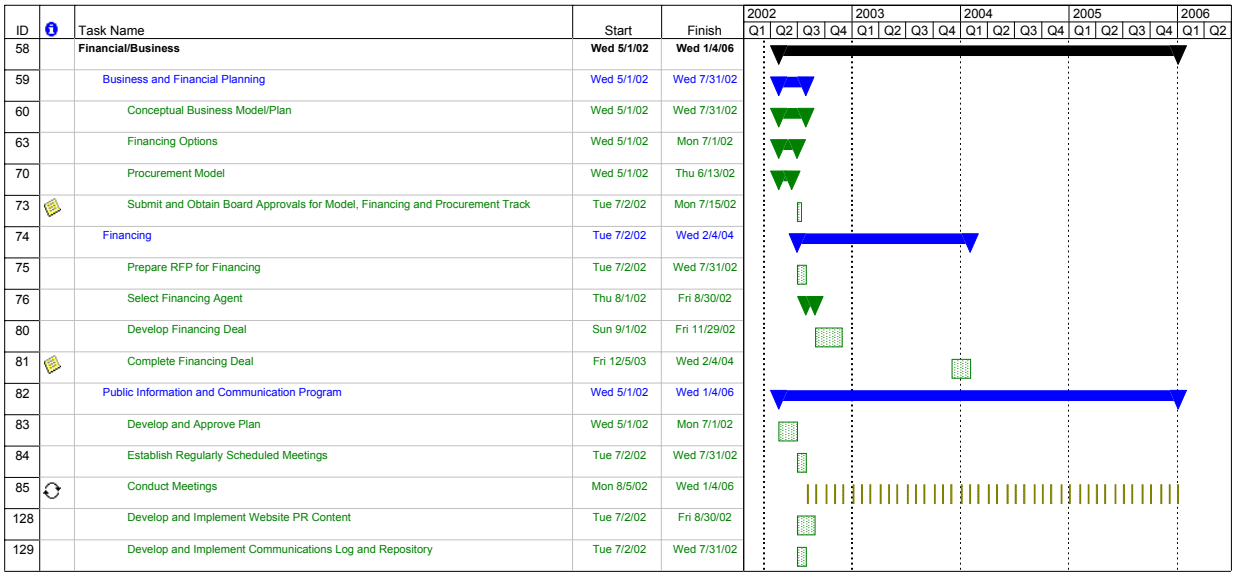
2.5.3. Comprehensiveness of the Plan

The Plan's details span over 600 tasks. There are over 25 major assumptions that govern the Plan. The build out of RTO West takes, from the April 1, 2002 start, approximately four years or 46 months.

2.6. Financial and Business Tasks

The chart below details the main tasks in the financial and business processes element of the Plan.

Chart 2.4 Task Details for Financial and Business Process Development Requirements



ID	Task Name	Start	Finish
58	**Financial/Business**	**Wed 5/1/02**	**Wed 1/4/06**
59	Business and Financial Planning	Wed 5/1/02	Wed 7/31/02
60	Conceptual Business Model/Plan	Wed 5/1/02	Wed 7/31/02
63	Financing Options	Wed 5/1/02	Mon 7/1/02
70	Procurement Model	Wed 5/1/02	Thu 6/13/02
73	Submit and Obtain Board Approvals for Model, Financing and Procurement Track	Tue 7/2/02	Mon 7/15/02
74	Financing	Tue 7/2/02	Wed 2/4/04
75	Prepare RFP for Financing	Tue 7/2/02	Wed 7/31/02
76	Select Financing Agent	Thu 8/1/02	Fri 8/30/02
80	Develop Financing Deal	Sun 9/1/02	Fri 11/29/02
81	Complete Financing Deal	Fri 12/5/03	Wed 2/4/04
82	Public Information and Communication Program	Wed 5/1/02	Wed 1/4/06
83	Develop and Approve Plan	Wed 5/1/02	Mon 7/1/02
84	Establish Regularly Scheduled Meetings	Tue 7/2/02	Wed 7/31/02
85	Conduct Meetings	Mon 8/5/02	Wed 1/4/06
128	Develop and Implement Website PR Content	Tue 7/2/02	Fri 8/30/02
129	Develop and Implement Communications Log and Repository	Tue 7/2/02	Wed 7/31/02

(See Appendix I for more details)

2.6.1. Business and Financial Planning

RTO West will be an operator responsible for ensuring network reliability and open access to the transmission system in the Pacific Northwest. It will perform its responsibilities as an institution and an enterprise. To be self-sustaining, it must be financed. And to be financed it must have a clear business plan as the basis for defining financial requirements and evaluating financial options given the risks inherent in the enterprise.

2.6.1.1. Business Planning

The Plan includes several tasks that result in a business plan and associated financials. They are scheduled for the first two years of the overall development and build out period. Early completion of these tasks best positions RTO West to activate financing expeditiously as regulatory approvals are obtained and Independence Day is declared.

Business planning is typically subordinated to the overriding focus on building core operating systems when starting up an RTO. The importance of operating systems is certainly a predominant focal point. But business planning properly done is a useful discipline for ensuring a comprehensive perspective on the essential institutional and enterprise challenges that will be as important to long-term success, in addition to the operating systems.

2.6.1.2. Selection of Financial Advisor

A critical decision that RTO West must make is whether to select a financial advisor early. The financial advisor will play a lead role in developing the enterprise business plan and identifying financing options that fit that plan.

Typically financial advisors are investment banks that couple their advisory assistance with underwriting services as part of executing the financing package. The experience from some ISO formations is that investment banks may uncouple their advisory and underwriting services if they have an opportunity to win the underwriting job, even though they are not guaranteed it.

2.6.1.3. Procurement Model

The Plan includes tasks for developing and selecting the *procurement model* that RTO West will use to acquire critical operations and business systems. RTOs throughout the US have used several different procurement models from a single source prime contractor to a multiple-contractor system that is managed by the RTO's staff, seconded employees, or a mix of various staff types and consultants in a program management office.

The Plan schedules at the front end a process for procurement model selection. The potential for revisions has been included in the program management office. It takes the form of regularly scheduled evaluations and modifications of the Plan to ensure it reflects the reality of the build out on an ongoing basis.

2.6.2. Financing

The Plan schedules preparation for several tasks related to securing long-term financing before Independence Day. However, the Plan holds execution of any transaction until after Independence Day and hiring the permanent chief executive (CEO). Most financial institutions will not execute until responsible parties are in place in a legitimate independent institution, with the regulatory assurance that it can collect revenue and pay bills. The speed of the financing will depend on how quickly a CFO is hired, and FERC approves the finance application.

2.6.3. Public Information and Communication Program

Included in this element of the Plan is the public information and communications tasks required to ensure effective stakeholder relationships, as well as positive relationships with political leaders nationally, regionally, at the state level, and locally.

These tasks are scheduled to continue from the start to the finish of the Program Implementation Plan. Properly executed, there will be a transition of responsibility from external and temporary resources to permanent RTO West staff.

2.7. Legal and Regulatory Tasks

The legal and regulatory tasks include the Stage II filing, an Open Access Transmission Tariff (OATT), supplementary filings for procedures that are more detailed than tariff (protocols), and placeholders for review by non-FERC regulators of utilities. Seams agreements are integrated into the OATT and protocol stages. Most legal filings at FERC are planned to result in a decision in 90 days, with a 90 day period for seeking clarifications or rehearing.

This report uses the term “state approval” as a short-cut reference to all non-FERC jurisdictional utility regulatory approvals, be they state, municipal, provincial, or congressional. RTO participation is currently voluntary on the part of FERC regulated entities, and even these utilities require state regulatory approval to transfer operational control of transmission assets and make that choice. The internal milestones of state, congressional, BPA, or provincial review and approval are not included in the Plan. Placeholders for these items are used based on the information available at this time.

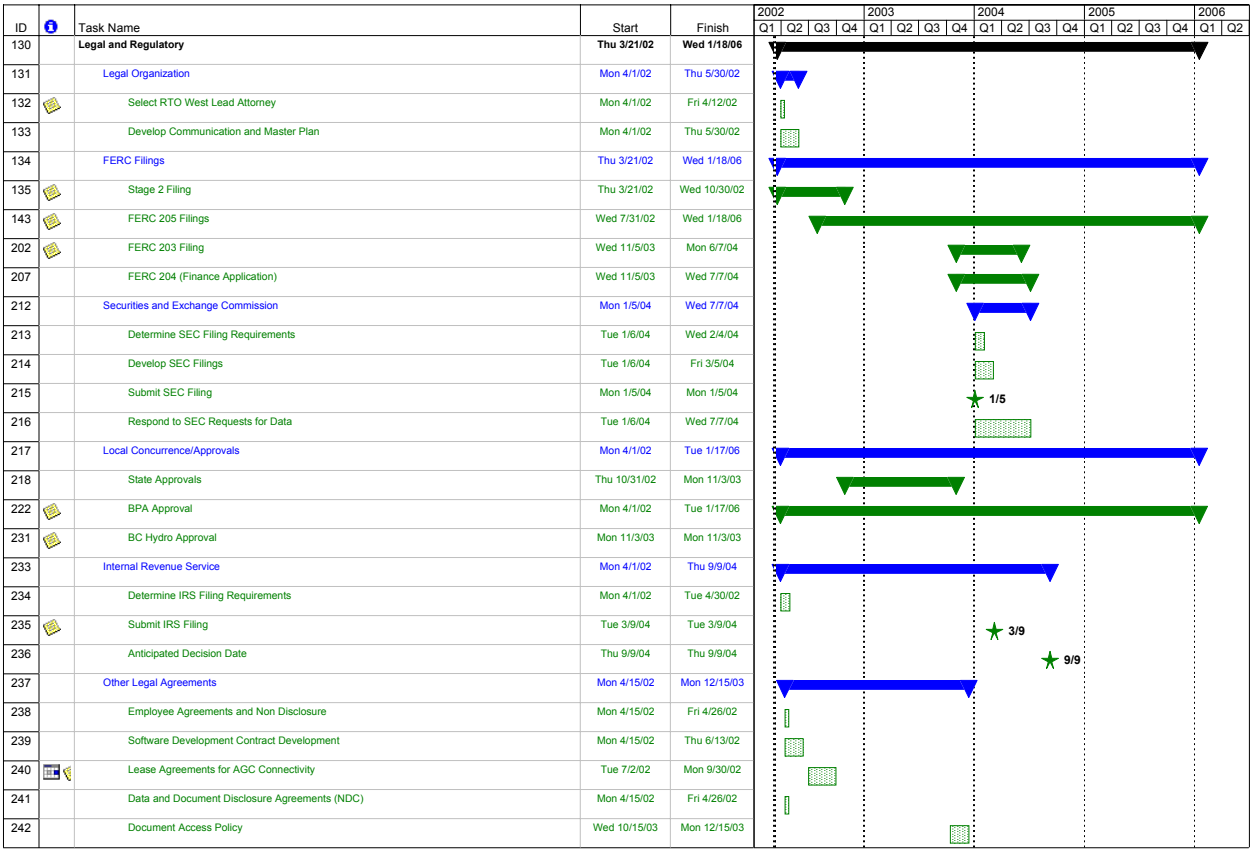
Other filing activities are: a 205 filing for the RTO’s own cost of service, a 205 filing for determining revenue requirements of each utility’s transmission assets under RTO control, a 203 filing for the transfer of assets and any contract obligations the RTO will be assuming, a 204 filing for authorization of the RTO’s borrowing and financing activities, SEC review of filings that may be required for borrowing or other activities not yet determined, IRS review of a non-profit application, 205 review of miscellaneous agreements referenced in current Stage II materials, and other miscellaneous legal work needed to support the project management and executive team.

Note that the FERC review of assets to be transferred and related revenue requirements is assumed to be consistent with the assets states have previously authorized can be transferred to RTO control. The formation of a state panel is a possibility included in the Plan, perhaps for further discussion of the cost-benefit study during the Stage II review process.

Work that post-dates the seating of an Independent Board is likely to have dates refined closer to execution. Many of the legal and regulatory tasks that are triggered by Independence Day are scheduled as early as possible. None of this work is currently on the Plan’s critical path, therefore the placement of these items in the schedule is at this time more discretionary and probably too optimistic.

Chart 5 shows the details of the legal and regulatory tasks required to start-up RTO West.

Chart 2.5 Task Details for Legal and Regulatory Process Requirements



ID	Task Name	Start	Finish
130	**Legal and Regulatory**	**Thu 3/21/02**	**Wed 1/18/06**
131	Legal Organization	Mon 4/1/02	Thu 5/30/02
132	Select RTO West Lead Attorney	Mon 4/1/02	Fri 4/12/02
133	Develop Communication and Master Plan	Mon 4/1/02	Thu 5/30/02
134	FERC Filings	Thu 3/21/02	Wed 1/18/06
135	Stage 2 Filing	Thu 3/21/02	Wed 10/30/02
143	FERC 205 Filings	Wed 7/31/02	Wed 1/18/06
202	FERC 203 Filing	Wed 11/5/03	Mon 6/7/04
207	FERC 204 (Finance Application)	Wed 11/5/03	Wed 7/7/04
212	Securities and Exchange Commission	Mon 1/5/04	Wed 7/7/04
213	Determine SEC Filing Requirements	Tue 1/6/04	Wed 2/4/04
214	Develop SEC Filings	Tue 1/6/04	Fri 3/5/04
215	Submit SEC Filing	Mon 1/5/04	Mon 1/5/04
216	Respond to SEC Requests for Data	Tue 1/6/04	Wed 7/7/04
217	Local Concurrence/Approvals	Mon 4/1/02	Tue 1/17/06
218	State Approvals	Thu 10/31/02	Mon 11/3/03
222	BPA Approval	Mon 4/1/02	Tue 1/17/06
231	BC Hydro Approval	Mon 11/3/03	Mon 11/3/03
233	Internal Revenue Service	Mon 4/1/02	Thu 9/9/04
234	Determine IRS Filing Requirements	Mon 4/1/02	Tue 4/30/02
235	Submit IRS Filing	Tue 3/9/04	Tue 3/9/04
236	Anticipated Decision Date	Thu 9/9/04	Thu 9/9/04
237	Other Legal Agreements	Mon 4/15/02	Mon 12/15/03
238	Employee Agreements and Non Disclosure	Mon 4/15/02	Fri 4/26/02
239	Software Development Contract Development	Mon 4/15/02	Thu 6/13/02
240	Lease Agreements for AGC Connectivity	Tue 7/2/02	Mon 9/30/02
241	Data and Document Disclosure Agreements (NDC)	Mon 4/15/02	Fri 4/26/02
242	Document Access Policy	Wed 10/15/03	Mon 12/15/03

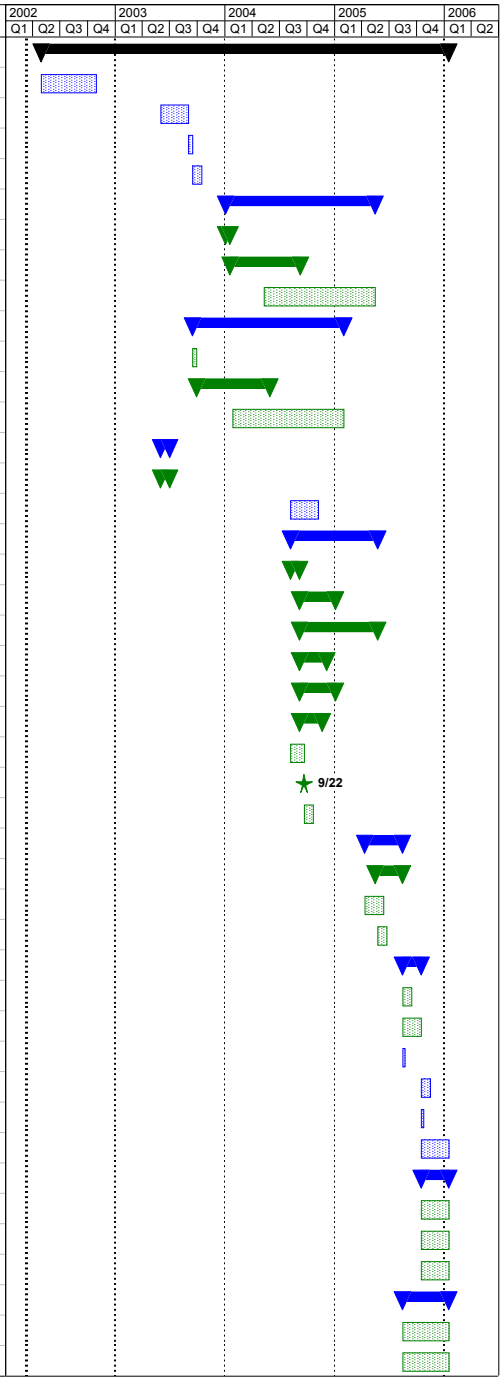
(See Appendix I for more details.)

2.8. Operations Tasks

Building out operations systems, business and human resources infrastructure, and critical financial systems – including billing and settlements – is on the critical path. Once regulatory approvals are completed, the Plan schedules simultaneous parallel development of all major systems required for operating the network, associated markets, and ensuring a sustainable business. Chart 6 summarizes the main tasks and associated schedule for the Operations element of the Plan.

Chapter 2.6 Tasks, Sequence and Duration for Operations Build Out

ID	Task Name	Start	Finish
243	**Operations**	**Wed 5/1/02**	**Tue 1/17/06**
244	As Is Infrastructure Review/Interface Requirements Definition	Wed 5/1/02	Wed 10/30/02
245	Assess and Develop Requirements	Tue 6/3/03	Tue 9/2/03
246	Select Alternative Development Options	Wed 9/3/03	Tue 9/16/03
247	Develop RFP Shell(s)	Wed 9/17/03	Thu 10/16/03
248	Seams Dependent Infrastructure Development	Mon 1/5/04	Mon 5/16/05
249	Complete Specifications	Mon 1/5/04	Mon 1/19/04
252	Select Vendor	Mon 1/19/04	Fri 9/10/04
260	Write Software and Construct Systems	Wed 5/12/04	Mon 5/16/05
261	Seams Independent Infrastructure Development	Wed 9/17/03	Tue 2/1/05
262	Complete Specifications	Wed 9/17/03	Tue 9/30/03
263	Select Vendor	Wed 10/1/03	Mon 5/31/04
270	Write Software and Construct Systems	Thu 1/29/04	Tue 2/1/05
271	Prototype Workflow Development	Tue 6/3/03	Wed 7/2/03
272	Prototype Business Process Workflow Development (Organization Middleware)	Tue 6/3/03	Wed 7/2/03
305	RTO Officers Review and Approve Workflows	Mon 8/9/04	Mon 11/8/04
306	Business Infrastructure Implementation (PCs and LANs)	Mon 8/9/04	Wed 5/25/05
307	Develop Guidelines for Business Infrastructure	Mon 8/9/04	Tue 9/7/04
310	PCs and LAN	Wed 9/8/04	Wed 1/5/05
314	Enterprise Document Management	Wed 9/8/04	Wed 5/25/05
318	Mail System	Wed 9/8/04	Mon 12/6/04
322	Website Enhancement	Wed 9/8/04	Wed 1/5/05
326	Internet Provider	Wed 9/8/04	Mon 11/22/04
330	Prototype IT Workflow Development	Mon 8/9/04	Wed 9/22/04
331	CIO Approves Workflow	Wed 9/22/04	Wed 9/22/04
332	Perform Employee Procedures Training	Thu 9/23/04	Fri 10/22/04
333	Major System Tests	Wed 4/13/05	Tue 8/16/05
334	Operations Systems (3 Months)	Tue 5/17/05	Tue 8/16/05
338	Financial and Administrative Systems (2 months)	Wed 4/13/05	Mon 6/13/05
339	Business Infrastructure (1 Month)	Thu 5/26/05	Fri 6/24/05
340	Integration Testing	Wed 8/17/05	Mon 10/17/05
341	Business Simulations (ALL Process and Systems)	Wed 8/17/05	Thu 9/15/05
342	End-to-End Testing (2 Months)	Wed 8/17/05	Mon 10/17/05
343	NERC Certification Of Facilities	Wed 8/17/05	Tue 8/23/05
344	Audit/Certification of Settlements	Tue 10/18/05	Wed 11/16/05
345	System Security Certification	Tue 10/18/05	Mon 10/24/05
346	Gaming Simulations	Tue 10/18/05	Tue 1/17/06
347	Market Testing	Tue 10/18/05	Tue 1/17/06
348	Market Participants	Tue 10/18/05	Tue 1/17/06
349	Seams Organizations	Tue 10/18/05	Tue 1/17/06
350	Shadow Operations	Tue 10/18/05	Tue 1/17/06
351	Market Participant Training	Wed 8/17/05	Tue 1/17/06
352	Business and Technical User Training	Wed 8/17/05	Tue 1/17/06
353	Operations Training	Wed 8/17/05	Tue 1/17/06



(See Appendix I for more details.)

The first task in Operations related sequence is an As Is/Gap Analysis Infrastructure Review. The As Is review has been scheduled because the assumption is that existing systems can be used or modified by RTO West and they will reduce costs. To do so, the existing systems must be mapped, vintaged, and operating related processes matched against market design requirements. Once this is done, the tasks of assessing options for how to procure and develop critical systems are scheduled.

The build out schedule for critical infrastructure is divided into two more or less parallel paths – seams-dependent and seams-independent. Seams-independent systems start sooner than seams-dependent systems. Both are completed with significant time built into the Plan for testing and certification of systems.

Testing regimes include tests of major systems for proof of capability to meet all specifications and design requirements. Business simulations are then conducted to stress systems and identify flaws that may undermine smooth operations. Following business simulations, the entire process stream from inbound schedules to outbound bills and settlements are tested rigorously.

Certification follows testing. NERC certification of facilities is done. Certification of settlements systems is critical to complete before going live. System Security certification is also vital to be assured that all necessary reliability capabilities are in place and ready to go. Gaming simulations are conducted to test robustness of systems and market design against potential abusive market behavior. Gaming simulations help market monitors to ramp up their systems and ensure they are operating effectively before operational start.

Once core certifications are completed, true systems operations begin as *shadow operations.* This begins with market testing, includes market participant training, and ends with a parallel live operation of the new system while the existing system continues to run in place. While this last step is not typical of implementation programs in other ISOs in the US, it is included in this Plan in recognition of the complexity of the Northwest and Western US systems. Given their interdependence it is consistent with prudent, conservative program management to adopt a final form of testing, such as shadow operations before going live.

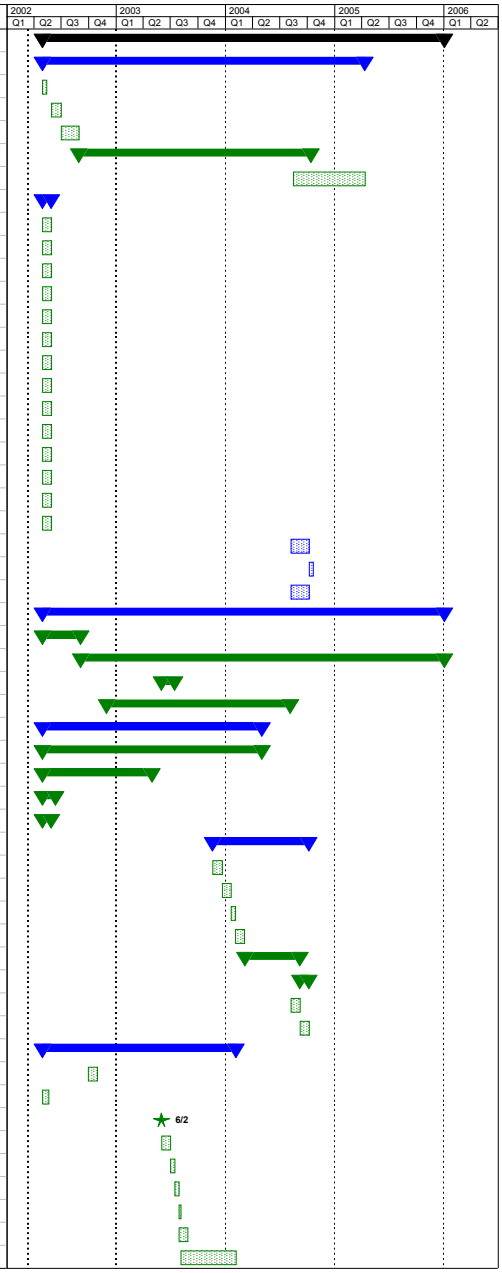
2.9. Administrative and Governance Tasks

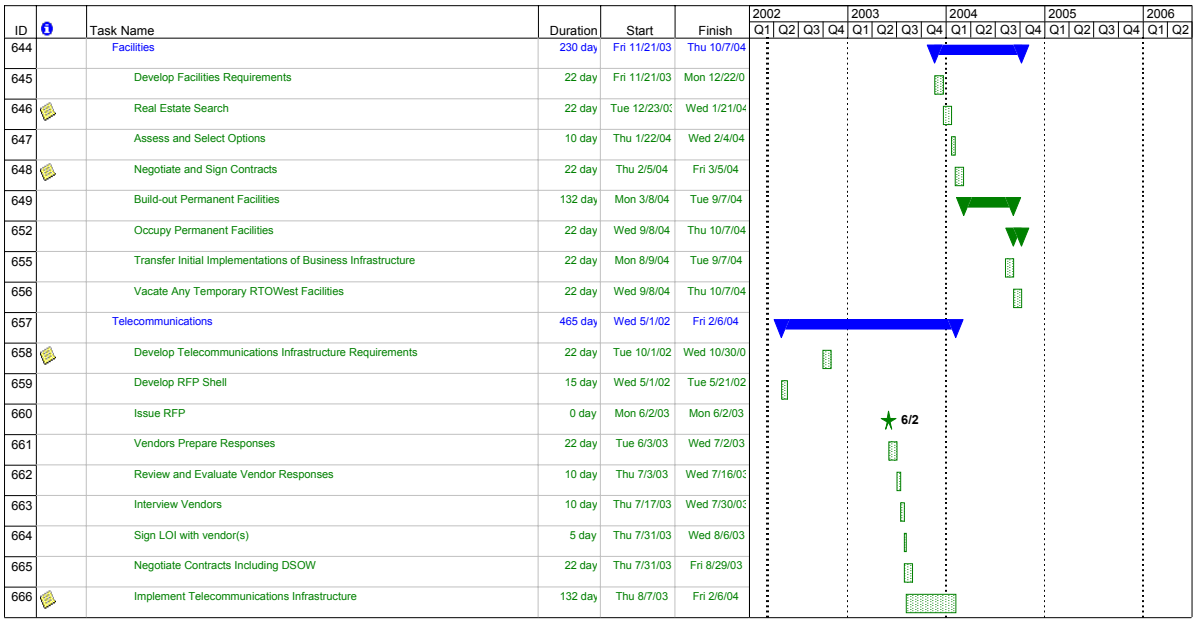
The administrative and governance section of the Plan includes a wide range of tasks. Administrative infrastructure, especially human capital, is tasked and scheduled in this section of the Plan. Prototype workflow development is converted into formal standards and practices of the enterprise. Officers come on board and take responsibility for enterprise operations. The stakeholder process is migrated from its present more informal organization to a formalized process orbiting around an appointed representative Advisory Board. Board

selection and seating is another key aspect of this element of the Plan. Facilities acquisition and preparation, telecommunications infrastructure, and the furnishing and facilities management tasks are also in this element. Chart 7 below summarizes the key tasks and the schedule for them.

Chapter 2.7 Administrative and Governance Tasks in the Plan

ID	Task Name	Start	Finish
354	**Administrative and Governance**	**Tue 4/30/02**	**Tue 1/3/06**
355	Infrastructure Development	Wed 5/1/02	Tue 4/12/05
356	Define Suite of Systems	Wed 5/1/02	Tue 5/14/02
357	Perform Outsourcing Analysis	Fri 5/31/02	Mon 7/1/02
358	Develop RFP and Specifications	Tue 7/2/02	Fri 8/30/02
359	Select Vendor(s)	Fri 8/30/02	Thu 10/14/04
367	Write Software and Construct Systems	Mon 8/16/04	Tue 4/12/05
368	Prototype Workflow Development	Wed 5/1/02	Thu 5/30/02
369	Human Resources	Wed 5/1/02	Thu 5/30/02
370	Procurement	Wed 5/1/02	Thu 5/30/02
371	Payroll	Wed 5/1/02	Thu 5/30/02
372	Finance and Accounting (Including Credit and Collections)	Wed 5/1/02	Thu 5/30/02
373	Treasury and Cash Management	Wed 5/1/02	Thu 5/30/02
374	Billing and Settlements	Wed 5/1/02	Thu 5/30/02
375	Management Practices and Reporting	Wed 5/1/02	Thu 5/30/02
376	Legal and Regulatory	Wed 5/1/02	Thu 5/30/02
377	Internal Audit	Wed 5/1/02	Thu 5/30/02
378	Media Relations	Wed 5/1/02	Thu 5/30/02
379	Financial Analysis and Reporting	Wed 5/1/02	Thu 5/30/02
380	Risk Management	Wed 5/1/02	Thu 5/30/02
381	FERC and SEC Reporting	Wed 5/1/02	Thu 5/30/02
382	NERC Reporting	Wed 5/1/02	Thu 5/30/02
383	Officers Review and Approve Workflows	Mon 8/9/04	Thu 10/7/04
384	Perform Employee Procedures Training	Fri 10/8/04	Thu 10/21/04
385	Officers Select Financial Auditor	Mon 8/9/04	Thu 10/7/04
386	Human Capital and Organization Development	Wed 5/1/02	Tue 1/3/06
387	Organization Design	Wed 5/1/02	Thu 9/5/02
398	HR Resource Procurement	Fri 9/6/02	Tue 1/3/06
551	HR Strategy Development	Tue 6/3/03	Wed 7/16/03
560	Governance Implementation	Mon 12/2/02	Fri 8/6/04
585	Stakeholder Process	Tue 4/30/02	Mon 5/3/04
586	Continue Existing Processes	Wed 5/1/02	Mon 5/3/04
629	Create Formal Advisory Board Reporting to Governing Board	Tue 4/30/02	Fri 5/2/03
633	Phase Out Existing Processes	Tue 4/30/02	Thu 6/13/02
637	Integrate Advisory Board with Governance System	Wed 5/1/02	Thu 5/30/02
640	Facilities	Fri 11/21/03	Thu 10/7/04
641	Develop Facilities Requirements	Fri 11/21/03	Mon 12/22/03
642	Real Estate Search	Tue 12/23/03	Wed 1/21/04
643	Assess and Select Options	Thu 1/22/04	Wed 2/4/04
644	Negotiate and Sign Contracts	Thu 2/5/04	Fri 3/5/04
645	Build-out Permanent Facilities	Mon 3/8/04	Tue 9/7/04
648	Occupy Permanent Facilities	Wed 9/8/04	Thu 10/7/04
651	Transfer Initial Implementations of Business Infrastructure	Mon 8/9/04	Tue 9/7/04
652	Vacate Any Temporary RTOWest Facilities	Wed 9/8/04	Thu 10/7/04
653	Telecommunications	Wed 5/1/02	Fri 2/6/04
654	Develop Telecommunications Infrastructure Requirements	Tue 10/1/02	Wed 10/30/02
655	Develop RFP Shell	Wed 5/1/02	Tue 5/21/02
656	Issue RFP	Mon 6/2/03	Mon 6/2/03
657	Vendors Prepare Responses	Tue 6/3/03	Wed 7/2/03
658	Review and Evaluate Vendor Responses	Thu 7/3/03	Wed 7/16/03
659	Interview Vendors	Thu 7/17/03	Wed 7/30/03
660	Sign LOI with vendor(s)	Thu 7/31/03	Wed 8/6/03
661	Negotiate Contracts Including DSOW	Thu 7/31/03	Fri 8/29/03
662	Implement Telecommunications Infrastructure	Thu 8/7/03	Fri 2/6/04





ID	Task Name	Duration	Start	Finish
644	Facilities	230 day	Fri 11/21/03	Thu 10/7/04
645	Develop Facilities Requirements	22 day	Fri 11/21/03	Mon 12/22/0
646	Real Estate Search	22 day	Tue 12/23/0	Wed 1/21/04
647	Assess and Select Options	10 day	Thu 1/22/04	Wed 2/4/04
648	Negotiate and Sign Contracts	22 day	Thu 2/5/04	Fri 3/5/04
649	Build-out Permanent Facilities	132 day	Mon 3/8/04	Tue 9/7/04
652	Occupy Permanent Facilities	22 day	Wed 9/8/04	Thu 10/7/04
655	Transfer Initial Implementations of Business Infrastructure	22 day	Mon 8/9/04	Tue 9/7/04
656	Vacate Any Temporary RTOWest Facilities	22 day	Wed 9/8/04	Thu 10/7/04
657	Telecommunications	465 day	Wed 5/1/02	Fri 2/6/04
658	Develop Telecommunications Infrastructure Requirements	22 day	Tue 10/1/02	Wed 10/30/0
659	Develop RFP Shell	15 day	Wed 5/1/02	Tue 5/21/02
660	Issue RFP	0 day	Mon 6/2/03	Mon 6/2/03
661	Vendors Prepare Responses	22 day	Tue 6/3/03	Wed 7/2/03
662	Review and Evaluate Vendor Responses	10 day	Thu 7/3/03	Wed 7/16/03
663	Interview Vendors	10 day	Thu 7/17/03	Wed 7/30/03
664	Sign LOI with vendor(s)	5 day	Thu 7/31/03	Wed 8/6/03
665	Negotiate Contracts Including DSOW	22 day	Thu 7/31/03	Fri 8/29/03
666	Implement Telecommunications Infrastructure	132 day	Thu 8/7/03	Fri 2/6/04

(See Appendix I for more details.)

2.10. Concluding Points

The Program Implementation Plan for building out RTO West to full operational capabilities takes nearly four years. This is consistent with the build out pattern of other ISOs.

However, given the defined sequence of critical path milestones, significant stress is placed on the last two years when most of construction occurs. In effect, the Plan structurally divides into two phases, turning a four-year design, develop, and build period into a two-year design and develop period, followed by a two-year build period. This division reduces flexibility relative to ISOs with earlier independence.

Significant investments are made in years three and four, and an extraordinarily high (possibly unrealistically high) hiring rate parallels spending. This pattern of sudden hiring and spending has proved sub-optimal in several ISOs.

Contingency planning as well as an analysis of options that reduce the constraints on independence may be advisable. This is typically done key the Program Management Office.

There are many tasks that can be undertaken now to help smooth the ramp up in the out years, but constraining near-year tasks by conditional and step-wise funding reduces the value of starting tasks other than execution of the regulatory related tasks.

There are seven steps that could be taken immediately to help clarify the focus of the Plan and evaluate key assumptions.

- *Start the As Is mapping of existing systems throughout the Western US*. It is critical to the specification of RTO West operating systems. The sooner this is started the better the information will be when specifications are developed.
- *Set up the interim organization early*. Decide the configuration of the associated program management office and initiate its formation.
- *Begin converting the Program Implementation Plan into a Master Plan* (see Appendix II: Definition of Terms for the distinction between this Plan and Master Plan).
- *Develop a robust first and second year budget for RTO West.* This is an important step as the first two years will be funded by the filing utilities. A budgeting exercise will be helpful in defining and assessing the value of starting some tasks early.
- *Enhance understanding of the critical contingencies that impact the Plan and its probability of successful completion on schedule and on budget*. Develop scenarios that provide alternative development and build out paths as well as provide alternatives to possible adverse outcomes along the critical path.
- *Conduct a Program Plan Implementation work session focused on clarifying the decision-making processes and procedures* that will be used to ensure the interim organization is well managed, and the interim Board can fully execute its responsibilities.
- *Develop the initial business plan for RTO West*. This process will help to accelerate preparation for financing the enterprise. It will also be an important information resource for the inbound permanent CEO and Officers.

RTO formation and development is a colossal undertaking with many similarities to venture financed start up organizations. The compelling differences, though, are that this start-up has no tolerance for error or failure and the velocity of change has a ramp rate unlike any start-up. The institution must be born as if it were a fully mature enterprise in order to ensure that reliability is present and it is ready to be accountable.

RTO formation is far more than configuring operating systems and related infrastructure. It is the crafting of a new institution that will have a longstanding role in the electric power industry for decades to come. As such, the importance of developing institutional identity, culture, shared values, and distinctive, cooperative style merits as much attention and care as the engineering focus on operations systems build out.

Fortunately, RTO West has the benefit of having several institutions develop in the U.S. before it. And more than 15 years of global experience in the creation, management, and change of independent transmission institutions to draw on as it moves from market design work to program implementation and eventual operational start.

3. Plan Management

3. Plan Management

3.1. Introduction

There are four overriding factors that will significantly influence program Plan implementation outcome and costs.

- Selection of Independence Day
- Federal regulatory decisions and processes
- The management system for Program Plan implementation
- Forces influencing the cost profile of the build out

3.2. Selection of Independence Day

The Plan schedules Independence Day after state approvals, which in turn depend upon FERC approval of market design. Independence Day is November 4, 2003. This is almost 19 months from the start date of the Plan, and 10 months of this time is required for the Board selection process. Thus, one will not know with precision whether state approval processes will be completed when one initiates the Board selection process.

The stated reason for scheduling Independence Day after Federal and state approvals is that there is no basis for proceeding with the development of RTO West without them. Deferring Independence Day minimizes exposure to unrecoverable development costs.

With Independence Day fixed to follow Federal and state regulatory approvals, any lags in these preceding milestones could have two effects – delay of Independence Day and an associated delay in the operational start date. (These delays are uncertain because the Bylaws, as approved, will not suspend the Board selection process based upon changes in regulatory decisions.)

The timing of Independence Day has other impacts on the Plan. Until there is an independent RTO West there is an imperfect counterparty to negotiate with utilities and other RTOs. This may amplify the risk of delays if at some point parties conclude they want to wait for the independent board and management to finalize agreements. For example, in the Midwest FERC ordered the Midwest ISO and the Alliance RTO to work out Seams issues, but efforts stalled because the Midwest ISO concluded it had no real entity to negotiate with in the absence of an independent board.

While deferring Independence Day is financially prudent, putting Independence Day earlier may offer offsetting benefits. Specifically:

- Creating a bona fide counterparty that can negotiate agreements with greater certainty, and assume management of implementation early enough to be held accountable for controlling task execution and costs.
- Providing a focal point for an effective stakeholder process that will continue to be of significant importance through development and after operational start.
- Helping to reduce the risks of polarization and gridlock between RTO West and its stakeholders, as well as RTO West and its regulators.
- Being more directly responsive to FERC priorities, and obtaining modification from FERC's standard market design.
- Enabling hiring objectives to be met. Without an independent entity it will be very difficult to recruit and hire quality permanent staff. The sooner permanent staff can be hired, the lower the overall cost of implementation.

To address these circumstances, time and cost are included in the regulatory tasks of the Plan, preceding Independence Day.

3.3. Federal Regulatory Decisions and Processes

3.3.1. Issues Pertaining to FERC Standard Market Design

FERC approval of RTO West market design is a critical path milestone. The Plan assumes the maximum cycle time for FERC decision-making, including a 60 day period following a filing before RTO West receives a FERC order and a 90 day period for requested clarifications or challenges.

These scheduled periods may be elongated if FERC's orders require significant revisions from the initial RTO West filings. The closer RTO West market design is to expected standards, the less likely it will cause delays to the Plan.

If RTO West seeks from FERC exceptions to standard market design, it will increase the scope and duration of FERC related filings. FERC has been requiring a higher standard of proof to approve exceptions, even though this standard design has not been decided in the NOPR. RTO West's requests for exceptions may succeed if supported by stakeholders, but to gain such support requires an effective stakeholder program (which is assumed in the Plan).

3.3.2. Importance of Seams Resolution to Timely Operations Systems Build Out

In the Western U.S., resolving seams issues sooner than later in a steady process will significantly contribute to minimizing risks of delays in the specification and subsequent build out.

Seams are currently being worked on. They will continue to be the focus of work throughout most of the duration of the Plan. Given their criticality, they will remain influential and relatively high risk factors affecting schedule and costs.

3.3.3. Seams Effects on Build Out Costs

Seams have another important effect on the Plan because of the assumption that Seams can be managed using some of the existing systems. As a result, a principal focus of new systems development will be on interface tools that enable existing systems to be integrated and work for RTO West.

This assumption has potentially serious implications for build out costs. If the assumption is valid, the effect will be to lower the total implementation costs to bring RTO West to operational start. But if existing systems turn out to be in need of modification because systems interface challenges are more costly, or because existing systems are less able to be integrated together, total implementation costs to bring RTO West to operational start may be greater than expected.

3.3.4. Need for a Valid As Is Map of Existing Systems and Gap Analysis to Effectively Cost Operations Systems Build Out

It is important to evaluate the assumption above early, as called for by the Plan. The As Is map documents the state of existing systems – their capabilities, vintage, costs of upgrades and adaptation, and the scope of the effort required to effectively knit together these systems, As Is, with new operating systems platforms that will be used by RTO West. Depending on the outcome of this task, the implementation schedule may be adjusted in either direction – the out-years may move inward in time, or the opposite. What needs immediate attention is evaluating the approach to development– "interface focused" middle-ware – and whether it is cost effective and feasible.

3.4. Management System for Program Plan Implementation

RTO implementation is in very practical terms a complex construction project. What is being built is part bricks and mortar – the facilities and hardware required to make an RTO work – and critical information and organization related infrastructure – e.g., software systems, business processes, training, monitoring, and human resources. Every ISO and RTO implementation has been coordinated through some form of central management – typically a program management and systems integration office (PMO).

The PMO develops and manages the execution of a comprehensive master plan. It manages necessary duration, work effort, and cost adjustments to the master plan with the focus being achievement of the scheduled operational start date. It also is responsible for ensuring that necessary capabilities are appropriately configured and deployed to complete specific tasks.

The PMO is a central coordinator of information flows, internal and external communications, public policy related support, and a coordinator of stakeholder processes (actual facilitation may be carried out by resources with specific expertise in this area). Through its efforts immediate tasks are managed and impending tasks, issues, and problems are focused for proactive treatment.

Also, the PMO is key support for the CEO's efforts to manage vendors (arms and legs until staff on board). Being ahead of vendors, their build out schedules and their agreed-upon costs can reduce delays from unexpected change order requests, under staffing of their projects, and running projects with insufficient capabilities to ensure cost-effective results.

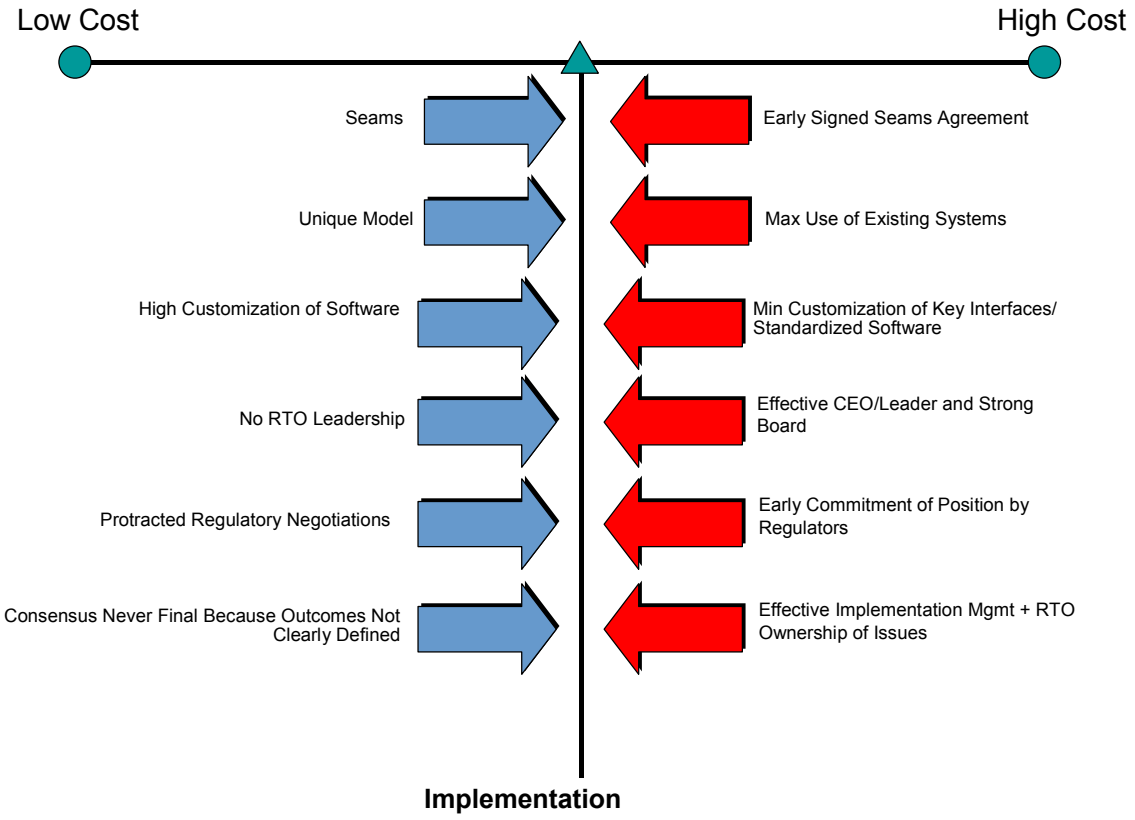
The PMO is a small group of four to five full-time staff. It may be staffed with consultants, contract staff, seconded staff, or employees of RTO West. Almost every combination of types of staffing has been used successfully, although some ISOs regret not using more employees sooner.

The sooner a PMO is established the more likely it is the Plan will stay on schedule and within costs. Early establishment of a program office gives RTO West the immediate staff it needs to manage implementation.

3.5. Forces Influencing the Cost Profile of the Build Out of RTO West

Effective task execution is critical to successful Plan implementation. Effective cost management is a significant challenge when it comes to RTO implementation programs. The following chart summarizes the key forces that tend to push costs higher or pull costs lower. Managing these forces is a main job for the RTO West leadership, both interim and permanent staff.

Chart 3.1 Forces Influencing the Cost Outcome of RTO West



To achieve a lower cost build out, RTO West should achieve an early-approved seams agreement, maximize the use of existing systems, and phase-in its start-up. It should also minimize the amount of customization of key interfaces by using standardized software, hire an effective CEO early, and gain early commitments from regulators regarding critical issues such as treatment for rate purposes of funds committed to RTO West. Finally, it should ensure that RTO West management takes ownership of RTO West issues as soon as possible.

3.6. Critical Implementation Issues Re: Financial and Business Tasks

3.6.1. Timing of an RTO West Financial Advisor

Preparing to seek long-term financing for RTO West can be done early in the Plan. Cost can be minimized by negotiating with a possible underwriting institution to provide up front financial advice for a minimal fee. This can be accomplished by severing financial advice from the underwriting. For these reasons RTO West could begin the business plan and financial plan development immediately.

However, to begin this process is to change RTO West into a more active entity. It will involve hiring an interim leader and supporting staff.

3.6.2. Prudent Pre-Independence Day Spending

In other venues where RTOs are being developed utilities have encountered direct orders from FERC to stop spending until there is an independent entity. Decisions may not be binding to the RTO, and funding activities that are significant to the future operation of the RTO can only proceed with "full stakeholder process to *achieve* consensus." (Re GridSouth, mimeo., p.5, July 12, 2001, emphasis added, citing GridFlorida, 94 FERC 61,363 (2001). Attempts to circumvent this restriction have a high failure rate, particularly for deviations from the emerging standard market design. A prudent approach to this constraint is consistent with the filing utilities' instructions concerning when major vendor contract commitments can start (after Independence). However, many other tasks prior to Independence will raise this critical implementation issue: how much spending is too much too soon? See Appendix XII for an inventory of the tasks before Independence that can be done, and which may require stakeholder consensus.)

The trade-offs between no spending, some spending, and a lot of spending are clear in the extreme, but the practical problem is definitively ambiguous. If near-year spending is too limited (and the goal is to stay on the Plan's schedule for operational start) the out-year spending grows significantly. Experience shows that there is only so much money that can cost-effectively be spent in a year on build out. Above these amounts (typically $30-50 million annually), budgets tend to under-spend targets, anecdotally due to human management constraints. (See Appendix III for ISO/RTO histories.) Cost conscious Program Implementation argues for slipping the operational start date rather than over spending without beneficial results.

The challenge for RTO West will be to structure its spending so that reasonable near-year risks will be taken and offset for the risk that insufficient near-year spending will produce unacceptable delays in operational start.

3.7. Critical Implementation Issues Re: Legal and Regulatory Tasks

3.7.1 Management of Filings

As stated in the assumptions, the ability to maintain a schedule in the legal and regulatory area requires some decisions about managing the filing process, authorizing the lead attorney to reflect stakeholder consensus, and exercising good judgment about extensions when more consensus can be gained, while meeting expectations about a stable and step-wise process.

For each month of delay in making a filing, the operational start date will move about a month forward, therefore filing management is part of demonstrating progress to FERC. For these reasons, defining the scope of delegation, authority, and discretion in advance is crucial to an effective process stakeholders can support as fair, even when they disagree about content.

State regulatory approvals are one of the less controllable factors influencing whether the Plan can be implemented on schedule. For this reason, contingency planning will be important, so consensus on how to respond to changes and options that can be pursued are prepared when needed. The Plan does not include specific contingencies but the Master Plan, when developed, should do so.

3.7.2. OATT: Timing Relative to State Approvals and Seams Agreements

The primary near-term activities are the stated pre-conditions to Independence: a FERC-approved OATT, and state decisions based upon FERC approved market design (in that OATT). As the state filing process is pending one year, and the Board seating process is not tied to the OATT or state approvals, delays in state approval may result in a seated Board before the states have finished their process. The alternative, waiting for state approval to begin seating the Board, will add approximately 10 months to the Plan.

Although the OATT process at first blush appears to continue after Independence, the OATT is actually done before state approval, with two exceptions. The first (in the Plan) involves how the seams agreement process interacts with the OATT, and the second (not in the Plan) involves the uncertainty associated with refinements or modifications that will be made by an Independent Board in light of stakeholder, FERC, or pre-operational testing.

The OATT process is represented in the Plan as having two primary cycles. The first cycle puts the OATT filing before FERC in November, 2002, and includes one month before filing to incorporate shifts from the upcoming standard market design decision, if any. A decision is scheduled for the following March, 2003. A refinement to the OATT is planned to incorporate seams agreements from all seams teams except scheduling/OASIS. Those seams refinements to the OATT

would be filed July, 2003, resulting in a decision planned September, 2003. This date allows some time for the state review process to absorb any seams-related changes to the OATT before its planned decision in November, 2003.

Other alternatives would allow the seams work more time, and delay the OATT filing until "full" market design agreement was reached. In the context of an uncertain process for review and adoption of seams agreements, meeting a schedule through the current ad hoc process could prove to be very challenging. The Plan relies on the current degree of alignment between at least two of the RTOs, the ability to expand that alignment if design work stays at a level of detail appropriate for tariffs, the history of other organizations in which Financial Transmission Rights (FTRs) were offered well after startup, and the backdrop of a standard market design.

The seams agreements themselves have three cycles of review and approval: two with each RTO's Board, and one with FERC, **before** these agreements are incorporated into the OATT and resubmitted in an OATT filing. There are several reasons for this:

- It makes the approval process at FERC more conservative, which is justified by the novelty involved in achieving seams agreements,
- It allows the seams teams and Boards to attain some momentum, since there is clarity about the process and a future identified step for translating conceptual agreements into tariff form.
- It allows for each Board to react to and stipulate concerns that the seams teams should address before sending the agreement back to the Boards.

The tariff-level seams agreements will most likely be highly conditional: the agreements are planned to be subject to Independent Board acceptance or modification, to avoid prohibitions on binding future operations before the Independent Board is seated. The Plan allots time for the Independent Board and its Advisory Board to act on these materials, but hopefully will not then be on the critical path.

An alternative would be to establish independence as soon as possible (10 months), and have the Independent Board (with Advisory Board input) act as counter-party to the seams agreements, which could be linked to the OATT (delaying it) or not linked (revising it).

The scheduling and OASIS team's seams agreements are lagged behind the other teams because this team currently schedules its work for fourth quarter 2003, which would have a significant impact on Independence Day. Proceeding from the position that the three Western RTO's need not have the exact same market design, within the parameters allowed by FERC's upcoming standard market design, it is likely the bulk of this team's work will be at a level of implementation, interface, and technical compatibility. The cycles of review by

Boards and FERC are the same for any tariff-level agreements that do result from this effort. However, the team's pace has not been accelerated, and the FERC filing date of January, 2004 will be executed by an Independent Board. The Plan thus lags this seams teams work behind the other teams, in part because the team's work is critical to real-time control, which is critical to startup and long-term stability.

Other seams team's subject matter is further removed from real-time operations and is accelerated, with initial recommendations to Boards in May of 2002. Filings for FERC approval of the tariff-level seams agreements would be made in March of 2003. The intervening months are planned for structured back and forth between the teams and their Boards to attain comfort with what is expected to be a relatively conceptual content of the filings. (e.g., there is or is not a day-ahead energy market.) The project management team and the lead attorney will need to structure this interaction in concert with the other RTOs to make effective progress during this timeframe.

The initial seams recommendation dates come relatively early in the Plan because some of the work is well developed (e.g. phase-shifters), and other elements of the work will likely continue even after startup (e.g. transmission planning). Deciding to move forward with three RTO's and provide tangible evidence to FERC that this approach is making progress, is expected to require decisions to move more incrementally, in a context of non-finality and planned regulatory stages. The Plan thus includes a bias towards intermediate milestones for the teams to define deliverable recommendations, and build slow but steady progress with a shared understanding of the stages of review still to come.

3.7.3. The Importance of Managing Stakeholder Process

FERC has consistently emphasized the importance of engaging stakeholders in the market design and development process. Most stakeholders in the market design process are or become market participants. During the development/build out period, a significant stakeholder/customer outreach is essential to staying on schedule. Long-term cultural and institutional problems can begin during this stage if input and expectations are not properly managed. The judgment needed to delay the schedule in the interests of more consensus is significant, and behaving as if Independence were already established requires some attention to filing management (i.e., the scope of delegation, authorization, and discretion).

Absent effective consensus building, stakeholder protests at FERC and FERC's orders frequently reflect the concerns stakeholders express. In areas where RTO scope issues are still fluid, geographical boundaries can turn on stakeholder dissatisfaction.

Additionally, in the context of a standard market design, stakeholders' input is even more important. The recent MidWest ISO decision is illustrative: even with an independent staff and a relatively effective stakeholder process, there is value to be captured by building important functional elements that enjoy broad

support, or waiting for FERC to decide disputed design elements, at least those at tariff level. The Plan (outside the Legal and Regulatory segment) includes early commitment to an effective communications program, and scheduled migration of the existing stakeholder process to a formal process involving the seating of an Advisory Board. Both are important to managing the filing processes effectively.

3.7.4. Timing of the TOA

The TOA is a stated critical transaction for all filing utilities. It is conditioned on FERC and state approvals, as well as an Independent Board. Given the scope of the RTO West TOA and what is typically incorporated into the OATT, there may be iterations to the TOA required by FERC as aspects are moved into an OATT. If this occurs, the Plan has sufficient time built into it to enable changes. However, major revisions to the TOA by the Independent Board may restart the state and federal review process, depending upon the content of prior orders authorizing transfer of control.

3.7.5. FERC Standardization Process

RTO West market design, while most likely consistent with FERC standard market design (SMD), does vary from the expected SMD in its approach to clearing a day-ahead energy market. One month is allotted for incorporating SMD aspects into the market design, but this short time may not prove to be enough if the decision is delayed or major changes are ordered.

3.7.6. Timing of RTO West Revenue Method Approval

A FERC Section 205 filing is scheduled following tariff approval wherein FERC will determine RTO West's cost of service and fee(s). This may, and usually does, precede long-term financing, but the basic principles used can be developed soon as an integral part of business planning, the financial model, and associated risk analysis that will ultimately be required by a lender. An alternative used by Midwest ISO involved a $50 million loan guaranteed by one of the expected transmission owners and authorized by FERC, prior to a MISO 205 filing but after independence was established.

An approach that gradually phases in RTO West functions may drive a change to the business plan and funding levels, and decisions about phasing-in functions may require Independent Board acceptance.

Specific filing tasks can occur fairly quickly if pre-Independence preparation accurately anticipates the financial needs of the RTO upon Independence, and this speed is reflected in the Plan. If there are changes to the ratemaking methodology as the actual filing preparation occurs, the financial planning will also need to be adjusted.

3.8. Critical Implementation Issues Re: Operations Tasks

3.8.1. Importance of As Is Mapping/Gap Analysis

An important premise among some market design working groups and seams working groups is that existing operations related systems, e.g., EMS, AGC, and metering, can be incorporated into RTO West operating systems. The view is that it will lower costs and enable a more accelerated build out. The focus of new systems would be narrowed to those that are uniquely pertinent to RTO West and to interfaces that would integrate new and existing systems.

Experience indicates that any time customized software is required to integrate systems or to develop hybrids of existing and new systems costs rise and start-up instability is increased. When network reliability is paramount, start-up instability should be avoided.

The premise that existing systems can be adapted and thereby help minimize costs and accelerate build out merits serious consideration. The only way to know for sure the scope of adaptability of existing systems is to map them and evaluate how they would fit within the new system requirements defined by RTO West market design.

Specification of needed systems and solutions cannot be detailed if there is any ambiguity about the potential usefulness of existing systems. Any ambiguity in systems specifications is an invitation to lose control of costs. Therefore before any specification begins the Plan includes an important task for mapping existing systems throughout the Western U.S. The geographic reach must be the Western U.S. because RTO West operations interface with every other region within the Western system. Merely mapping RTO West TOs will be insufficient because other critical interfaces now exist – the California ISO, the utilities in the Southwest, including WestConnect, British Columbia, and Alberta.

An As Is mapping effort helps to control program implementation costs as well as to define in more detail the schedule required for build out. It has the added advantage of helping to increase control over seams-dependent systems. By better articulating what now exists compared to what will be needed, the As Is work can be used as input, direction, and pull to move seams solutions along. This in turn will reduce the risk that seams-dependent build out will be delayed.

3.8.2. Unique Market Models Complicate Procurement

RTO West's market design is generally consistent with expected FERC standard market design. But there are distinctive, unique features to the design pertaining to how existing contract structures are handled and, in effect, monetized for purposes of congestion management and future transmission development planning.

As a general rule the more unique the market design the more likely the cost of build out will be higher than a standard market design. As systems specification progresses in the Plan, it will be important to examine the tradeoffs in costs between the building of systems for managing unique features of the Northwest electric power system and adapting unique features to standard market design.

Certainly this tradeoff is an ongoing consideration as market design continues, but it takes on greater significance when the details required for specification of systems comes into play.

Another important aspect of the tradeoff concerns how controllable systems development is when the product has unique features. Program managers will lose control to vendors as more unique features are added to systems. As this occurs, the risk of expensive change orders taking control of the build out will grow. The best way to counter these risks is to minimize unique features and maximize standard market design principles.

3.8.3. Critical Importance of People and Infrastructure Mix

Once the build out of systems begins and RTO West permanent staff come on board, the essential character of the institution will begin to emerge. Experience shows that the early months of RTO independence set a tone that sustains thereafter through development to operational start and from there to continuing operations.

Institution-crafting is far more important than previously understood, now that several ISOs have developed and been operating for some time. The institutional personality from start remains generally the same thereafter; and that personality is largely shaped by three critical selections – the Interim Leader, the membership and make-up of the Board, and the CEO.

Infrastructure build out is better managed and more likely to succeed if permanent staff assume responsibility early, before the systems themselves are generally complete. As such, it is the interdependence of the right people managing the completion of critical infrastructure that yields more reliable start-ups and better control of costs.

For example, in the case of the New York ISO, there were over 200 people on board before major systems were completed or the enterprise went live. The New York ISO benefited from importing 100 New York Power Pool people to its staff before start up.

Another example is PJM where the ISO management came from a tradition of tight pool network management that dated back decades. The culture for independent transmission network operations was long implanted, so the transition to more formalized ISO management was relatively smooth.

Given the complexities of the Pacific Northwest and the Western US electric power system, early retention of key staff would go a long way to increasing the control of costs. Careful selection of the first key people will pay dividends by ensuring they can effectively work equally well in technical operational, financial, and economic venues. In the case of the Northwest, special attention to capabilities in managing stakeholder processes, constituent expectations, and general political and regulatory arenas is also important to the selection process.

3.8.4. Enhancement of Website Access and Content is Critical to Stakeholders

Website related tasks are scheduled in the Plan but the importance of these tasks needs emphasis. Experience shows that website management is often overlooked but is particularly critical to stakeholders. Web access is a principal form of communication amongst stakeholders and with RTOs.

3.8.5. Testing is Critical to Effective Implementation

In every RTO, implementation testing is critical to effective operational start. The important focus of testing is assurance that the basic operational infrastructure of RTO West works. Ultimately this is a liability management priority because if market operations start with inexplicable trade patterns it will be critical to know for certain that these patterns are not caused by RTO West operations or systems.

To ensure liability is effectively managed, testing must focus on:

- Proof of operational readiness
- Proof of business infrastructure readiness
- Proof the end-to-end sequence is valid
- Proof that contingencies are planned for and, with the exception of acts of God, are manageable

Of particular importance is certification that critical systems are valid and have been proven to withstand stressing. Four key certifications are included in the Plan:

- NERC certification
- Certification of settlement formulas
- Security audit
- Sign off process for regulatory certification

The last certification – sign off process for regulatory certification – is something that should be developed by RTO West and agreed to with both state and Federal regulators. Such a process involving sign off by the CEOs of market participants as well as Transmission Owners and the CEO of RTO West would contribute to assuring decision-makers that managers were confident that their systems were ready for live operations. This approach may be helpful to the Northwest Congressional delegation as well.

3.8.6. Shadow Operations - A Critical Process to Reduce Risks and Increase Reliability of Operational Start

The importance of shadow operations has been previously discussed. Given the complexity of RTO West its importance is clear. From a program management perspective shadow operations helps to increase control of less controllable factors that contribute to start-up uncertainty. These include seams, use of existing systems, the big bang approach to operational start, and regulatory and political concerns about the value of independent transmission operations and management.

In addition, shadow operations are critical for synchronizing speeds and sequential tasks related to operations. Control room operations change significantly when the technical engineering operation of the network must interdependently work with technical financial and economic operation of the network – the latter being the unprecedented new processes in the system.

Speed of operation now reaches beyond the traditional signaling to generators to ramp up or down in various response times. Speed of operation depends on timeliness of schedule submissions and what operators will do if schedules are not submitted in a timely fashion. It must now incorporate automated control that selects from bid stacks emanating from market operations and subordinate traditional voice-based person-to-person solutions to network problems that cannot be easily monetized. The scope of the speed challenge is a massive change that requires training, testing, and in the case of this Plan, the prudent use of shadow operations.

3.9. Critical Implementation Issues Re: Administrative and Governance Tasks

3.9.1. Administrative Related Key Issues

Principal Plan management concerns pertaining to administrative tasks are focused on the timing of human resources acquisitions and the effect delayed hiring may have on build out costs. Given the critical path in the Plan the opportunity to lower costs by hiring staff earlier is not an option. As noted above, there are complex tradeoffs concerning what management control may mean, who actually has control, and whether control of timing is as valuable as control of development and build out from a cost perspective.

The Board selection process is documented in the bylaws of RTO West. Significant duration has been included in the Plan for Board selection because of the process requirements. A Plan management priority should be accelerating the selection process while simultaneously (and somewhat contradictorily) avoiding its prolongation due to unexpected political and regulatory interventions.

Board selection and timely seating of the Independent Board is on the critical path. In the same way that regulatory delays more or less translate into one month for one month extensions of the operational start date, so also is the effect of delays in Board selection and seating. More importantly, delays in seating the Board translate into delays in selecting the CEO.

If the Plan is managed as set up to maintain a sequential hiring pattern – CEO, then Officers, then staff – Board selection delays protract the acquisition of permanent staff. In turn, this will either delay the operational start or leave new leadership with the legacy of interim leader and contractor decisions in absentia that lock new permanent management into systems and infrastructure.

Experience shows that new management tends to make changes in whatever systems are in place as part of the process of gaining control of the organization and its direction. Consequently, delays in hiring will most likely contribute to added costs as the new management makes modifications in systems that are either newly completed or very nearly complete. In the same way that change orders are the most expensive part of a vendor contract, last minute changes are the most expensive form of change order.

3.9.2. Seams Related Key Issues

The ad hoc seams process in operation as the Plan was developed leaves a very important question unanswered. Who files approved SSG-WI agreements at FERC? Since SSG-WI itself is not an RTO or any formally recognized party to RTO West design and development, whatever agreements that are struck will have to be executed through some other institution(s). Considering the criticality of Seams solutions to RTO West build out, this is a very important question to answer.

A related question is whether SSG-WI can be a legal entity, or placed under the wing of a specific legal entity. If SSG-WI adopted a legal imprimatur its relationship to existing and developing RTOs in the West would become of vital interest to both the RTO institutions and FERC. Given the interest in a seamless West-wide market a legally constituted SSG-WI might be a platform upon which FERC could achieve that goal. (See Appendix VI, which discusses an option for managing seams and creating a super-regional entity that supports rather than supercedes existing and proposed RTOs in the West.)

Certainly the existing RTO West Board could submit SSG-WI agreements to FERC, and that would be appropriate. To do so, however, will require RTO West having its own interim counsel to coordinate and manage the filings preparation.

A related "who?" question concerns funding. It is assumed that the filing utilities and other RTOs in the West fund seams-related work before RTO West Independence Day. It will be important to the financial planning and financing of RTO West to know early whether utilities intend to include SSG-WI costs in loans transferred to RTO West.

During the period when an interim RTO West Board is in position and Independence Day has not been declared seams negotiations may be difficult to move from discussion to resolution. The reason is that seams agreements are supposed to be between RTOs.

In the current environment in the West it is questionable whether the existing and emerging RTOs could actually sign agreements. For example, the California ISO Board considers CAISO's involvement in seams to be of questionable legality given the enabling legislation under which the institution operates as a California corporation. WestConnect is not a formally approved RTO yet, and RTO West has approximately two years under the Plan before it is ready for independence.

In other venues the absence of true counterparties not only undermined the process of developing seams solutions. It also got in the way of striking bona fide deals. In the Midwest the Alliance RTO's lack of independence lead the independent Midwest ISO to minimize seams discussions until the Alliance could be a true counterparty.

3.10. Plan Resource Requirements

The development and build out of an RTO is resource intensive, but the types of resources and the pattern of utilization changes through the various phases of the construction process. For example, during the market design process, staff resources are primarily drawn from utilities as the design process itself is a collective effort amongst utilities and other stakeholders. By contrast, during the final phases of testing before start up the mix of resources is skewed toward contractors and RTO employees with minor, if any, participation from utility staff.

The sourcing challenge is the same for each RTO development – how to initialize, build, and transition temporary staff and how to recruit, hire, bring on the board and implant permanent staff. Each RTO has approached the solution differently. For example:

- The build out of the California ISO relied heavily on contractors and utility staff loaned to the project until staff was hired toward the end of the build out process.
- The Midwest ISO relied primarily on hired staff and contractors, including the outsourcing of many business processes.

- The Alliance RTO, prior to being ordered to stop its development as a stand-alone RTO, initiated a build out process using a temporary entity called Bridgeco. Bridgeco staff was seconded utility employees, i.e., people from various Alliance filing utilities dedicated to specific tasks and provided as full-time support.

The RTO West Program Implementation Plan structure suggests its own distinctive sourcing solution. During the early years when the priority is progressing the regulatory agenda to both state and Federal decisions there is no basis for hiring permanent RTO West staff. The Plan includes retaining an Interim Leader and establishing a Program Management and Systems Integration Office instead. These resources are contractors, consultants, or seconded utility staff.

The significant ramp up in activity after state and Federal regulatory approvals are achieved is so steep that RTO West will still depend on resources such as contractors, consultants, seconded utility staff, and initial employees hired by the enterprise. It is only toward the end of the build out that RTO West permanent hires are sufficient to resource most tasks.

The Plan delineates several types of resources:

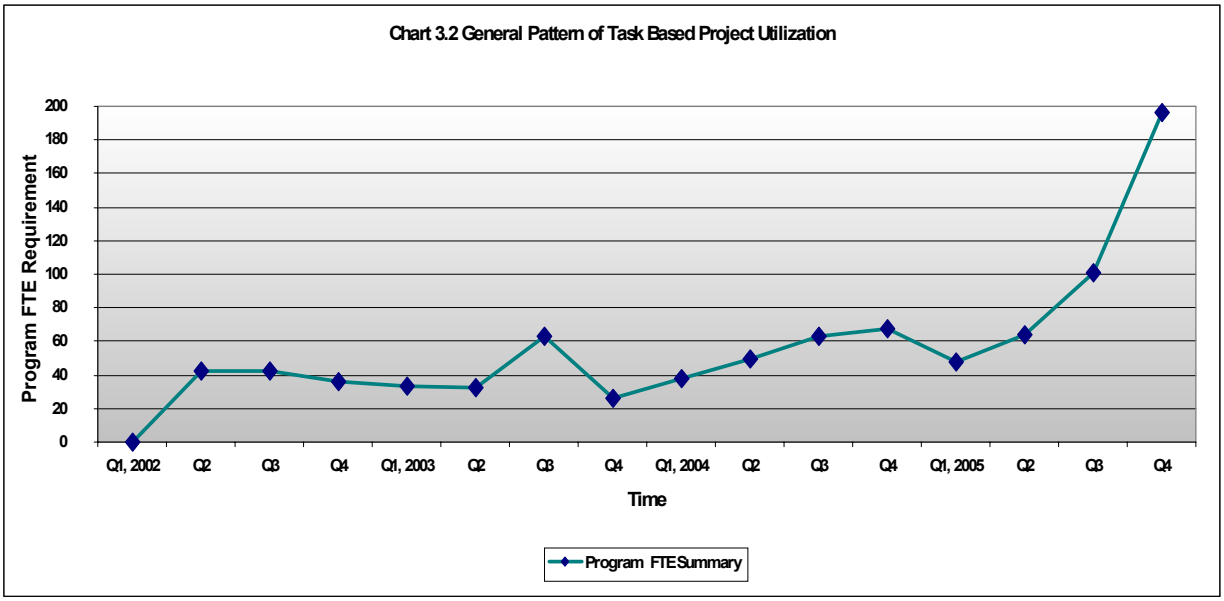
- **Utility staff** – Resources that are provided by the filing utilities to work on RTO West related matters. In particular, market design and state and Federal regulatory filings. Other uses of utility staff may include support for technical specifications writing or requirements where specialized subject matter expertise is crucial. The costs of these resources are included in the Plan because they represent true costs to RTO West since it is expected that these in-kind services will be valued and included in the loan that RTO West must repay to the filing utilities. No costs prior to the start of the Plan are estimated or included, though it is likely the loan amount will include pre-Plan related costs.
- **Utility attorneys** – Resources that are provided by the filing utilities to work on market design, state and Federal regulatory filings. The costs of these resources are included in the Plan because they represent true costs to RTO West since it is expected that these in-kind services will be valued and included in the loan that RTO West must repay to the filing utilities. No utility attorney costs prior to the start of the Plan are estimated or included, though it is likely the loan amount will include pre-Plan related costs.
- **RTO West Chief Executive Officer** – A specific permanent hire of RTO West that is included after state and Federal regulatory approvals.
- **RTO West Officers** – Same as RTO CEO.
- **RTO West staff** – Specific functional positions hired as permanent employees following RTO West Independence Day.
- **RTO West General Counsel** – Same as RTO CEO and Officers.

- **RTO West Outside Counsel** – The RTO West Board retains outside counsel to represent RTO West as a counterparty to all negotiations that pertain to contracts, agreements, and deals between utilities and stakeholders prior to Independence Day. The outside counsel also assumes the task of directing and filing RTO West related filings with FERC. State related filings remain the responsibility of utilities and those specific costs are internalized by the utilities, i.e., do not become part of costs that are included in the RTO West loan.
- **Paralegals** (RTO West or attorney sourced) – As a means of controlling legal related costs the Plan includes a paralegal resource that is included in both outside counsel, utility attorney, and General Counsel related tasks. Where legal work is for utility attorneys these costs would be included in a loan to
- **RTO West contracted staff** – Resources that are retained part-time or full-time for specific functions that are not slated for full-time employment are considered contracted staff. Contracted staffing is a typical vehicle that is used for RTO build out. It is often less costly than using consultants working for one of the vendors involved in RTO build out.
- **Consultants** – Resources retained through contracts with vendors including systems development, financial and business process development, administrative systems development, and program management and systems integration professional services firms.
- **Senior Consultants** – All firms have experienced people that are accessed for specific subject matter expertise. Senior Consultants is the category used to reflect the sourcing of such expertise.
- **Program Management and Systems Integration Office** – The role and responsibility of this office was explained above. The resources included in it vary in relation to the phasing of tasks. Generally speaking the office is composed of three to five full-time staff – either contracted or retained through a vendor. During the systems build out and integration phase of the Plan the office may include several more full-time staff from key vendors.
- **RTO Seconded staff** – Particularly in the early phases of RTO development, utilities often dedicated staff full time to function on behalf of the RTO. These Seconded staff are contributed but expected to return to their companies and to their previous assignments following the transition to full time RTO staff.
- **RTO Interim Leader** – An interim leader that directs all tasks prior to Independence Day is included in the Plan. The Interim Leader is most likely a single individual contracted to play the role of CEO-equivalent. During some periods of high activity prior to Independence Day, however, the interim leader may be more than one person. In other words, the CEO-equivalent may direct other contract resources as his/her agents. These additions to the interim leader role are limited in duration to cover peak periods.

3.10.1. Resource Use Patterns in the Plan

While the structure of the Plan has two distinct phases – one primarily focused on regulatory filings and approvals and the other focused on systems build out – the pattern of resource use has three principal cycles –

- Regulatory filings related
- Systems build out
- Shadow operations, including market and systems testing and certification and preparation for operational start



Source: Andersen, Microsoft Project Derived

3.10.1.1. Utility Counsel

Utility counsel resource requirements are related to state and Federal regulatory filings. Since filings are not completed until operational start the requirements remain high from the start of the Plan to the end of the Plan.

There are important implications for management of the Plan in the pattern of utility counsel utilization. If associated costs are to be transferred to RTO West as part of a loan, the use of utility counsel for work on RTO West filings, then RTO West should control resource deployment from utilities. Absent such control, these are uncontrolled costs that are rolled into the loan package.

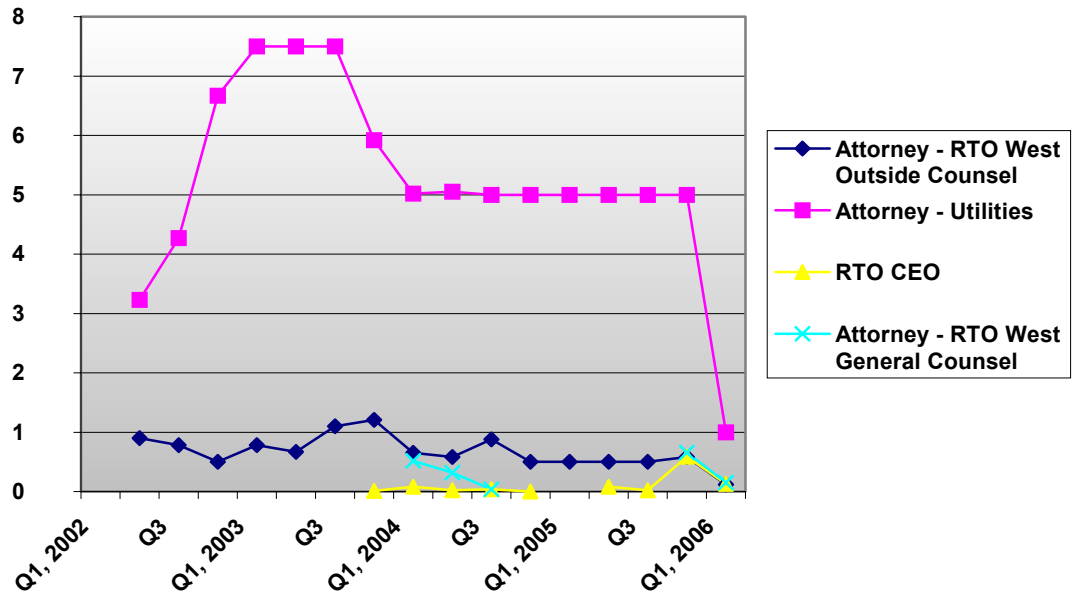
3.10.1.2. RTO West Outside Counsel

Outside counsel fills in for the RTO West General Counsel until hired. Utilization reflects the three cycles within the Plan – regulatory filings, systems build out, and operation start related tasks. In each case outside counsel represents the interests of RTO West. Once the RTO West General Counsel is hired, outside counsel remains involved as support because the scope of work required – particularly related to vendor contract management – remains extensive.

Outside counsel costs have the same potential for being uncontrollable as utility attorney costs unless there is an RTO West interim leader and/or associated PMO. Even with controls in place legal costs for RTO West implementation remain some of the most difficult to *actually* control. Experience from other venues indicates that aggressive attention to attorney related resources are important to controlling overall implementation costs.

As the CEO comes on board and the General Counsel utilization patterns shift, with utility attorney involvement drops off for RTO West but remains an active part of the Plan as the RTO West filing process proceeds. This is depicted in the chart below.

Chart 3.3 Program Utilization of Attorneys and CEO



Source: Andersen, Microsoft Project Derived

The above chart further illustrates the importance of direct management of legal related costs. This must occur from the inception of the Plan through its completion with operational start.

3.10.1.4. Patterns of Consultant Utilization

There are three types of consultant resources used in the Plan. Consultants associated with principal vendors, contracted staff, and consultants in the PMO. The chart below depicts the patterns of consultant utilization.

Consultants play a greater role prior to Independence Day, as does RTO contracted staff. As systems development begins consultants are replaced with vendors building hardware and software. The migration to shadow operations increases consultant involvement.

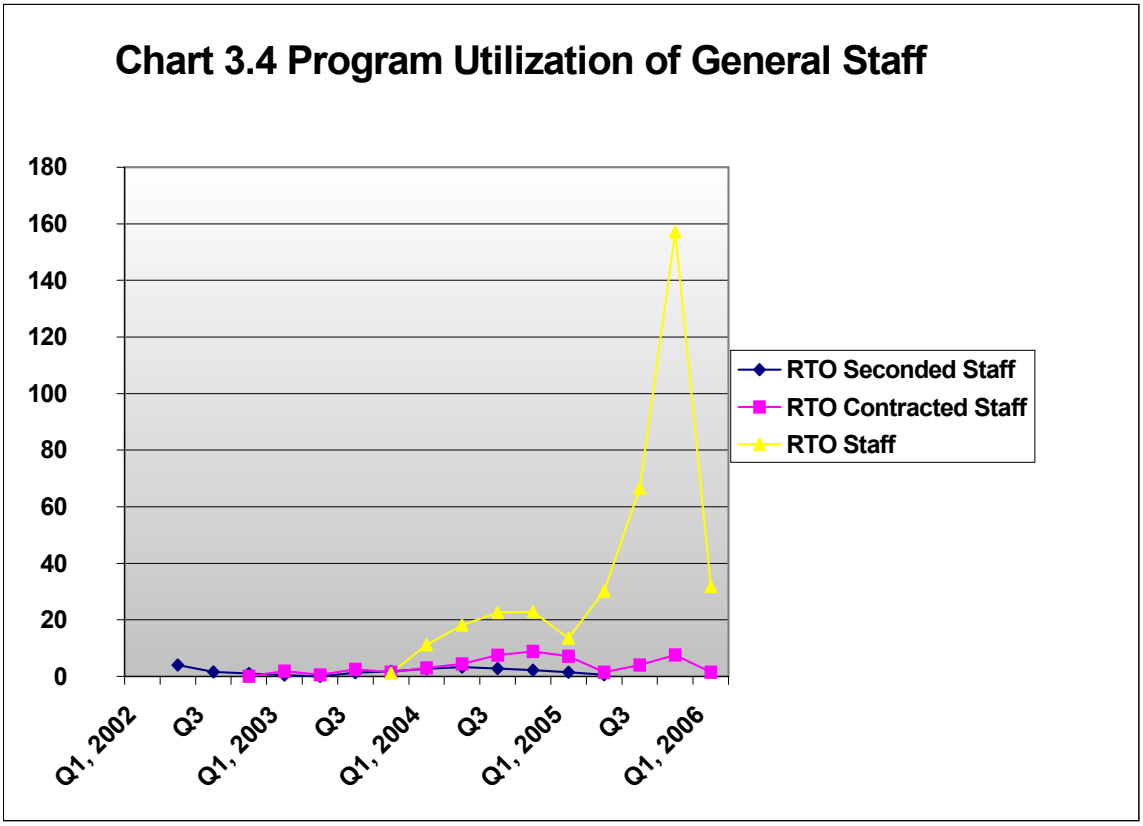
The PMO has an initial growth period as the staff comes on and pre-Independence Day tasks are started. The PMO utilization drops after initial set up because most activity in 2003 is related to regulatory filings. As systems build out begins the need for system integration expertise is at a premium. Additional staff is added to the PMO for this purpose. The PMO remains at high utilization through build out completion, testing, certification, and operational start.

Contracted staff begins to increase involvement and grow as the systems build out starts. Contracted staff involvement grows and exceeds the involvement of consultants for cost reasons.

The PMO is used for managing other vendor activity, including contract consultants until RTO West full time staff comes onboard. But the PMO itself is a vendor resource and needs management as well. This is one of the reasons that an interim leader is so important to implementation of the Plan.

3.10.1.5. Staff Utilization Patterns

There are several staff resources that increase and decrease involvement over the Plan period. They include utility staff, RTO contracted staff, RTO seconded staff, and permanent RTO staff. The patterns are depicted below.



Source: Andersen, Microsoft Project Derived

Utility staff remains involved through most of the Plan, contributing primarily to the continuing market design related activities in the Plan; in particular, Seams work. As RTO West activities increase before Independence Day seconded staff are used until contracted staff come on board. Contracted staff is more independent than seconded staff. As the contracted staff resource grows, seconded staff is reduced. Because Independence Day does not occur until well into the second year of the Plan, the build up of permanent staff never rises to meet the need for staffing during the Plan period.

Experience shows that the earlier permanent staff is on board the greater the control of costs. While the Plan attempts to control costs by using seconded staff and contracted staff, these are still more expensive resources than permanent hires.

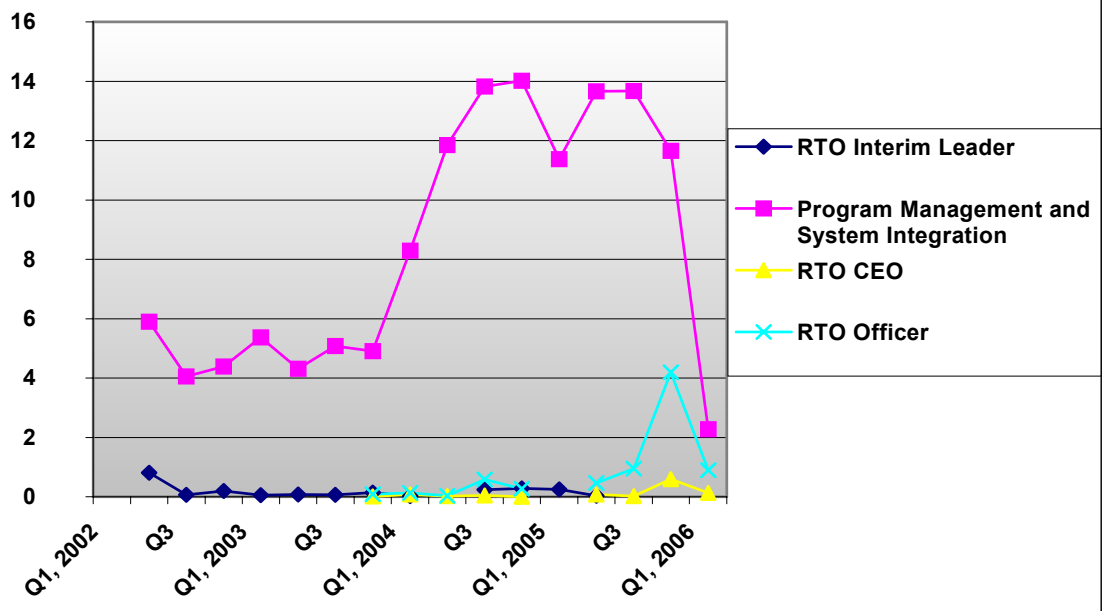
3.10.1.6. Shifting Patterns of Leadership

The structure of the Plan has implications for how the Plan is managed and the frequent migration of leadership over the Plan period. Continuity is provided by the PMO, but for this to work the PMO must be carefully managed and directed by first, the interim leader, and second, the CEO. Accordingly, there are three principal transitions to manage:

- The transition of the interim leader to the permanent CEO;
- The transition of the PMO from the interim leader to the CEO;
- The close out of the PMO and the transition of roles and responsibilities to permanent RTO Officers.

The shifting patterns of leadership are depicted in the chart below.

Chart 3.5 Program Utilization of Senior Staff



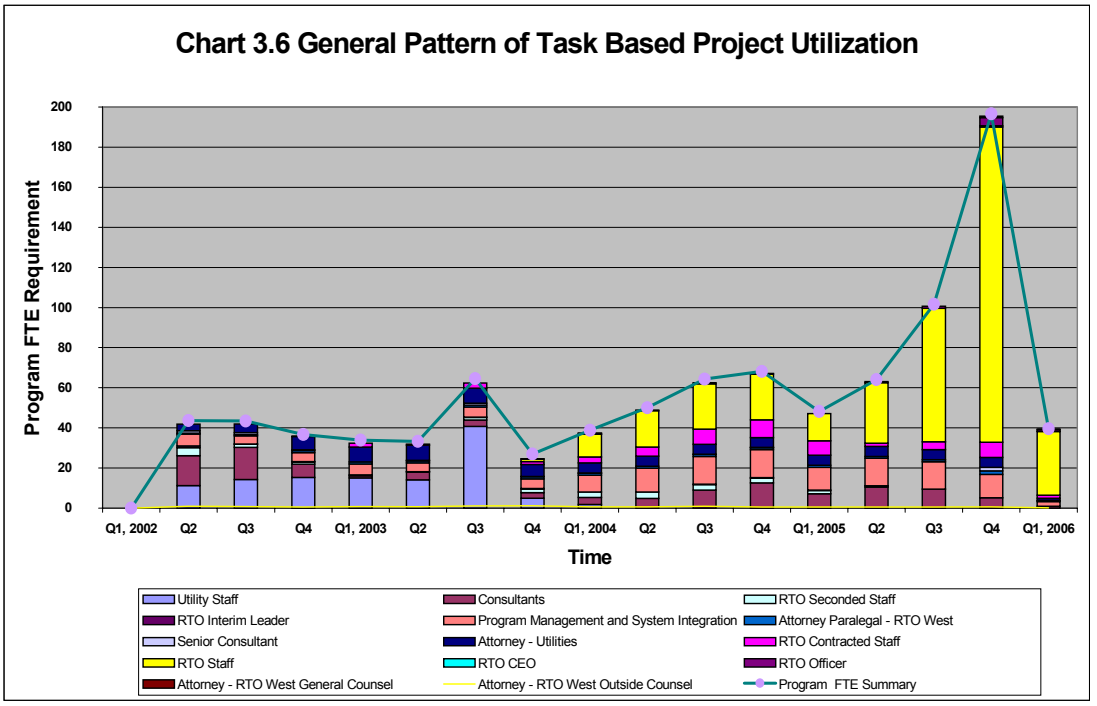
Source: Andersen, Microsoft Project Derived

The PMO is the principal source of continuity while at the same time central to effective transitions of leadership through the Plan period. This makes the combination of selection of the PMO and the interim leader of significant importance; vital decisions for the pre-Independence Day RTO West Board.

3.10.1.7. Plan Management Challenges in Resource Utilization

The following chart depicts the patterns of use of all principal resources during the Plan period. The chart is intended to illustrate the typical resouce challenges that impact whether the Plan stays on schedule and whether the Plan stays within costs.

Chart 3.6 General Pattern of Task Based Project Utilization



Source: Andersen, Microsoft Project Derived

This chart shows the complexity of the ongoing management of the Plan. Continuity of information and awareness of progress against Plan will be challenged by the dynamic shifting of resources through the Plan period. Communications must be constantly working to ensure that all the divergent resources are coordinated and share a common understanding of work progress.

Through effective change management, information flows and communications the Plan has a higher probability of staying on track. These tools are also critical to the assurance of quality of performance by all resources individually and in the aggregate. These patterns of change reinforce the importance of the early hiring of a permanent staff.

3.10.2. Cost Patterns

The Plan includes estimated variable and fixed costs. The variable costs were built from the bottom up for each group of tasks in the Plan. Resource values reflect typical costs from other ISO/RTO experience. Nevertheless these estimates should be treated as indicative, not definitive. The Master Planning task in the Plan is where true detailed costing of the Program Implementation Plan would occur.

Fixed costs were derived from information on similar systems costs for other ISO/RTO implementation programs. Included in the fixed cost calculation is a typical contingency factor reflecting uncertainty about the final costs. The contingency value varies by specific system and is reflected in the notes of the MS Project file included with this document. Further detailing of costs would occur in the Master Plan task of the Plan and when systems specifications are developed and vendor bids are reviewed. The costs included in the Plan are indicative of likely actual costs. The following table summarizes. Note that the percentages are a comparison of a specific year against the total for all years of the Plan. Percentages sum along the rows, not the columns.

Chart 3.7 Total Resource Costs

(in millions)	Year 1 2002	% of Total	Year 2 2003	% of Total	Year 3 2004	% of Total	Year 4 2005	% of Total	Year 5 2006	% of Total	Total Cost Per Resource	% of Total
Utility Staff	$1.5	16.2%	$2.8	26.3%	$0.1	0.4%					$4.3	7.4%
Attorney - Utilities	$1.0	11.2%	$2.1	21.5%	$1.5	9.8%	$1.5	6.4%	$0.1	3.9%	$6.1	10.5%
RTO CEO			$0.0	0.0%	$0.0	0.1%	$0.1	0.3%	$0.0	0.6%	$0.1	0.2%
RTO Officer			$0.0	0.1%	$0.1	0.8%	$0.7	2.9%	$0.1	5.6%	$0.9	1.5%
RTO Staff			$0.0	0.5%	$2.7	18.2%	$9.8	43.1%	$1.2	61.7%	$13.7	23.4%
Attorney - RTO West General Counsel					$0.1	0.5%	$0.1	0.3%	$0.0	0.7%	$0.2	0.3%
Attorney - RTO West Outside Counsel	$0.4	4.3%	$0.7	7.1%	$0.5	3.2%	$0.4	1.7%	$0.0	1.2%	$2.0	3.4%
Attorney Paralegal - RTO West	$0.1	1.0%	$0.2	1.8%	$0.2	1.1%	$0.2	0.9%	$0.0	0.9%	$0.6	1.1%
RTO Contracted Staff	$0.0	0.0%	$0.3	3.6%	$1.3	8.3%	$1.1	4.7%	$0.1	4.1%	$2.7	4.7%
Consultants	$4.0	42.4%	$1.2	11.9%	$3.1	20.8%	$3.4	14.8%	$0.1	5.1%	$11.7	20.0%
Senior Consultant	$0.5	5.1%	$0.2	2.3%	$0.1	0.3%	$0.3	1.3%	$0.1	3.6%	$1.1	1.9%
Program Management and System Integration	$1.5	16.2%	$2.1	21.2%	$5.0	33.4%	$5.2	23.2%	$0.2	12.6%	$14.1	24.0%
RTO Seconded Staff	$0.2	2.6%	$0.1	1.4%	$0.4	2.7%	$0.1	0.3%			$0.9	1.5%
RTO Interim Leader	$0.1	0.9%	$0.0	0.3%	$0.0	0.3%	$0.0	0.1%			$0.2	0.3%
Resources Annual Total	$9.3	15.9%	$9.7	16.6%	$15.1	25.7%	$22.6	38.6%	$1.9	3.2%	$58.6	
Fixed Cost	$3.6	2.5%	$7.9	5.5%	$81.7	57.0%	$32.2	22.4%	$17.9	12.5%	$143.3	
Total Cost	$12.9	6.4%	$17.6	8.7%	$96.8	47.9%	$54.8	27.1%	$19.8	9.8%	$201.9	

Source: Andersen, Microsoft Project Derived

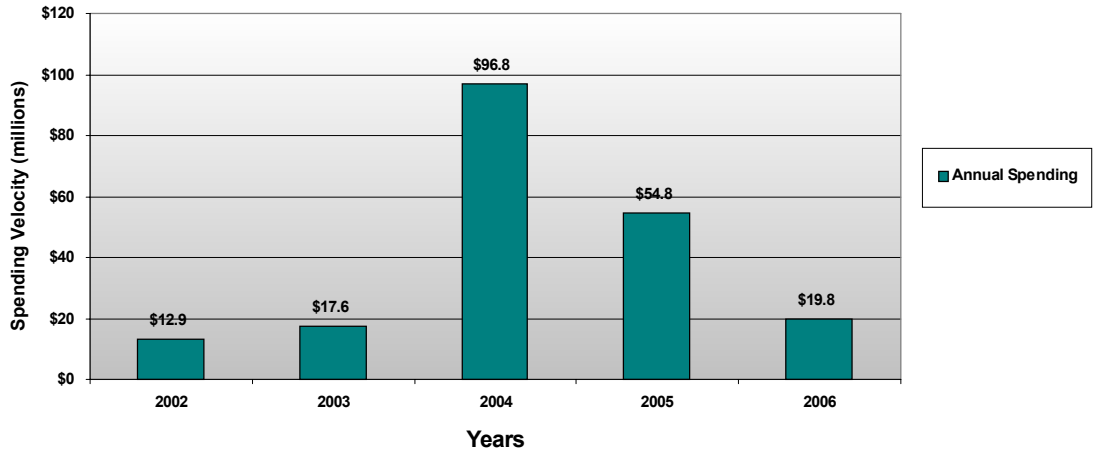
Key points:

- Estimated total cost of the build out -- $205 million.
- Estimated fixed cost of the build out -- $145 million
- Estimated variable costs of the build out -- $60 million (includes estimates of charges from utilities during the Plan period that may be part of a loan transaction)

3.10.3. Plan Implementation Tradeoffs

The build out and associated capital spending pattern in the Plan has a significant surge in activity in the third year, after Independence Day, as illustrated below.

Chart 3.8 Spending Implications



Source: Andersen, Microsoft Project Derived

This build out pattern is not typical of other ISOs, with the possible exception of the California ISO. Therefore it carries risks that the Plan will slip and costs may not stay within budget if for no other reason than it is somewhat unprecedented.

The risks within the Plan are several:

- Given the number of tasks involved and the array of elements that must be simultaneously managed the probability of successfully staying on Plan is low. No operating ISOs successfully stuck to their planned start dates.

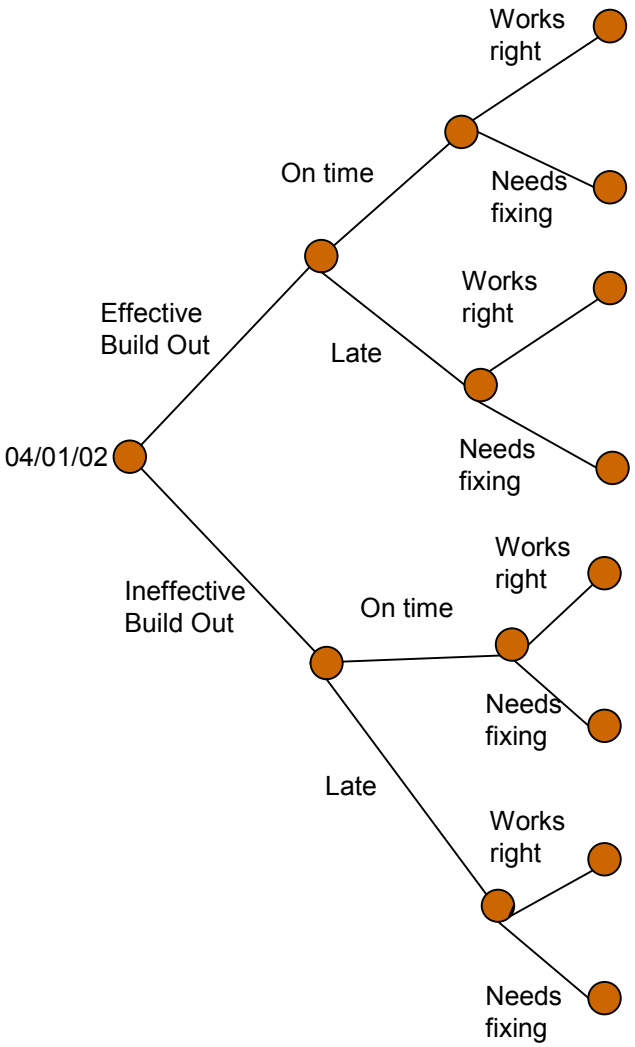
- No slack has been included in the Plan so missed milestones significantly increase the probability that the operational start date will slip.

- The shifting of resources and the complexity of transitions required over the Plan period increases the potential for error stemming from ineffective communications or poorly executed change processes.

- The delay in Independence Day and the subsequent hiring of the CEO increase the probability the CEO and RTO Officers will slow the Plan and make changes in its milestones in order to gain control and be confidently able to assure that operational start will be smooth.

These risks manifest themselves in simple tradeoffs. RTO build out is effective, or it is not. If it is either effective or ineffective the operational start date will be on time, or it will not. And in each of these cases the systems either work or they need fixing. The chart below depicts these points.

Chart 3.9 Sample Array of Implementation Outcomes



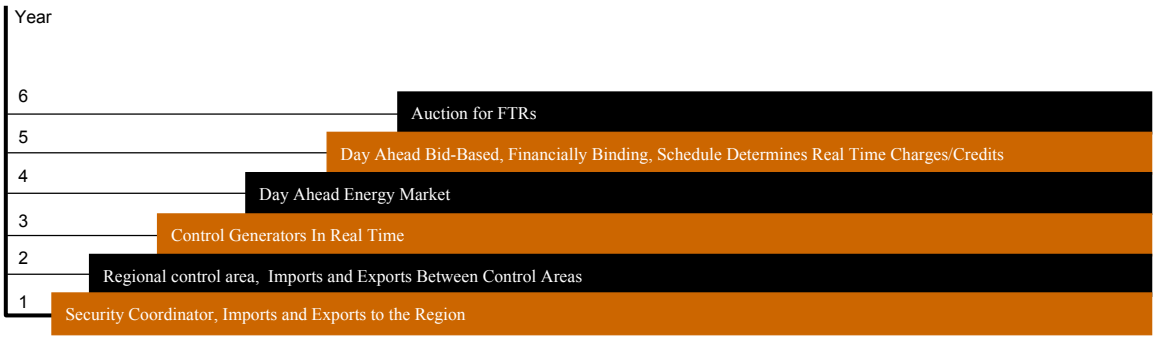
The above chart illustrates eight possible outcomes where only one represents an effective build out that is on time and works properly. It illustrates that the probability of success is inversely related to the degrees of freedom or number of risk elements. Given the challenges of this Plan, assignment of probabilities to the possible outcomes most likely reveals an outcome that yields delays and possibly cost increases.

The Plan is somewhat inflexible in structure because it linearly sequences regulatory approvals before much build out (capital commitment) occurs.

Appendix III provides empirical start up information on the sequencing and associated costs of ISO developments in the US.

Appendix III shows that each operating ISO phased in its operations on a functional basis. The initial start required very little building of new systems. After approval to operate the build out continued year in and year out. The diagram below summarizes a typical functional phase in.

Chart 3.10 RTO Functional Phase In



Functionally phasing in RTO operations may not significantly lower overall costs. What it does do is increase the control over costs and the quality of new functionality. This baseline Plan does not functionally phase in the development of RTO West. A separate variant of the Plan would need to be developed.

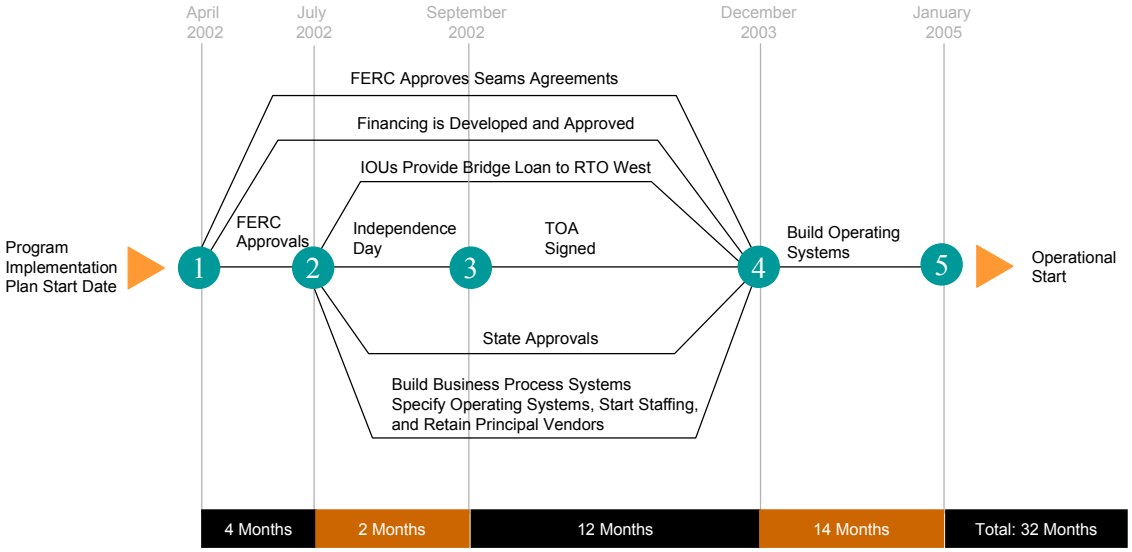
Given the uncertainty in the Plan, consideration of alternative approaches is merited. For example, one alternative approach, compared to the approach in the baseline Plan, is summarized below.

Chart 3.11 Alternative Project Approach

	Regulatory Approvals	Market Design	Operating Agreements	Financing	Management Team
Baseline Program Implementation Plan	Done in Series Milestone based	RTO West focused with minor changes made from NOPR and Seams groups	Single Agreement (TOA) signed all at once	RTO West based with minor seed funding from TOs	Serial progression from interim team to permanent hiring -- Independent Board a key milestone in this progression
Alternative Approach to Program Plan Implementation	Parallel & Flexible Path Highly Iterative	Standard Market Design focused with changes based on regional constraints	Base agreement with riders for ITC, Canadians, Federal participants based on a signed letter allowing go-forward actions	Multiple loan tranches from TOs prior to RTO West long-term financing	Interim team with a changing mix based on iterative needs of the project

The alternative approach brings Independence Day forward in time but controls the risks of an "out of control" RTO through structured funding that forces a strong budget minded implementation. The alternative approach is enhanced when a functional phase-in to implementation is included and the regulatory filings constraint is relaxed. The critical path milestones are depicted below.

Chart 3.12 Critical Path Milestones



4. Assumptions

4. Assumptions

4.1. General Assumptions

There are twelve general assumptions that govern the structure of the Plan.

4.1.1. Start Date

April 1, 2002 was selected as the Plan start date. This is a somewhat artificial date. It was selected because it coincided with the Phase II filing, scheduled for submission in March 2002.

4.1.2. Governance of RTO West Prior to Independence Day

The Plan assumes that the current Board of RTO West has all necessary authority to make decisions, approve funding, and the execution of specific tasks within the Plan.

This is an important assumption because in order to achieve the operational start date in the Plan decisions must be made from the Plan start date forward.

4.1.3. Seams Issues

With possibly three RTOs (RTO West, California ISO, and WestConnect) emerging in the Western US (four if Alberta is included and five if British Columbia restructures), the goal of a seamless Western market requires resolution of system interface issues. System interface issues, or Seams, assume that problems that occur at the boundaries between RTOs can be solved to provide a seamless market. Interface related problems stem from distinctive qualities of each RTO's OATT. Resolution of Seams problems takes the form of Seams agreements that would be filed with and approved by FERC.

For purposes of the Plan, it is assumed the first cycle of Seams agreements are approved by FERC by June 2, 2003. The exception to this is Scheduling and OASIS: it is assumed these topics will reach agreement by January 1, 2004, and will primarily address protocol level issues. A second cycle is made available through refinements to the OATT or protocols after Independence Day, based on the new management's review.

4.1.4. Regulatory Approval Related Assumptions

The Plan assumes that Tariff-level Federal and state regulatory approvals precede Independence Day.

It is assumed that final FERC approval of the March 2002 Stage II filing(s), and the subsequent filing of the FERC required OATT occurs by May 2, 2003.

The Plan assumes FERC approvals can occur any time within 90 days of the filing date. However, the Plan always uses the maximum time is assumed. Also, it assumes FERC decisions on RTO West filings will become final within 90 days of the decision.

With regard to state approvals, it is assumed that this process begins after FERC approves market design, but before the Transmission Operating Agreement (TOA) is signed. The inherent assumption is that the TOA cannot be signed until after all approvals are completed and that the RTO West board has approved of the agreement.

The TOA is assumed to be the vital lynchpin in the sequence of regulatory related critical path milestones. The TOA defines the contractual relationship between the owners of transmission assets and RTO West as the operator of those assets. The transfer of control requires both Federal and state regulatory approval of utilities' request to execute the TOA. Without an approved TOA, it is assumed RTO West cannot be financed and it cannot operate.

The Plan assumes the TOA must be signed before major financing is approved and after FERC approves RTO West's market design. State approval of the TOA occurs one year after the 90-day appeal window following FERC's approval of Stage 2 filings.

Recently FERC has announced a Notice of Public Rulemaking (NOPR) on standard market design (SMD). The outcome of this NOPR will be a set of standardized market design elements and criteria that all RTOs will have to incorporate in their market designs, or justify why alternatives are superior. While the specific timeline for the NOPR remains somewhat unclear, the assumption is that FERC's NOPR on market design does not require RTO West to make significant changes in its market design. Additionally, there is another inherent assumption that as the timelines for both activities are coincident is that RTO West does not knowingly file in such a manner, without good defense, a market design that is not intrinsically compatible.

Finally, it is assumed that the migration of the current stakeholder process to a formalized Advisory Board with procedural interfaces and decision-making process links to the independent RTO West Board will not require any additional FERC approvals. If additional FERC approvals are required the effect may be an extension of the operational start date beyond January 2006.

Of notable importance is the assumption that legal and regulatory timelines that are public information are valid and unchanged. The Plan does not take into consideration any additional information obtained from the filings teams currently at work on the Phase II filing.

4.1.5. All Necessary Commercial Registrations Are in Place

The Plan assumes that RTO West as it exists is properly registered as a commercial enterprise and no additional filings at the state or local level are required. While it is most unlikely that if additional filings were required they

would slow the operational start date, these filings would add costs and *might* result in delays.

4.1.6. Market Design Related Assumptions

A critical milestone in the progression toward operational start is the approval of RTO West's market design by FERC. This approval occurs early in May 2003 and if this approval is delayed, it significantly defers the operational start date.

The Plan assumes that RTO West market design is near completion and that further refinements will not delay the schedule. Further refinements include response to FERC standard market design and preparation and FERC approval the OATT.

An important related assumption is that all agreements amongst utilities, stakeholders, and RTO West concerning market design, existing contracts, the TOA and other critical matters, can be nearly finalized without the presence of representatives of RTO West, i.e., the Board and/or appointed management, as a counterparty. The plan only allows a month for ratification of the TOA by the newly seated board By contrast, if an independent RTO West counterparty is required, then delays in Independence Day and RTO West staff hiring, will delay the resolution of issues and the subsequent operational start date.

Finally, it is assumed that when the current Board yields its authority to the independent Board, the independent Board will not significantly change the market design or project schedule. Doing so could defer the operational start since by the time the independent Board assumes authority significant progress in the development of system specifications will have occurred.

4.1.7. Management/Personnel Related Assumptions

In order for the Plan to be implemented there must be a responsible party that directs work and ensures the planned schedule and associated costs are managed. Operating ISOs were all developed as complex, detailed projects that were directly managed. The forms of management have varied from a single Trustee (in the case of California) to a full complement of employed staff (as in the Midwest ISO case).

The assumption is that a management group (seconded, contracted, or hired) takes responsibility for the Program Implementation Plan from its inception. Specific tasks associated with the set up of a management group are included in the Plan.

The form this management will take is not decided as the Plan is submitted to the RTO West Board. The assumption used to develop the Plan is that an interim management group not affiliated with the RTO West filing utilities will be responsible for the development and operational start of RTO West.

It is not, however, assumed that the current market design project teams and managers are necessarily the same as today. Time and tasks are included in the

Plan reflecting the possibility that changes will be made in the organizational structure to move from the development of market design to implementation.

It is also assumed that the leader of the implementation effort has good management skills, the trust of the filing utilities and stakeholders, and previous experience in ISO implementation and start up.

This is an important assumption, though it may seem obvious. It is often assumed that if a manager has project management experience and familiarity with the regional utility system in which an RTO is being created, these capabilities will be sufficient. But experience has shown that those responsible for start up have an important influence on the culture and longer-term institutionalization of the RTO, even if they are interim or temporary managers.

The first leaders and managers of an RTO shape the future organization in several important ways.

- They are principally responsible for selecting the recruiting methods and search firms that will find and attract key employees to the new organization. Employee selection is significantly influenced by the criteria used for selection and the recruiting methods applied.
- They are, in many cases, the ones who select the procurement method, pre-qualify vendors, and the vendor selection process. Experience shows that if the RTO does not manage the critical vendors, the vendors will manage the RTO.
- They are instrumental in setting the tone and quality of stakeholder relations. Experience shows that if the institution gets off to a rocky start with stakeholders it is difficult to turn it around. Because stakeholders have been given such a significant role in RTO development by FERC, positive, effective, and proactive stakeholder relations are a vital part of keeping program implementation on schedule and within planned costs.
- They are instrumental in setting the tone and quality of relationships with the independent Board as it assumes its responsibilities. Interim or temporary leaders often first establish operating procedures concerning matters of openness, effective decision-making processes, and governance dynamics of the Board. Like stakeholder relations, management - Board relationships and the overall character and culture of the future operating RTO are shaped by these early interactions.

Consequently, it is of great importance to the long-term success of the RTO that its interim leaders bring excellent leadership qualities that reach beyond traditional project management discipline. The skills must also include understanding the social, political, and economic milieu in which the RTO is being developed.

The Program Implementation Plan includes a schedule for tasks involving the hiring of permanent RTO West officers and staff and the out-migration of interim staff as permanent staff come on board.

4.1.8. Funding and Financing Related Assumptions

The Plan makes the assumption that no tasks are initiated without explicit consensus that the existing agreement that funds RTO West prior to Independence Day is effectively a letter of intent that defines the supporting utility's financial commitments to create an operating RTO. This assumption includes the understanding that expansion of funding requirements to implement RTO West prior to its major long term financing is in place and funding can occur as the Plan requires.

An agreement to fund prior to Independence Day is an important assumption because it enables lower cost activities to be initiated, and in some cases completed, before long term financing is in place. Absent this assumption, the Plan schedule will show only activity necessary to gain regulatory approvals occurring before Independence Day. Such a program plan will have an operational start date further into the future.

The associated assumption is that the transmission owners/filing utilities that make up what will become the RTO West transmission network will bridge the financial gap between the Plan start date and realization of long-term financing for RTO West after Independence Day. It is assumed that funds committed will be treated as a loan that RTO West will assume and repay when its long-term financing package is complete.

This assumption is important because it impacts the time and associated work required to prepare and to execute a long-term financing. When filing utilities structure funds contributions to RTO West as a loan, once independent, RTO West will be obligated to review and accept or reject claims to adjust the amount. Also, the expected scale of the loan may have an impact on the type and cost of the long-term financing package. These factors are reflected in the duration of the financing process in the Plan.

4.1.9. Declaration of Independence

The Plan assumes that Independence Day occurs after the RTO West Board is seated. Until this time, the current RTO West Board decides issues pertaining to program Plan implementation.

4.1.10. Vendor Procurement Related Assumptions

Once tasks shift away from regulatory related critical milestones, procurement of hardware and software systems becomes a principal priority. The procurement method and how vendors are managed once selected is a key success factor in bringing RTO West to full operational status.

Comparatively speaking, vendor procurement is to operational start success as regulatory approvals are to Independence Day. With the Plan structured to focus

activity for the first two years of implementation on regulatory matters for the most part, the out-years of the Plan are significantly stressed, given the scale and scope of the systems and processes build out required for operational start.

The Plan assumes that vendors will be pre-qualified as part of the vendor selection process. Pre-qualification is a key assumption because it eliminates tasks and their associated duration that otherwise would be included in the Plan, in turn enabling an earlier start than would otherwise be possible.

The Plan assumes three distinct procurement tracks, again driven by the overriding assumption that the implementation goal is to ensure a fully operational RTO West in the least time prudently required.

4.1.10.1. Procurement of Operating Systems

The first procurement track concerns operations based systems. Two are assumed – one for Seams dependent systems and one for Seams independent systems. This differentiation is further summarized in the table below.

Chart 4.1. Seams Dependent and Seams Independent Procurements

Seams Dependent	Seams Independent
• OASIS	• Outage Scheduler
• Scheduling and Tagging	• Modeling/ATC
• Dispatch Coordination	• Ancillary Services Management
• Ancillary Services Management	• SCADA/AGC
• Interchange Scheduler	• Control Center Interfaces
• Congestion Management	

4.1.10.2. Procurement of Administrative and Financial Infrastructure

The second procurement track is for administrative and financial infrastructure. Included in this procurement track are the following systems:

- Billing
- Settlements
- Dispute Resolution
- HR/Payroll
- Customer Service
- Market Monitoring

The most significant systems in this track are billing and settlements. Billing and settlements were often managed as part of the operations system build out. With the maturing of billing and settlements systems and experience gained at operating ISOs, the distinctive financial qualities and sensitivities are now better understood. With financial experience accountable for development there is a significantly lower probability of errors, system failures, and associated disputes when operational start occurs.

Billing and settlement dispute resolution is costly and time consuming. It adds working capital requirements that add costs to longer term financing packages. And it tends be one of the dominant start-up problems: because of the potential scale of impacts it can set the new organization off down a path of reaction and recovery. This undermines the ability of the organization to proactively manage start up and maintain positive relationships with market participants and other stakeholders.

4.1.10.3. Procurement of Business Process Infrastructure

The third procurement track is for business process infrastructure. This involves acquiring computers, LANS, office equipment and related material. It does not require an extensive vendor selection process other than for the procurement and development of the file management/data warehousing capability. It can be done quickly and at a low cost. It is not dependent on other critical path milestones and will not have a drag effect on plan implementation. The specification and implementation of the data warehouse/file management capability is typically run on a different schedule similar to the business systems.

4.1.10.4. Procurement Financing Assumptions

Procurement assumptions must address financing as well. The Plan assumes that major financing commitments are required in order to sign major vendor contracts. In other words, procurement is dependent on, or proceeds from, completion of major long-term financing.

4.1.10.5. Procurement and the Maturing of Technology

Another important procurement assumption concerns the effect of maturing technology on both the speed at which build out can occur and the cost of build

out. The Plan assumes that technology is no longer a factor that either slows implementation or increases its costs.

ISOs in the US have been built and have operated successfully for several years now. What was once novel is now well understood. LMP pricing engines are relatively mature. Congestion management systems are also maturing. Core operations systems from SCADA to EMS to ATC to OASIS are all mature, well-established, largely "de-bugged" systems. Accordingly, it is assumed that technology enables effective optimization of systems (which saves time and cost). It is also assumed that systems are no longer overbuilt because redundancy levels and associated risk concerns are well understood; over engineering for security reasons has been eliminated from vendor bids and build outs. Finally it is assumed that backup systems are now optimized and efficiently defined, again reducing costs and saving build out time.

4.1.10.6. Effects of Customization and Standardized Systems

As a caveat, insofar as RTO West's market design is unique and requires significant customization of systems, the benefits of a maturing technology platform are reduced. Similarly, customized systems are more costly and can take more time to install. It is typical for the buyer to minimize control of the build out as vendor change orders increase the overall cost of systems and sometimes protract the completion dates.

The Plan assumes maximum use of standardized systems. Again, standardized systems have the specific advantage of helping to control costs, ensure build out cost is minimized, and help to realize a more reliable operational start for the RTO. If this assumption is incorrect, the schedule will most likely stretch out and costs may creep upward.

4.1.11. Shadow Operations

When the United Kingdom first implemented the privatization and commercialization of its electric power sector the start up of the system involved a prolonged period of *shadow operations.* Shadow operations involved operating the system as *it was going* to function in parallel with the system *as it was functioning*. The shadow operation of the new system was intended to flush out operating problems that might lead to disaster when the new system actually went live. It was also an important period when training effectiveness was tested and additional training was done to ensure competent operation of the new system.

Many of those who lived through the development and start up of the UK systems attribute the shadow operations period with significantly reducing start up error. But in the U.S. a similar approach has been followed in a much more limited way. In most ISO implementation programs training and testing before going live has been of short duration. In California this contributed to a very rocky start for both the California ISO and the California Power Exchange leading to protracted settlement and billing disputes. In ERCOT the effects stretched over a short time horizon but stimulated considerable political reaction because

the outcome involved significant price spikes at start up. These start-up related price spike patterns were later understood to stem from ineffective training and contingency planning.

The Program Implementation Plan for RTO West assumes a three-month period where true shadow operations run in parallel with the existing system's operations. Given the complexity of the implementation of RTO West, in a Western states system with multiple Seams and international boundary considerations, the Plan assumes robust and comprehensive testing as a means of reducing potential start up errors that could increase RTO West operating costs.

4.1.12. Implementation in One "Big Bang"

RTO implementation has, for the most part, been functionally phased in. This means that minimum operating conditions are defined to allow for start of operations, and incremental expansion of RTO responsibilities occurs following start up (where subsequent expansion is financed directly by the RTO).

In California (and in the United Kingdom and New Zealand) a single start up event occurred (where most all systems defining the whole scope of the market came on line simultaneously). This single point start up, or *big bang*, lead to start up errors and complications that added costs and ultimately resulted in additional post-operational build out.

The most common progression of functionality starts from partial control area functions: first scheduling all imports and exports to the region, then ultimately scheduling all imports and exports between control areas. From there, control area functions are added to permit control of generators in real time. Subsequently, a day ahead market is added, followed shortly thereafter by a multi-settlement system to prevent leaning on real time. LMP and FTRs are the later stage functions added.

The Program Implementation Plan assumes a single point start up, or big bang approach to implementation, as specified by the RTO West Board.

4.2. Specific Assumptions Re: Financial and Business

There are four key assumptions with respect to financing that affect the program Plan:

4.2.1. All Money for Development of RTO West is Treated as a Loan

The financial timeline makes several assumptions that shape its sequencing. First, all money for development is treated as a loan and will be directly recovered by the filing utilities as cash from RTO West.

4.2.2. RTO West Will Take On Loan Obligations Without Delay

The assumption is that RTO West will take on loan obligations without delays affecting schedule. To make the alternative assumption – that RTO West might dispute specific items included in the loan –more time would be added to the Plan to long-term financing. That additional time would be for negotiation, dispute resolution and settlement tasks.

4.2.3. Financing Follows State and Federal Regulatory Approvals

Financing cannot be obtained until FERC and state regulators provide approvals that assure recovery. This has a significant bearing on the sequencing and duration of financing tasks. While some preparatory work can be done the main

effort is dependent upon regulatory approvals. Consequently reducing the uncertainty stemming from unclear regulatory outcomes will enhance RTO West financing. The opposite holds true as well.

4.2.4. RTO West Board Has All Necessary Authority to Fund the Work Required

It is assumed that the interim RTO West Board has the authority to fund all work until the Independent Board is seated. The implicit assumption is that the interim RTO West Board will approve funding and actively help direct execution of the Plan.

4.3. Legal and Regulatory Assumptions

4.3.1. Earliest Possible Start Date

The legal and regulatory schedule estimates the earliest possible start date for developing FERC filings, taking into account instructions provided. It assumes that access fee filings cannot be filed before state approval; that state approvals take one year; that state approvals require a FERC approved market design, in the form of an OATT; and that the Transmission Operating Agreement cannot be signed before state approvals.

4.3.2. Independence Day is Not a Constraint

The Plan assumes that FERC accepts the implied request for an Independent Board to be seated only after states have had an opportunity to approve or reject participation. Actions and decisions within the Plan prior to that time need to meet criteria established in Grid Florida and Grid South: either the action is not binding, or has broad stakeholder consensus or does not impact future operations (e.g., leasing buildings, establishing employee benefits).

4.3.3. FERC Will Require an OATT: Seams Work Can Be Incorporated Without Delaying State Approvals

The Plan assumes that FERC will require additional filings, including an OATT before RTO West is approved for operation.

The assumption is made that FERC will require an OATT filing within 90 days of its order on the Stage II filing.. As such, the state filings begin 90 days after the Stage II filing, with decision points one year later and after FERC approval of an OATT that incorporates seams agreements. It is assumed that the seams work in progress can be split into Tariff level agreement and non-Tariff level agreements, so that the Tariff level agreements can be incorporated into the OATT while it is pending at FERC, or in successive refinement decisions that will predate state approval.

4.3.4. Protocols Will Have to Be Filed: Seams Work Can Continue On This Level

The Plan assumes that some terms and conditions below the detail level of a tariff will be needed, and such Protocols will be filed following approval of the OATT. Based on experience, it is assumed Protocol revision is an ongoing process up to startup.

It is assumed that seams agreements can continue to work through successive levels of detail after the OATT is approved. The continuation involves making changes to Protocols.

4.3.5. Status of Development Reflected in April 2001 RTO West Order

The Plan identifies needed regulatory elements based on a review of the April 2001 decisions from FERC concerning RTO West. It is not based on a detailed knowledge of the Stage II filing.

4.3.6. Filings Process is Part of Project Management Discipline in the Plan

Further, it is assumed that the management of the filing process is an integral part of the overall Plan. That means that from the start of the Plan the schedule is subject to well-established, disciplined project management that involves driving the completion of tasks to stay on schedule and within budget. It means managing state and Federal regulatory filings from the perspective of RTO West as if it were independent, even though its independent Board has not yet been seated. In order to accomplish discipline in the filing schedule, a lead counsel with defined authority to file in the presence of non-consensus will need to be specified, as well as their role with respect to the stakeholders.

The above assumption is particularly important because for every month's delay in FERC related filings there is slightly less than a full month added to the operational start date. And in the case of state related filings, and the OATT decisions they are contingent upon, the relationship is one for one. That is, for every month of delay there is a full month added to the operational start date.

4.3.7. Not for Profit Public Benefit Corporation Filing Can Wait for CFO

RTO West intends to be a 501(c) 3 corporation – a not for profit public benefit institution. It is assumed that RTO West can execute a not for profit application and gain approval after the Chief Financial Officer is hired yet before operations. The enterprise needs to have a responsible officer to sign documents, attest to

intent, and thereafter monitor and manage the enterprise to ensure it stays within the boundaries of this tax status. The approval by the IRS now has sufficient precedent from other organizations to be managed by the CFO before startup.

4.3.8. The Stakeholder Process Works Smoothly

Finally, it is assumed that the stakeholder process works smoothly and no delays stem from a litigious process reflecting a strained relationship between RTO West and its stakeholders.

4.4. Specific Assumptions Re: Operations

4.4.1. Seams Dependent and Seams Independent Technology Development

System build out is accelerated in the Plan by differentiating Seams Dependent and Seams Independent development paths.

There are risks in this assumption. If the differentiation cannot be made clearly, the ambiguity may increase costs and delay the scheduled operational start date. Because Seams-Dependent systems are less controllable – because the seams process itself is less controllable – the impact of having to place Seams-Dependent systems on the critical path is increased risk that the Plan will not be kept on schedule.

4.4.2. Multiple Formal Certifications are Required

Certification is assumed as a critical step in the qualification and acceptance of critical systems before operational start. Certification processes are not generally standardized throughout the industry.

Certification is robustly represented in the Plan. It adds time to the operational start and exceeds the typical duration given to it in most other RTO build outs. The assumption of robust certification is driven by the view that RTO West will be a complex system given the number of seams, public and private integration, and the impact its operation will have West-wide.

While no specific slack has been scheduled into any tasks, there may be one or two months available if RTO West chooses a less robust certification process.

4.4.3. Work Flow Prototyping Can Occur Immediately Using Public Information and Experience from Other RTO Start Ups

Effective operational start hinges in part on effective workflow definition and specification. This is particularly true with regard to control room operations.

Workflow mapping and documentation has matured along with technology as more ISOs and RTOs have been approved and have started to operate. For this reason it is assumed that public information and experience from other RTOs can be applied to workflow mapping for RTO West.

The schedule provides for a near-year workflow prototyping followed by a later finalizing of these maps once the senior management is on board. It is assumed that officers must approve workflow specifications and that their own experience and expectations will modify these specifications before finalization occurs.

The underlying assumption is that the way workflow is implanted in the organization will contribute to how the culture, style, and shared values of the institution take shape.

4.4.4. Operations Build out Occurs in a Single Phase

One of the general assumptions discussed above is that RTO West will go live without any programmed phase in of operational capabilities over time. The schedule for operations build out is focused on convergence of all systems simultaneously to the point of operational start.

This assumption in part drives the inclusion of significant testing, certification and system validation prior to going live. Given the "big bang" approach there are significant risks that operational start will not be smooth. The only other case of a big bang approach since the movement to establish ISOs and RTOs in the U.S. began is California. Based on California's experience the Plan includes significant testing and with shadow operations. The alternative would be to structure RTO West implementation in functional phases. This would require a significant rework of the current Plan's structure and configured schedule.

4.5. Key Assumptions Re: Administrative and Governance Tasks

4.5.1. The Importance of Early Staffing

Experience in the implementation of RTOs shows that the earlier permanent staff are brought on the more likely it is that development and build out will occur on schedule and within budget. The supporting analysis is presented in Appendix III.

The Plan constrains hiring in several ways. First it is assumed that no hiring of permanent staff occurs before Independence Day. This is an important assumption because key staff people will not leave secure employment for a new position when the entity does not technically exist yet.

Second, hiring is deliberately sequenced so the CEO comes on board followed by Officers who in turn hire their core staff people. The assumption is that this sequencing increases the likelihood of creating a positive culture and effective working institution from operational start forward.

Third, FERC approval of market design is required before the RTO West organization is designed, and organization design will come before hiring of key staff.

The critical path in the Plan does not enable RTO West to hire staff early for the above reasons. The tradeoff of keeping costs especially low until regulatory approvals assure revenue recovery risk is eliminated and bringing on staff that contribute to lowering the overall cost of build out should be carefully weighed by the RTO West Board as it adopts this Plan.

4.5.2. Other Key Human Resource Assumptions

Other key human resource assumptions are that compensation and benefits packages are competitive with existing utility positions. RTO West will not assume retirement liabilities of employees hired from utilities – this being important to control costs. However, employment retirement benefits are bridged by the utilities.

4.5.3. Billing and Settlements Systems Are Included in the Financial Arena

The Plan incorporates a procurement track for the development of financial systems that is independent of operations systems procurement. In previous RTO implementation programs billing and settlements tended to be implemented as part of operations systems. Typically, operators focus on operations, not necessarily on financial matters.

The assumption in the Plan is that a more efficient, cost-effective, and responsive billing and settlements system will be built if managed by financially oriented program managers and contractors. This is a particularly important assumption because in other RTO start up cases the most difficult problems emerged in billing and settlements as market participants challenged the record of their transactions in the early days and weeks after operational start.

4.5.4. Seams Related Assumptions

A seams management element is incorporated into the Plan. It is fitted into the ongoing stakeholder management processes that are developed and managed during the build out. The seams tasks are focused on ensuring that seams solutions are achieved within the time specified in the Plan. Important assumptions have been made in order to incorporate the seams element into the Plan.

The work on seams is coordinated through an ad hoc group – SSG-WI. This group is still in its early formative stage and as such has an unclear charter, ambiguous deliverables, and an uncertain budget to do its work. In order to be integrated into the Plan the assumption is made that SSG-WI processes will be explicitly structured and incorporated into this Plan, and managed like all other elements of the Plan.

Seams solutions are linked to RTO West system specification, as discussed previously. As such, seams solutions must be completed before final specifications are completed.

It is assumed that when seams agreements are reached between RTOs in the Western U.S., RTO West can sign off whether or not an Independent Board is commissioned or Independence Day has occurred. This sign off authority is important because the collateral assumption is that seams agreements will be filed separately at FERC but become an integral part of the RTO West OATT once FERC has approved seams agreements.

The related assumption is that seams pricing agreements will be reflected in RTO West's 205 rate filing. Also, the participating transmission owner's separately filed Section 205 revenue requirements will similarly reflect pricing agreements.

It is assumed that seams will influence RTO West's OATT filings, but the OATT filings are not dependent on seams solutions. OATT revisions and FERC's decisions are assumed completed by the time of state regulatory approvals. If the sequencing in the Plan varies, it is likely to push the operational start date out further, or other tasks will have to be compressed in order to stay on schedule. Since there is no slack built into the Plan, compressing tasks runs the risk that work product will be prone to error, itself a contributor to additional delays.