

## Surface Transportation Board Confidential Report

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## 1. Executive Summary

#### **Overview**

The Surface Transportation Board (STB), in its role as the regulatory agency charged with resolving railroad rate and service disputes, continually strives to improve its efficiency and effectiveness as a forum for the resolution of surface transportation disputes. One of the more complex responsibilities of the STB is the evaluation of rate reasonableness for captive shippers via the adjudication of Stand Alone Cost (SAC) rate cases. The STB uses a discounted cash flow (DCF) calculation to establish the cost of building and operating a stand alone railroad for ten years; if that calculation shows that charged rates are in excess, then the STB may award relief to the shipper based on the maximum lawful revenue-to-variable cost ratio. This approach results in large teams that bring together members from the Office of Economics (OE), Office of Proceedings (OP), and Office of the General Council (OGC), each with their own roles. The intricate data connections in the DCF model and the corresponding relationships in the narrative decision require a deliberate approach to produce accurate and timely rate case decisions. Failure to understand and mitigate the risks involved in rate cases can increase the chances of adverse litigation; hinder transparency with shippers, railroads, and the public; and hamper the overall mission of the STB.

#### Approach

To improve the quality of rate analysis and verification procedures, the STB formed an assessment team comprised of representatives from OE, OP, and OGC (referred to as "project champions"), as well as contractor resources. The team applied the following five-phase approach to assess the STB's SAC rate case process and identify potential opportunities for improvement.

#### **Phase 1: Confirm Processes to Assess**

The process assessment team met with the STB project champions to gain a high level understanding of the SAC rate case process, identify useful documentation, and identify the pool of STB team members to interview. The assessment team also discussed prior and current efforts to improve the process and lessons learned from these projects. **Figure 1** depicts the key, high level process steps within a SAC case.

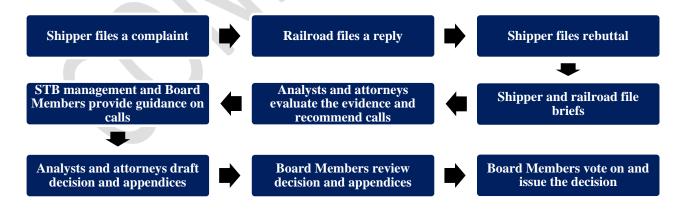


Figure 1. High Level SAC Rate Case Process

#### Phase 2: Identify and Verify Risks

Once the assessment team confirmed the intent and scope of the project, team members worked with the project champions to identify process risks. The term "risk" in this context refers to an uncertain event that



could prevent the STB from meeting mission objectives related to SAC cases, should it occur. There are two primary risks the team identified and assessed:

- 1. The decision issued by the STB is not accurate. The Interstate Commerce Commission (ICC) Termination Act of 1995 charged the STB with maintaining reasonable rates in absence of effective competition. To do this, the STB evaluates the cost of building and operating a hypothetical efficient railroad to serve the needs of the shipper, yielding a legally binding decision with substantial financial impact to the parties. The amount and complexity of data, number of issues and assumptions, likelihood of changes, and time constraints make decisions susceptible to technical errors.
- **2.** The decision issued by the STB is not timely. The Board's governing statute requires the STB to complete a SAC rate case decision within nine months from the close of the record. The complexity of SAC cases, large number of involved staff, and many coordination activities makes SAC cases vulnerable to delays.

#### **Phase 3: Document the Current State**

During this phase, the assessment team met with members of the STB's staff, developed documentation of the rate case process, and created a list of controls to assess. The assessment team began with the documentation provided by the project champions and developed flow charts to capture the rate case process. The assessment team conducted interviews with the STB workforce to improve its understanding and refine documentation of the process steps. The assessment team used the flow charts to highlight those activities the STB performs to help ensure that a decision complies with mission objectives (i.e., is timely and accurate). These "control activities" formed the basis of the risk and control matrix (RCM). The assessment team and project champions held a series of sessions to discuss the list of identified control activities and confirm its completeness.

#### **Phase 4: Assess Controls**

Using the results from Phases 2 and 3, the assessment team compared the identified control activities against the process documentation, as well as favorable practices used in similar regulatory and adjudicatory organizations for utilities. The assessment team identified existing activities and processes that help the STB address the SAC rate case risks, as well as areas with opportunities to implement new processes or activities. **Figure 2** presents the criteria the assessment team used to assess the estimated effort to implement a given opportunity and its expected impact to the SAC rate case process relative to other identified opportunities. In the graphs below, yellow bubbles indicate those opportunities that appear most helpful to the STB in meeting its objectives; white bubbles are also viable options and should be reviewed for implementation as time permits.

Score	Impact	Effort
Low	Affects a subset of an office or individual staff	• 0-6 months to implement
	Occurs during some rate cases	Requires refinement of existing processes
	Revises or updates existing policy	Necessitates intra-office coordination
	Supports the control objective incidentally	
Medium	Affects a majority of staff within one office	• 6-12 months to implement
	Occurs once during a rate case	Requires restructuring of existing processes
	Results in a new policy	Necessitates coordination among senior agency staff
	Facilitates the control objective indirectly	



Score	Impact	Effort
High	Affects staff in multiple offices	• 1+ years to implement
	Occurs multiple times during a rate case	Requires a cultural shift and process changes
	• Results in a new formalized process	Necessitates coordination among senior agency staff
	Facilitates the control objective directly	and/or external stakeholders

Figure 2. Opportunity Prioritization Criteria

#### **Phase 5: Develop Confidential Report**

The assessment team summarized the analysis and results of Phase 4 in this Confidential Report. This report summarizes the team's assessment, including identified opportunities for improvements.

#### Summary of Analysis

The assessment team identified 24 unique opportunities the STB should consider to improve the quality of the SAC rate case process. These opportunities address the breadth of the rate case, from receiving the shipper's complaint through issuing the rate case decision. A number of identified opportunities address both accuracy and timeliness as a number of the suggested measures are designed to allow the STB more time to complete activities which inherently supports accuracy objectives. **Figure 3** presents the results of the team's analysis.

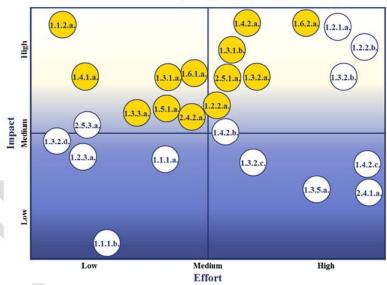


Figure 3. Impact and Effort for Opportunities to Address Accuracy and Timeliness of Rate Case Decisions

Further analysis helped to identify thirteen opportunities (the yellow bubbles) deemed most valuable to the STB. These opportunities help STB address 33 of the 49 identified opportunities (67%). **Figure 4** describes these thirteen key opportunities. **Section 3. Observations** documents additional detail for each identified opportunity and its ranking relative to other solutions within a given control objective.

#### **Opportunities to Improve Quality**

#### 1.1.2.a. Hold a technical conference at the start of every case.

The parties submit structurally different arguments and evidence, requiring significant effort from OE's analysts and economists to combine the various parts and produce the STB's decision. These complex steps increase the likelihood of introducing technical errors into a decision. The STB should consider holding a technical conference with the parties to help identify areas for agreement and focus the case on the major issues. This can help reduce the likelihood technical errors arise from combining hundreds of structurally different spreadsheets, as well as assist the STB in reducing the overall number of litigated issues.



#### **Opportunities to Improve Quality**

## 1.2.2.a. Develop an internal work product that outlines the expectations for OE analysts when correcting errors in the parties' evidence

A documented process and criteria for when to use it does not exist for OE analysts correcting errors in the parties' evidence, potentially leading to differences in how changes are documented and greater risk of technical errors. STB should consider formalizing the criteria and approach for correcting errors in the parties' evidence. This can help improve consistency with which analysts and economists make updates or changes and help mitigate technical errors due to insufficient documentation of a change.

#### 1.3.1.a. Assign team members early and simultaneously from all offices.

The STB offices assign rate case team members at different times during the rate case process. These timing differences can result in coordination gaps (e.g., competing priorities) which can in turn lead to delays and/or reduced levels of quality. To address these challenges, the STB should consider appointing a project manager, who can help facilitate the process of building a team that possesses the necessary skills and experience across OE, OP, and OGC.

#### 1.3.1.b. Define rate case team member roles and responsibilities.

Team member roles and responsibilities are not formally defined which can lead to process inconsistencies that increase the likelihood of delays and quality gaps. The STB should develop written guidance to formalize the roles, responsibilities, and expectations for SAC rate case team members. This will help build a shared sense of accountability among team members and promote process consistency to help STB manage the timing and quality of rate case activities.

#### 1.3.2.a. Formalize the training process for rate cases.

Training for rate cases is ad hoc which can result in differing approaches to the process and introduce variance that may lead to technical errors. The STB should consider providing new attorneys with an introduction to the various appendices (i.e., what RPI means and how it works), as well as provide engineers and economists with an introduction to legal requirements for defensibility. This training will help provide new team members with a baseline understanding of rate cases, reducing time constraints by alleviating some of the pressure for on the job training, and helping to mitigate the risk of technical errors by creating a shared understanding of the process.

#### 1.3.3.a. Decide all calls according to priority.

An agreed-upon prioritization of calls does not exist which can lead to stakeholders focusing on different aspects and/or decisions made late in the process that affect the broader case. The STB should consider prioritizing each call identified during issue spotting based upon a defined set of criteria. This can help provide greater coordination and reduce the likelihood of significant changes late in the process.

#### 1.4.1.a. Formalize the approach to DCF model construction.

Model construction varies by case based on the evidence and appendices submitted by the parties, potentially leading to different approaches and increasing the risk of technical errors. The STB should consider developing a formal methodology for consolidating the appropriate spreadsheets from the parties. This can help improve consistency, reduce the specialized nature of the work, and drive accuracy throughout the model.

#### 1.4.2.a. Articulate specific expectations for each level of review.

The various levels of review do not have clearly delineated responsibilities that can lead to gaps and/or redundancies in the review process, which in turn can impact both timeliness and accuracy. The STB should consider developing specific tasks and objectives for each level of review. This can help increase effectiveness of reviews and improve timeliness by efficiently using the skills provided by members of each office.

#### 1.5.1.a. Develop a standard for OE completion of the Notes database.

OE uses a Notes database to share analysis, recommended calls, and rationale with OP line attorneys. The level of detail included in the database varies by team member, which can lead to delays and/or technical errors. The STB should consider establishing specific criteria for completing each field of the database, complete with examples to mitigate the risks of rework and delays.

#### 1.6.1.a. Set guidelines for meetings.

SAC rate case teams conduct many meetings during the rate case process; however, the STB does not follow a standard approach for capturing outcomes (e.g., decisions). The STB should establish standard procedures for planning and executing meetings, such as an agenda and a consistent method for capturing outcomes or action items. This can help reduce confusion over outcomes, mitigate reopening decided issues, and help increase accountability for accomplishing tasks assigned.



#### **Opportunities to Improve Quality**

#### 1.6.2.a. Formalize the process for authorizing and documenting changes.

A formal process for managing changes to the decision does not exist which can lead to the introduction of unapproved changes or the failure to make approved changes. The STB should consider developing a process to evaluate, implement, and document changes made to the draft decision and DCF model. This can help reduce the chance of incomplete application of changes resulting in technical errors.

#### 2.4.2.a. Hold cases in abeyance to issue decisions on late filings.

The STB requires time to review and respond to errata or other motions filed after the close of the record. When the parties file additional information and the STB chooses not to extend the procedural schedule, the STB increases the time pressure by adding significant additional tasks into an already tight window. The STB should consider consistently using procedural tools to manage the timeline. This predictable approach can help encourage the parties to submit evidence in a timely manner and reduce schedule pressure from inserting extra steps, allowing the STB to produce a timely and accurate decision.

#### 2.5.1.a. Develop a joint rate case schedule.

The STB's rate case schedule does not include a sufficient level of detail to enable team members to effectively coordinate amongst themselves and meet the deadlines. The STB should consider creating a standard schedule that captures activities from OE, OP, OGC, and the Board Members and details the dependencies among the offices. This can help provide greater coordination and reduce the tendency to work in siloes.

Figure 4. Summary of Key Opportunities to Improve Quality

The sections below provide the STB with a notional approach to implementing the thirteen key observations:

#### • For Immediate Implementation (1 to 3 months):

- 1.1.2.a. Hold a technical conference at the start of every case. The STB can immediately begin holding technical conferences at the onset of a SAC rate case (1.1.2.a.) to encourage agreement by the parties on certain areas of the case in an effort to reduce the number of litigated issues. In the near term (3 to 12 months), the STB should work to establish a standard approach to facilitating technical conferences.
- o **1.3.1.a.** Assign team members early and simultaneously from all offices. The STB should immediately begin working with leaders from OE, OP, and OGC to assign team members from each of the offices upon receipt of a case. The act of designating team members at the onset of a case should assist the STB in making immediate improvements to the collaboration of rate case teams. In the near term (3 to 12 months), the STB can further enhance the effectiveness of this opportunity by defining and documenting team members' roles and responsibilities (1.3.1.b.).

#### • For Near Term Implementation (3 to 12 months):

- 1.3.1.b. Define rate case team member roles and responsibilities. The STB should use the team assignments as a baseline to begin assessing the current activities of each team member and the appropriateness of assigning the tasks to an individual. Leaders from OE, OP, and OGC should review the method for dividing work to identify opportunities to share the required tasks more appropriately. The eventual result of this effort should be a document that details the knowledge and skills required for each role, as well as an overview of the tasks that each team member needs to accomplish to support developing an accurate and timely decision.
- o **1.3.3.a. Decide all calls according to priority.** The STB should develop a process to analyze all calls and escalate them to the board for a decision before drafting the narrative. In the near term, the Board may need to base this process on experience while developing criteria to improve long term consistency of future cases.



- o **1.4.1.a. Formalize the approach to DCF model construction.** In the near term, the STB can begin to capture the complex relationships between the parties evidence in the DCF model graphically. In the long term (12 to 36 months), the STB can take a more proactive approach by developing and implementing detailed MFRs that help reduce the complexity of joining the parties' evidence.
- o 1.6.1.a. Set guidelines for meetings. The STB should develop expectations for meetings and create a tracker for action items and meeting outcomes. The guidelines should address how to determine quorum for a decision and different expectations for discussing issues and deciding them.
- 2.5.1.a. Develop a joint rate case schedule. The STB should begin refining the recently developed milestone list into a joint rate case schedule. This may take several iterations to develop sufficiently robust template and incorporate input from all levels and offices.
- 2.4.2.a Hold cases in abeyance to issue decisions on late filings. The STB should assess the opportunities to use procedural tools to mitigate risks introduced by the parties, particularly after the close of the record.
- For Long Term Implementation (12 to 36 months):
  - 1.3.2.a. Formalize the training process for rate cases. The STB should review the current training gaps to determine how to prioritize development of introductory and technical training. Training should include an overview of rate cases and team standards, as well as detailed technical instruction for each individual office.
  - 1.2.1.a. Assess evidence using objective criteria and resolve potential issues. The STB can begin assessing the potential for implementing detailed minimum filing requirements based on those used by utility regulatory agencies. The STB should begin the rulemaking process as soon as possible to obtain input from shippers and railroads and establish a standard framework within which they can operate.
  - o **1.2.2.a.** Develop an internal work product that outlines the expectations for OE analysts when correcting errors in the parties' evidence. The STB should work to establish a standard for documenting changes made to the parties' submitted evidence. The expectations should be tailored for each file type and outline the types of changes that analysts are permitted to make.
  - 1.4.2.a. Articulate specific expectations for each level of review. The STB should assess the current review process to determine the tasks and levels necessary to accomplish a sufficient review in the time available. The STB should immediately begin the process of assessing the current reviews to determine the greatest value added tasks, as well as which tasks may be redundant.
  - o **1.6.2.a. Formalize the process for authorizing and documenting changes.** The STB should begin working with leaders from OE, OP, and OGC to develop a rate case change management process. This process should include members of each office and help control the changes made after completing the draft decision and DCF model. The process may include a change control board and a series of controls to confirm the successful implementation of changes.

To continue momentum of the analysis and verification assessment project, the project champions should solidify the list of issues and opportunities for improvement with STB leadership, develop an implementation strategy, and then form an implementation team. The STB should staff the implementation team with individuals who understand rate cases and desire the opportunity to improve the STB's rate case process.



Armed with a plan and a team, the STB can begin taking the steps necessary to improve process quality in current and future rate case decisions.





## 2. Approach

To improve the quality of rate analysis and verification procedures, the STB formed an assessment team comprised of representatives from OE, OP, and OGC (referred to as "project champions"), as well as contractor resources. The team applied the following five-phase approach to assess the STB's SAC rate case process and identify potential opportunities for improvement.

#### **Phase 1: Confirm Processes to Assess**

The process assessment team met with the STB project champions to gain a high level understanding of the SAC rate case process. As part of this phase, the assessment team worked with the project champions to identify useful documentation and identify the pool of STB team members to interview. The assessment team also discussed prior and current efforts to improve the process and lessons learned from these projects. **Figure 5** depicts the key, high level process steps within a SAC case.

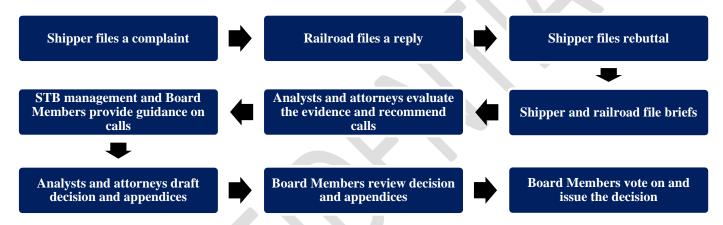


Figure 5. High Level SAC Rate Case Process

#### Phase 2: Identify and Verify Risks

Once the assessment team confirmed the intent and scope of the project, team members worked with the project champions to identify process risks. The term "risk" in this context refers to an uncertain event that could prevent the STB from meeting mission objectives related to SAC cases, should it occur. There are two primary risks the team identified and assessed:

- 3. The decision issued by the STB is not accurate. The Interstate Commerce Commission (ICC) Termination Act of 1995 charged the STB with maintaining reasonable rates in absence of effective competition. To do this, the STB evaluates the cost of building and operating a hypothetical efficient railroad to serve the needs of the shipper, yielding a legally binding decision with substantial financial impact to the parties. The amount and complexity of data, number of issues and assumptions, likelihood of changes, and time constraints make decisions susceptible to technical errors.
- **4.** The decision issued by the STB is not timely. The Board's governing statute requires the STB to complete a SAC rate case decision within nine months from the close of the record. The complexity of SAC cases, large number of involved staff, and many coordination activities makes SAC cases vulnerable to delays.



#### **Phase 3: Document the Current State**

During this phase, the assessment team met with members of the STB's staff, developed documentation of the rate case process, and created a list of controls to assess. The assessment team began with the documentation provided by the project champions and developed flow charts to capture the rate case process. The assessment team conducted interviews with the Chairman, Members' staff, and over one-fifth of the STB workforce to improve its understanding and refine documentation of the process steps.

The assessment team used flow charts to highlight those activities the STB performs to help ensure that a decision complies with mission objectives (i.e., is timely and accurate). These "control activities" formed the basis of the risk and control matrix (RCM) in **Appendix B**. The assessment team and project champions held a series of sessions to discuss the list of identified control activities and confirm its completeness.

#### **Phase 4: Assess Controls**

Using the results from Phases 2 and 3, the assessment team compared the identified control activities against the process documentation, as well as favorable practices used in similar regulatory and adjudicatory organizations for utilities. The assessment team took a collaborative approach to review the process flowchart, risk control matrix, interview findings, as well as industry standard practices simultaneously and document observations for each existing control. The assessment team identified existing activities and processes that help the STB address the SAC rate case risks, as well as areas with opportunities to implement new processes or activities. This effort allowed the assessment team to refine the opportunities, compare the potential impact against the expected effort to implement the changes, and produce a prioritized list of the opportunities for the STB to consider. **Figure 6** presents the criteria the assessment team used to assess the estimated effort to implement a given opportunity and its expected impact to the SAC rate case process relative to other identified opportunities. In the graphs below, yellow bubbles indicate those opportunities that appear most helpful to the STB in meeting its objectives; white bubbles are also viable options and should be reviewed for implementation as time permits.

Score	Impact	Effort	
Low	Affects a subset of an office or individual staff	• 0-6 months to implement	
	Occurs during some rate cases	• Requires refinement of existing processes	
	Revises or updates existing policy	Necessitates intra-office coordination	
	Supports the control objective incidentally		
Medium	Affects a majority of staff within one office	• 6-12 months to implement	
	Occurs once during a rate case	Requires restructuring of existing processes	
	• Results in a new policy	Necessitates coordination among senior agency staff	
	Facilitates the control objective indirectly		
High	Affects staff in multiple offices	• 1+ years to implement	
	Occurs multiple times during a rate case	Requires a cultural shift and process changes	
	Results in a new formalized process	Necessitates coordination among senior agency staff	
	Facilitates the control objective directly	and/or external stakeholders	

Figure 6. Opportunity Prioritization Criteria

#### **Phase 5: Develop Confidential Report**

The assessment team summarized the analysis and results of Phase 4 in this Confidential Report. This report summarizes the team's assessment, including identified opportunities for improvements.



This section documents the team's observations from Phases 2, 3, and 4 of the assessment, and presents corresponding opportunities the STB may consider in further mitigating risk and improving quality throughout the SAC rate case process. In accordance with the team's approach, observations and opportunities to strengthen controls are organized by control objective and the risk they are designed to mitigate. Some of the opportunities address multiple observations or risks and in those instances, the numbering remains consistent with the first occurrence.

#### 3.1. Risk 1 - The decision issued by the STB is not accurate

The STB strives to produce decisions free of technical errors, and traceable from the decision through the analysis to the submitted evidence. However, technical errors may occur as a result of external and internal actions that could result in the STB issuing an inaccurate decision. To mitigate this risk, the STB relies on a number of activities ("control activities") that help its personnel detect and prevent technical errors during the process. The sections below present the assessment team's observations of these control activities and potential opportunities for improvement.

#### Control Objective 1.1. Reduce the Number of Litigated Issues

Control Objective	The STB attempts to reduce the number of litigated issues by providing parties with opportunities to resolve the rate dispute outside of a formal rate case. By pushing parties to participate in mediation and negotiation activities, the STB drives agreement on smaller issues and focuses the case on larger issues. Reducing the number of litigated issues helps the SBT improve the accuracy of the decision by streamlining the necessary analysis; reducing opportunities for changed calls; and simplifying the process of combining the parties' spreadsheets. It also increases the average amount of time the STB's employees have to work on remaining issues.
Control Activities	<ul> <li>1.1.1. The STB leads mandatory mediation</li> <li>Code of Federal Regulations (CFR) Part 49 Part 1109 requires the STB to provide mediation-trained STB staff to lead the mandatory 30-day mediation between the parties.</li> <li>1.1.2. The STB convenes a technical conference (when applicable)</li> <li>CFR Title 49 Part 1111 states "The Board will convene a technical conference of the parties with Board staff prior to the filing of any evidence in a SAC rate case, for the purpose of reaching agreement on the operating characteristics that are used in the variable cost calculations for the movements at issue."</li> </ul>



1.1.1. The STB faces increased time pressure due to the increasing number of litigated issues per case with no corresponding change to the statutory timeline. The number of litigated issues per SAC rate case increased over the past twenty years. Figure 7 graphically presents the estimated number of calls for the first four non-DCF appendices (i.e., traffic group, stand alone railroad system, operating plan, and operating expenses) in decided SAC cases. The increased number of litigated issues, in the absence of changes to the statutory timeline, results in less time for the STB to analyze each call and increases the likelihood that technical errors may occur.

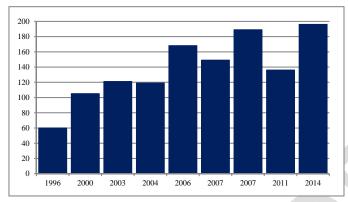


Figure 7. Estimated number of issues in the first four appendices (excludes DCF appendix)

STB mediator selection affects availability of key personnel. The STB maintains a bench of eight to ten trained mediators across OE, OP, and OGC. The staff members selected to mediate must recuse themselves if the mediation fails to resolve the case. This creates a challenge for the STB, as the personnel best suited to support mediation may also best support quality in the decision.

1.1.2. The STB's decision not to hold a technical conference during every case reduces opportunities to interact with parties. The STB decides when to hold a technical conference. Historically, the STB used technical conferences to resolve issues with variable costs before the implementation of the average total cost (ATC) methodology. Since 2006, the STB uses technical conferences at OE's recommendation, often in response to a new or unique approach from one of the parties. The conference offers the STB an opportunity to build agreement between the parties and helps to efficiently identify issues that will need to be addressed within the scope of the

#### **Opportunities to Improve Quality**

**1.1.1.a. Develop a standard mediation process.** The STB should consider identifying a more rigorous process to prepare for and conduct the Board-mandated mediation period between the parties. The process should detail the requirements for serving as a mediator, selection method, and standard approaches to use during mediation. Planning the approach to mediation can help improve the efficacy and result in fewer cases requiring adjudication by the Board.

1.1.1.b. Continue to prepare staff to serve as mediators. The STB should continue to build its cadre of employees qualified to serve as mediators. Identifying and preparing additional personnel to serve as mediators may reduce the likelihood that the Board lacks sufficient employees to serve on a SAC rate case due to forced recusal. In the near term, the STB could explore whether external mediators have the required knowledge and skills to facilitate these sessions where the parties agree to the use of non-Board mediators. By increasing the number of available mediators, both internally and externally, the STB may reduce the risk of technical errors in the decision by helping to ensure that the assigned team possesses the required knowledge, skills, and experience.

1.1.2.a. Hold a technical conference at the start of every case. Holding a technical conference can help reduce the number of litigated issues, allowing STB employees more time to analyze the remaining issues. This decreases the likelihood of errors and increases the likelihood the STB adheres to the procedural schedule. The STB should consider holding the technical conference after opening to allow the staff and the railroad time to formulate questions and facilitate discourse around the major issues identified by the shipper.

A technical conference could also provide the STB with a forum to discuss the following topics that may help enhance the quality of the STB's decision:

- Reconcile structural issues with submitted evidence (e.g., different versions of the DCF model, different modeling software).
- Promote compliance with evidentiary standards and address questions.
- Share leading practices identified during prior cases.



#### Summary of Analysis for Control Objective 1.1. Reduce the Number of Litigated Issues

In considering opportunities to improve control activities designed to reduce the number of litigated issues, the team assessed the relative amount of effort to implement and the potential impact of the opportunities. **Figure 8** presents the results of the team's analysis. Although improving the mediation process may result in fewer cases or fewer differences between the parties' submissions, the non-binding and confidential nature of the mediation suggests that conducting a technical conference (1.1.2.a.), with members of the STB rate case team as active participants, may be more likely to reduce the number of litigated issues in a rate case.

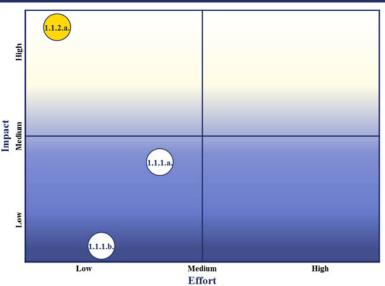


Figure 8. Impact and Effort for Opportunities to Address Control Objective 1.1



#### Control Objective 1.2. Resolve Evidence Presentation Issues

Control Objective	The STB attempts to improve accuracy by reducing evidentiary issues through the guidance outlined in Ex Parte No. 347 (Sub No. 3) <i>General Procedures for Submitting Evidence in a Stand Alone Cost Rate Case</i> , as well as providing time for analysts to review the evidence. Resolving evidence presentation issues can streamline analysis, reduce the likelihood that large data sets are misunderstood, and increase the efficiency and effectiveness with which the STB combines and recalculates parties' spreadsheets.	
Control	1.2.1. OE conducts analysis of the evidence submitted by the parties	
Activities	OE reviews the evidence submitted by the parties to identify technical errors and other types of issues.	
	1.2.2. OE analysts make minor corrections to submitted evidence	
	Staff fixes broken links, hardcoded values, or other issues.	
	1.2.3. OP requests clarification of submitted evidence	
	OP may request missing evidence, i.e., missing spreadsheets or other referenced documents, as needed.	

#### **Observations**

1.2.1. The STB's acceptance of evidence with presentation issues complicates analysis. Upon receipt of evidence, the STB completes an informal assessment of opening evidence for workability. As part of this workability assessment, OE analysts may identify situations where the submitted evidence fails to comply with the STB-issued guidance in Ex Parte 347 (Sub-No. 3) that sets standards for structure and content of evidence. Beyond the workability assessment, OE interviews indicated that evidentiary spreadsheets regularly do not comply with Ex Parte 347 Sub 3 and contain issues with functionality (e.g., hard coding, broken links), improper naming, and missing references. Other issues with evidence include the increasingly large spreadsheet files (250 MB+) and limitations with reviewing evidence that relies on Structured Query Language (SQL) queries and databases. These challenges in conjunction with the STB's commitment to use the parties' unaltered evidence can increase the risk of technical errors in the final decision.

#### **Opportunities to Improve Quality**

1.2.1.a. Assess evidence using objective criteria and resolve potential issues. The Chairman, Members, and Directors should assess the risk assumed by the STB when evidence not compliant with Board guidance is nonetheless accepted (or is accepted without a requirement that the submitting party correct it). The Board may be able to improve the quality of the submitted evidence by establishing detailed minimum filing requirements (MFRs), modeled on those used in utility rate cases. Detailed MFRs provide the Board an objective standard for evaluating the evidence, removing the need for the current OE workability assessment. OE could instead use this time to review the evidence in detail; conduct thorough issue spotting; and build out the Notes database with detailed analysis and rationale.

When developing these new MFRs, the STB should also consider including the use of an input strip (i.e., a single spreadsheet with every input to the DCF) to help reduce the risk of referencing an incorrect data point when incorporating the parties' evidentiary spreadsheets. Other possible issues to address include updating the required document formats, creating a maximum size for individual spreadsheets based on the STB's computing power, and clarifying the Board's approach to the outputs of SQL queries or software.



**1.2.2.** The STB is hesitant to improve suboptimal evidence and ends up making calls between two poor options. During interviews, the assessment team noted a common theme among OE analysts who raised concerns about evaluating two poor options when neither party submits a well-supported position. These situations can introduce inconsistencies in the DCF model because of the more subjective nature of selecting a "least bad" option, compared to evaluating feasible versus infeasible options.

Although there is precedent for filling gaps in the record, the STB takes a conservative approach to adjusting parties' evidence. OE analysts do not set out to identify technical errors in the parties' evidence, but regularly encounter issues with broken links, hardcoded values, or mathematical mistakes identified as they perform their analyses. The analysts resolve these technical errors. But when documenting these changes, analysts use various approaches creating inconsistencies that can lead to miscommunication and downstream technical errors.

1.2.3. The STB's process for resolving incomplete evidence is unclear and can result in OE analysts failing to request clarification. During the assessment team's interviews, OE analysts were unsure of what to do about missing evidence. This led to frustration related to making calls where the parties' failed to include evidence or included insufficient evidence to support their assertions. Further discussions revealed that OP could request the parties submit errata to resolve missing documentation and/or significant errors.

#### **Opportunities to Improve Quality**

1.2.2.a. Develop an internal work product that outlines the expectations for OE analysts when correcting errors in the parties' evidence. The guidance should be specific to each type of document (e.g., Excel, Word) and outline the appropriate method for noting changes and references. By establishing a consistent approach, OE analysts can more quickly identify and reference notes, reducing the likelihood of improperly applied changes later in the process.

1.2.2.b. Consider increasing the willingness to introduce expert testimony from OE analysts into rate cases. Courts have previously approved STB's ability to adjust the parties' evidence and fill a gap in the record. This approach is consistent with the process used in utility rate cases. For example, when Federal Energy Regulatory Commission (FERC) adjudicates utility rate cases, it regularly introduces agency expert testimony pursuant to 18 CFR 385.102(b), which requires parties to provide sufficient and reasonable evidence to support their positions. A similar interpretation of 49 CFR 1101.2(d) could provide an incentive for the parties' to improve their evidence and allow the Board greater control over the quality and consistency of the DCF model.

1.2.3.a. Develop an internal work product describing the process for requesting clarification or missing evidence from the parties. The STB should develop an internal document that defines the criteria that merit requesting clarifying or missing evidence, as well as the steps to issue the request. Analysts and attorneys could use the criteria to help produce a single request, reduce the burden on OP as intermediary, and help improve the quality of evidence. Additionally, if the Director of Proceedings makes this request as a Director Order, the consultants responsible for developing submissions may face pressure to improve the quality of their work. The improved evidence could reduce the number of contentious calls and support traceability of the decision.



#### Summary of Analysis for Control Objective 1.2. Resolve Evidence Presentation Issues

The team assessed opportunities for the STB to resolve evidence presentation issues based on their relative estimated effort to implement and the potential impact. Figure 9 presents the team's assessment of the opportunities. Based on the team's analysis, the development of an internal work product to detail how and when analysts should correct the parties' evidence (1.2.2.a.) offers the STB a useful balance of effort and expected results. The two potentially more impactful opportunities, improving the evidence (1.2.1.a.) and introducing expert testimony (1.2.2.b.), likely require longer lead times to implement and will entail greater consideration prior to providing the desired impacts. At a minimum, addressing the process through which analysts remedy minor issues with the submitted evidence (1.2.2.a.) allows the STB to increase the structure of the process and reduce the likelihood of introducing technical errors caused by insufficient or misplaced documentation.

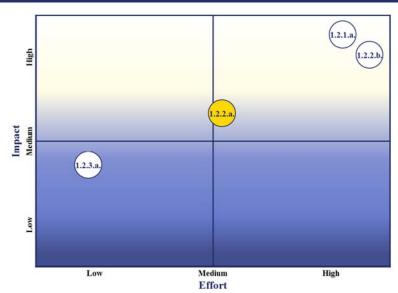


Figure 9. Impact and Effort for Opportunities to Address Control Objective 1.2



## Control Objective 1.3. Make Calls Based On Evidence, Precedent, Knowledge, and Experience

Control	
Objective	•

The STB strives to make calls based on the evidence and through the lenses of precedent, specialized knowledge and experience. This process helps the STB develop a clear, consistent, and well-cited decision that addresses parties' arguments. It also assists the STB in limiting the number of calls changed after a draft decision is substantially complete, which reduces the likelihood of introducing technical errors into the case.

#### Control Activities

#### 1.3.1. Assign a team to the case

OE and OP select attorneys and analysts to analyze the evidence and develop a recommendation to the Board.

#### 1.3.2. STB team members new to SAC cases receive instructions

New attorneys and analysts receive informal training and instruction on the SAC rate case process to enable their efforts on the case.

#### 1.3.3. OE and OP conduct issue spotting

Analysts and attorneys review the filings and evidence to identify the differences between the parties.

#### 1.3.4. OE management provides guidance on issues of first impression or complex issues

The senior economists in OE discuss the issues of first impression and other calls with unique approaches with the OE analysts to understand the issues and make recommendations on how to make and support calls.

#### 1.3.5. Chairman and staff provide guidance on calls

OE and OP brief the Chairman and his/her staff on calls to obtain guidance.



1.3.1. OE, OP, and OGC assign employees to rate cases at different points in the process; these employees do not have defined roles and responsibilities. The assessment team noted that OP, OE, and OGC assign rate case team members at different times and without discussing the experience of team members from the other offices. The timing differences can result in coordination gaps as employees focus on different aspects of the case, while the assignment process can lead to challenges with less experienced employees working on the same section of the case.

These are the key details the assessment team noted related to the processes used by OE, OP, and OGC to assign teams:

- OE assigns staff to rate cases earlier than OP and OGC. The office uses a standard work breakdown to designate a team leader, as well as primary and secondary analysts for each section of work; however, due to the specialized nature of the work, the team lead assigns some sections to the same analyst every time (e.g., DCF and Road Property Investment (RPI)), while other sections rotate among OE analysts. Furthermore, despite the primary/secondary analyst structure designed to assist with workload and build breadth in knowledge, the volume of work OE analysts must accomplish over the course of a rate case usually results in the primary staff carrying a majority of the burden of the assigned section.
- OP sometimes assigns attorneys as late as at receipt of reply.
   This includes assigning a team leader and line attorneys, as well as managing other work assigned to the team. The assessment team noted that in prior cases, OP assigned two attorneys to work on each appendix, but that this practice ended several years ago; the current process generally results in one attorney carrying responsibility for completing a whole appendix.
- OGC engages in the process later than OE and OP. OGC is responsible for legally defending the STB's decisions on appeal. Requests from OGC for clarification on narratives generally occur well after OE analysts have completed their initial analyses. Because of the rework that accompanies change requests, OE analysts may fall behind on other concurrent tasks leading to internal delays.

While assigned team members understand their general roles on the team, written guidance clearly defining their specific SAC rate case responsibilities and setting expectations does not exist.

#### **Opportunities to Improve Quality**

1.3.1.a. Assign team members early and simultaneously from all offices. The STB should take two steps to improve the team structure, assign a team and place a project manager to oversee the rate case from complaint to decision. To be effective, building a rate case team requires support across all offices. The STB should appoint a project manager to lead the team and help navigate the inevitable, complex decisions and challenges that are inherent to SAC rate cases. Project managers cannot meet deadlines, manage employees, and achieve an accurate and timely decision without the support of STB leadership and a capable team. To build that capable team, the project manager should collaborate with office leaders from OP, OE, and OGC to form the rate case team shortly after receiving a complaint. Selecting the team members early provides the opportunity for all team members to attend the case's kickoff meeting; engage in the process from the onset; and help enable coordination to reduce downstream rework and conflicts. In terms of composition of the team, the project manager and office leaders should assign primary and secondary staff for each role. Assigning team members early may affect the office's flexibility for adjusting to changing workload, but over time, defined roles (1.3.1.b.) and a detailed schedule (2.5.1.a.) can help improve predictability in workforce planning. Although staffing vacancies may make this challenging, a deliberate approach to this process can mitigate the risk of losing a team member, identify potential weaknesses in peer review pairings, or highlight areas of concern for overtasking staff.

**1.3.1.b.** Define rate case team member roles and responsibilities. The STB should develop written guidance to formalize the roles, responsibilities, and expectations for SAC rate case team members. This will help the STB build a shared sense of accountability among team members and limit the extent to which team members' personal styles influence the quality and timing of rate case activities.

When defining the roles and responsibilities, the STB should consider the amount of work and, if necessary, adjust the size of the team accordingly. Rather than assigning OE and OP team leaders the responsibility for reviewing substantial portions of a SAC rate case, which may be an unrealistic ask, the STB should assign deputy team leaders. Similar to the primary/secondary assignments for line attorneys and analysts, a deputy team leader can split up how to perform a higher level review (i.e., spot check details and look for consistency) and support peer review of the individual contribution of the team leader.

Team leaders and supervisors are not the only ones with specific responsibilities. The STB should clearly define each team member, their responsibilities; and set expectations for team conduct, including performance, supervision, communication, and collaboration. By establishing standard responsibilities for rate case team members in the STB can help ensure everyone involved knows what is expected of them.



1.3.2. The STB does not provide training for team members on the rate case process, technical requirements, or team **performance.** OP and OE use a similar approach to introduce new analysts and attorneys to the SAC rate case process. A new team member receives a short list of recent cases and instructions to review the assigned section of work as it fits into the larger context of the case. The assessment team identified one technical training document, an OE training deck created in 2008. The deck provided an overview of the major sections of work, but did not touch on the roles and responsibilities of the analysts or the STB's approach for creating the DCF model. The OE Quality Assurance (QA) Handbook provides some guidance on expectations in a rate case, but analysts indicated that the guidance is neither adhered to nor well publicized The documents did not address training on process knowledge (i.e., how does the STB draw on knowledge from OE, OP, and OGC to facilitate rate cases) or team behavior (i.e., how OE, OP, and OCG work together to produce a rate case decision).

This informal process relies on the analysts and attorneys to self-teach the SAC process, leads to different processes for each person and for each case, and results in inconsistent quality control.

- **1.3.2.** The STB's workforce size does not provide organizational redundancy for some key skills. During interviews, the assessment team noted representatives from both OE and OP identified challenges related to having enough employees with the requisite knowledge and experience to serve on SAC rate cases. Specific observations the team made for each office are as follows:
- One factor contributing to OE's workload pressures appears
  to be the office's ability to recruit staff with the required
  technical skills. The assessment team also noted that as of
  December 2014, OE had three vacancies, two of which had
  been open for over six months.
- Within OP, the office is trying to provide line attorneys with a broad range of experience by rotating staff assigned to SAC rate cases. However, this strategy can result in the office assigning line attorneys with little to no rate case experience.

#### **Opportunities to Improve Quality**

**1.3.2.a.** Formalize the training process for rate cases. The STB should consider providing new attorneys with an introduction to the various appendices (i.e., what RPI means and how it works), as well as provide the engineers and economists with an introduction to the legal requirements for defensibility. This introductory training should include an overview of the rate case process, expectations of team members, as well as separate, more technical training for each office. The overview training should include the roles and responsibilities for team members (1.3.1.b.), as well as processes for deciding calls (1.3.3.a.), completing the Notes database (1.4.1.a.), and managing changes (1.6.2.a. and 1.6.2.b.). The technical training should include specific resources for producing an accurate decision, including how to develop the DCF model (1.4.1.a.) and review properly (1.4.2.a.). This training could help improve the coordination among the offices and lead to the development of work products that integrate more easily, reducing the time spent on redoing analysis or legal research.

#### 1.3.2.b. Develop a formal process for knowledge capture.

The intent of knowledge capture is to turn tacit knowledge into an explicit representation available to the organization. Based on the current vacancies and issues with identifying and hiring qualified candidates, the STB should look to reduce the risk of losing experience through turnover and help shrink the learning curve for new employees. After a recent case, an OP team leader developed a high-level overview of the SAC case to capture some key points that he felt would be useful for a new attorney. STB should consider taking this several steps further and developing documentation to capture the process for each individual analyst and attorney on how they complete their section of work. The STB could also develop a repository to capture precedent for both the legal decision and the economic and engineering rationale. This kind of database could simplify the Board's approach to completing the Notes database and drafting the narrative, and help mitigate inconsistencies among decisions.

The STB should also consider capturing lessons learned from each case to update and improve its SAC rate case process and procedures (e.g., documentation, guidance, training). The STB could capture lessons learned by holding formal sessions at key milestones during, as well as immediately following the conclusion of a case.



1.3.2. Team members may take on management roles without a lot of guidance or SAC experience. Rate cases are the largest and most complex cases handled at the STB, requiring large teams with a lot of coordination among the offices. The current team structure and division of responsibilities may not provide new managers with sufficient exposure to the various facets of SAC cases or the technical project management skills necessary to lead large, complex rate cases prior to assuming rate case leadership responsibilities.

#### **Opportunities to Improve Quality**

1.3.2.c. Plan the growth and development of staff. To prepare attorneys and analysts for future roles, such as team leader or branch chief, the STB should implement a succession planning process. This could include mentoring junior staff and assigning them as understudies to shadow experienced team members. It could also include regular assessments of staff for demonstrated capability and the potential for greater responsibility. These assessments can help the STB to identify staff ready to serve as deputy team leaders or team leaders. Additionally, the STB can include SAC rate case work as a requirement for promotion or assignment to positions of greater responsibility. This could incentivize staff to seek out the complex challenge of a rate case. These approaches to assigning the team can help prepare team members for more challenging roles and mitigate the risk of technical errors caused by inexperience.

1.3.2.d. Acknowledge SAC rate case team accomplishments. The STB should consider opportunities available for recognizing the accomplishments of SAC rate case team members. While the STB faces constraints to offering monetary awards (e.g., bonuses, extra personal leave), managers should explore valuable forms of non-monetary awards to build team behavior and improve morale. For example, the STB could use handwritten thank you notes; establish a SAC rate case "most valuable player" award/certificate; or offer SAC rate case teams access to special roundtables with the Chairman and Members where they discuss lessons learned. A consistent approach to thanking team members lets people know leaders notice their efforts and that they are making a difference.



1.3.3. Staff completes issue spotting on an individual basis resulting in different approaches to the issues across the offices. The assessment team noted that analysts and attorneys conduct issue spotting as an individual activity focused on their assigned appendices. Currently, OE analysts focus on the economic and engineering calls included in their assigned sections of work, and build out the Notes database from that assessment. OP attorneys may conduct their own individual issue spotting as they read the parties' filings. OP line attorneys noted that it is challenging to identify issues of first impression and determine which issues exert greater influence over the decision without input from OE. Collaboration is limited and may lead to inconsistencies among similar calls across the appendices.

As OE and OP analysts and attorneys identify complicated or significant issues, they escalate those issues to senior staff within their individual offices for guidance. The STB does not have guidance for identifying and prioritizing issues, relying instead on the experience and knowledge of the staff. Senior team members provide guidance on the issues put forward and escalate the major issues (e.g., operating plan, rail traffic controller (RTC) model, and issues of first impression) to the Chairman and Members. This leaves the review and discussion of the remaining issues until the Board reviews the draft narrative. This can lead to schedule pressures and ineffective reviews as issues require rework to address the Board's concerns with only weeks remaining before the statutory deadline.

1.3.4. Prior to completion of draft decision, OE management only provides input on major calls, leaving analysts to complete the analysis and rationale on some calls without supervisory review. The OE Chief Economist and Deputy Director read the narratives submitted by the parties and identify significant issues. OE holds a series of meetings to discuss these issues and develop an approach to analyze the issues. These meetings may occur over a series of months and include escalation and involvement of the other Directors and the Chairman. This approach emphasizes "major" issues; however, the Board may later focus on other issues that did not previously received the same level of scrutiny, but ultimately impact to the outcome of a case.

#### **Opportunities to Improve Quality**

**1.3.3.a.** Decide all calls according to priority. The STB's current process results in the Board Members not receiving "lower priority" issues for input or review until late in the process. To improve the likelihood of an accurate rate case decision, the STB can help reduce the number of late changes by prioritizing calls and using that priority to complete the analysis and drive decision making.

The STB should develop criteria to articulate the significance of the types of calls (e.g., issues of first impression, cornerstone issues like the operating plan, or issues with a long and consistent precedent) and support consistent and effective prioritization. The STB should involve members of the three offices at the start of each case to jointly spot issues and prioritize calls in accordance with the newly established criteria. The STB can use this complete list of prioritized issues to coordinate the timing for completing the OE analysis, drafting the narrative, and the review of the sections of work. In support of improving the timeliness, the OP line attorneys can structure the decision based on the joint issue spotting efforts and develop the draft concurrent with the OE analysis.

The STB can also use the call priorities to escalate every call to the Board for input based on the rationale and analysis entered in the Notes database (*I.5.1.a.*). Although some calls may still change during the review of the narrative decision and appendices, the STB can help ensure that the Board makes "cornerstone" calls early and that all calls receive sufficient attention from the Board to reduce the number of late changes and the associated schedule pressure.

#### 1.3.3.a. Decide all calls according to priority.



1.3.5. Chairman and Members provide guidance on major issues, but may not see the smaller issues until completion of the draft narrative. The current process for obtaining input from the Board consists of escalating "major" issues to the Chairman and Members separately via a series of briefings. The Sunshine Act complicates this process by requiring the Board to meet either publicly to discuss a case with each other or not discuss the case at all. Due to the complex nature of the briefing process, the Board only provides early input on 10-20 issues in each case. The staff makes the remaining calls and completes the draft decision. The Chairman and Members do not see the complete set of recommended calls until reviewing the draft decision towards the end of the case. The assessment team noted that there is occasional uncertainty around what issues the Board will have concerns about and which lead to changes late in the process.

The assessment team also noted that the Chairman is involved in the process earlier than the Members. Although, the Members receive the same briefings as the Chairman, they typically do not receive the drafts of the decision until they have been approved by the Chairman's office. This can create a situation where the Members' do not have sufficient time to request changes as the timeline no longer permits substantive changes to the calls.

1.3.5. Board meets rarely and may miss opportunities to discuss pertinent issues. The 2012 STB Annual Report indicates that only one public meeting (chaired by OE), two headquarters hearings, and two oral arguments occurred that year. The lack of regular discourse on the topics of interest to the Board can lead to poor communication among the Members and can increase the risk of disagreement on a decision or rework to address divergent guidance.

#### **Opportunities to Improve Quality**

1.3.3.a. Decide all calls according to priority.

1.3.5.a. Hold recurring public meetings as a platform for the Chairman and Members to discuss issues. This is common practice for many organizations impacted by the Sunshine Act. The requirement is for the meetings to be public, but the Members' conversation can be as guarded or direct as desired. Additionally, having regularly scheduled meetings provides an opportunity for maintaining a collegial environment among the Members. Instead of relying on staff to sort out the details, the Members could discuss relevant topics as they occur. This improved communication could help reduce the risk of miscommunication and the need to change calls.



## Summary of Analysis for Control Objective 1.3. Make Calls Based On Evidence, Precedent, Knowledge, and Experience

The assessment team compared the opportunities identified to support the STB's efforts to make calls based on evidence, precedent, knowledge and experience based on the impact and effort for implementation. **Figure 10** presents the results of the team's comparison. The STB may consider two initial changes to help reduce the likelihood of introducing technical errors into the DCF model and decision through improving the process for making calls: (1) assign team members early and simultaneously (1.3.1.a.) and (2) Decide all calls according to priority (1.3.3.a.). The assessment team based this on the current approach of assigning team members at different times and the resulting number of changes required as each new team gets up to speed. Although improving training (1.3.2.a.) can also effectively support the accuracy of a rate case, additional time is required to develop effective tools to support their success.

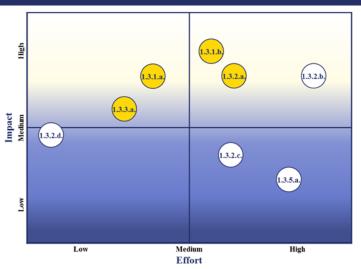


Figure 10. Impact and Effort for Opportunities to Address Control Objective 1.3



## Control Objective 1.4. Build a DCF Model Based On Calls, Evidence, Precedent, Knowledge, and Experience

#### Control Objective

The STB builds a DCF model based on the calls and evidence relevant to the case, viewed through that same lens of precedent, knowledge, and experience. This requires the organization to combine the parties' evidence based on the calls in an efficient and effective manner. By basing the DCF model on the calls and evidence, the STB reduces the opportunities for introducing STB caused technical errors into the DCF model.

## **Control Activities**

1.4.1. OE develops the DCF model by combining the parties' evidence in accordance with calls

OE analysts construct the DCF model by combining the parties' evidence and work papers based on the calls.

1.4.2. OE conducts peer review of model

OE analysts may conduct an informal peer review prior to placing spreadsheets in the final folder on the X drive.

1.4.3. OE team leader and supervisor conduct initial review of the DCF model and associated work papers

The OE team leader and supervisor review the X drive and verify that all sections of work are complete.

1.4.4. OE conducts a quality assurance roundtable

OE senior management convenes a QA roundtable to review the logic and accuracy of the DCF model.

#### **Observations**

1.4.1. OE builds the DCF model by combining evidence in accordance with economic calls based on the analysts' individual work products. The assessment team noted that the size and complexity of evidentiary spreadsheets create challenges in OE during DCF model development and throughout the STB during drafting and review of the narrative. These challenges include unlinked workbooks, hard-coded values, and multiple locations for data inputs, each of which can increase the likelihood of technical errors. The OE DCF analyst developed an approach to relink and recalculate inputs in the DCF model (i.e., creation of an intermediate spreadsheet). Another OE analyst developed a process using Visio to map out the various links and spreadsheets prior to beginning work. By creating these personal intermediate products, the OE analysts attempt to reduce the chances of technical errors within their sections created by the combination of the parties' evidence.

#### **Opportunities to Improve Quality**

1.4.1.a. Formalize the approach to DCF model construction. The current approach to the DCF model relies on each analyst to evaluate the parties' evidence and construct an approach to link the necessary sheets together. By formalizing DCF model construction and introducing a required step to map the links between spreadsheets, OE analysts may better define the relationships among the calls to provide team members a better understanding of the downstream impacts of changes. For example, the STB should expand on the current flowchart to develop a case specific map of the worksheets that feed into the DCF model, including naming the particular input and the cell reference. Analysts could also develop an OE specific input strip to feed the DCF model, alleviating the need for the DCF analyst to search for inputs and reduce the risk of referencing outdated files. Overall, a planned approach can provide greater control over the DCF model structure and result in fewer technical errors.



**1.4.2. OE analysts use peer reviews inconsistently.** The assessment team noted that analysts use peer reviews irregularly and lack a consistent review methodology. The individual sections of work are reviewable by other team members. The assessment team discovered that OE's traffic group team regularly uses peer reviews. Traffic group peer reviews consist of circulating the individual sections of work amongst the team and reviewing for technical errors, reliable indexing and referencing, and well-documented rationale. Once the analysts merge the sections into the DCF, the number of links and cell references increases noticeably, resulting in a corresponding increase in the time required to review the DCF model.

#### **Opportunities to Improve Quality**

**1.4.2.a.** Articulate specific expectations for each level of review. The STB should evaluate its current approach to quality assurance reviews and consider aligning reviews with the newly developed detailed roles and responsibilities (*1.3.1.a*). Team leader, supervisory, and Board reviews should occur sequentially and approach work products with different lenses that reflect their role and experience. There may be opportunities to delineate the focus based on specific sections (i.e., body vs. appendices or DCF vs. appendices) or on specific objectives (i.e., agreement with the DCF model vs. defensibility or indexing and referencing vs. accurately capturing the calls). The roles and responsibilities may include, but are not limited to, the steps listed in **Figure 11**.

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Role	Review Responsibilities		
Primary Analyst/ Attorney	<ul> <li>Creates work product</li> <li>Adheres to documentation standards</li> <li>Reviews draft narrative for technical accuracy</li> </ul>		
Secondary Analyst/ Attorney	<ul> <li>Peer reviews work product for section</li> <li>Supports creation of work product as needed</li> </ul>		
Team Leader/ Deputy Team Leader	Provides a full quality review of narrative decision/DCF model to help ensure they meet the STB's standards Provides quality guidance to the line attorneys or analysts  Assists in enforcing guelity throughout the		
	Assists in enforcing quality throughout the project		
Supervisor/ Branch Chief	<ul> <li>Provides feedback to team members regarding the level of quality and areas for improvement</li> <li>Shares lessons learned and leading practices</li> </ul>		
Office Director/ Deputy Director	<ul> <li>from prior experience</li> <li>Provides technical input and review work products and deliverables, as necessary</li> <li>Leads OE QA roundtable</li> </ul>		
OGC	<ul> <li>Reviews Notes database for defensibility of rationale</li> <li>Provides technical input and review work products and deliverables, as necessary</li> </ul>		
Board and staff	<ul> <li>Serves as the authority over quality standards</li> <li>Provides the final review of decision</li> </ul>		

Figure 11. Roles and Review Responsibilities

In addition to the roles and responsibilities, the STB should assess the tools for effectiveness. The STB may want to consider the timing of the QA roundtable as it can be helpful in identifying technical errors in the DCF model and underlying spreadsheets, but changes made after the roundtable do not receive the same level of scrutiny. The STB may also consider implementing a sampling process to verify agreement between the decision and the DCF model. An effectively designed sampling process can help the STB identify weaknesses in the review process, help with continual improvements, and reduce the number of technical errors in the decision.



1.4.2. OE has a limited number of staff with critical knowledge and experience. OE possesses the required skills and knowledge, but the irregular nature of demand leads to challenges when processing multiple SAC rate cases simultaneously. OE management communicated that there are a limited number of analysts possess the expertise to review all aspects of a SAC case. Additionally, the assessment team noted that one OE analyst does the primary works on the DCF model for each case and has done so for many years. There is a risk that substantive peer reviews are not possible due to limited excess capacity in OE.

#### **Opportunities to Improve Quality**

**1.4.2.b.** Identify opportunities for knowledge sharing and crosstraining. Although some sections of work require specialized knowledge, OE can improve their capabilities by providing analysts the opportunity to support other sections of work during rate cases. By assigning primary and secondary staff (*1.3.1.a.*), the STB can organically develop organizational redundancy and reduce the likelihood of losing the experience of individual analysts and attorneys. This shared knowledge can support efficient and effective reviews, both in peer review of the individual sections, but also during the QA roundtable.

**1.4.2.c.** Widen the net for recruiting. The STB currently operates with approximately 25 total vacant positions, including two in OE. Last year, STB hired eleven new employees and lost seven, while January 2015 began with five new retirements. The current HR approach to filling these positions is to post the positions on USAJOBS, a change from previous years when STB advertised positions in relevant trade associations or job fairs. The STB should look to expand the search against its open positions, find qualified candidates quickly, and provide the offices with the full complement of staff to complete their mission activities. As the STB improves the quality and consistency of training (1.3.2.a.), implements knowledge capture practices (1.3.2.b.), and develops staff internally (1.3.2.c.), it may become easier to identify candidates because the skills and experience necessary to begin work at the STB may not be as advanced, or may be easier to attain on-the-job.

1.4.3. The DCF model and associated spreadsheets are too expansive for the OE team leader to review in the **limited time available.** The team leader is the first level of review for the individual sections of work, as well as the complete DCF model. The OE QA handbook states that "The Team Leader must inspect the work product of the analysts on his team – to include the electronic files, databases, worksheets, and documents an analyst relied on; the Team Leader is responsible for maintaining the electronic files, databases, worksheets, and documents that the team creates." Due to the size of the DCF model and the underlying workpapers, as well as the time constraints, the OE team leader may not be able to review the DCF model. the inputs, and the rationale for the calls. OE team leaders prioritize the review of issues and errors identified by the analysts, check high-risk areas (e.g., operating plan, RTC, and DCF model), and review the shared drive (X drive) to confirm the presence of each section of work. Outside of the QA roundtable, this team leader review is the only time where an individual inspects the details of the DCF model.

1.4.2.a. Articulate specific expectations for each level of review.



changes go unaddressed.

# 1.4.4. OE conducts a QA roundtable before finalizing the model with the Boards' input and changes. Given the large number of spreadsheets and complicated calculations, technical errors are likely to occur. To reduce the likelihood of technical errors in the final decision, OE uses an industry standard approach for reviews with the QA roundtable. This process examines the logic and links in the DCF model, but does not review each cell against the evidence for accuracy, leaving a residual risk that technical errors could go unnoticed. The assessment team also noted that calls might change following the QA roundtable, but that OE does not reconvene to assess the changed calls or validate the

changes flowed through accurately. This increases the likelihood that technical errors introduced by incorporating

#### **Opportunities to Improve Quality**

1.4.2.a. Articulate specific expectations for each level of review.

## Summary of Analysis for Control Objective 1.4. Build a DCF Model Based On Calls, Evidence, Precedent, Knowledge, and Experience

The team assessed opportunities for the STB to strengthen its controls for building the DCF model based on calls, evidence, precedent, knowledge, and experience, considering their relative level of effort to implement and expected outcomes. Figure 12 depicts the assessment team's comparison of the opportunities, and highlights the need for the STB to formalize its approach to the DCF model construction (1.4.1.a.) and articulate expectations for reviews (1.4.2.a) as higher priority items. A proactive approach like formalizing the DCF model is a favorable industry practice, as it reduces the reliance on time consuming processes necessary to detect technical errors in large data sets. Even with a proactive approach to building the model, the size and complexity of the rate case decision and DCF model neccessitates a detailed process for reviews to help the STB reduce the gaps and overlaps in reviews and help achieve an efficient and consistent review.

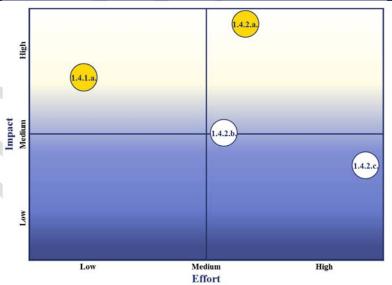


Figure 12. Impact and Effort for Opportunities to Address Control Objective 1.4



#### Control Objective 1.5. Derive Decision from the DCF Model

#### Control Objective

The STB produces a rate reasonableness decision that is rooted in the calls and resulting outputs of the DCF model by working as a team and verifying that the work products agree. By reviewing both the DCF model and narrative simultaneously or including reviewers with different experience and focus, the STB reduces the risk of issuing a decision where the narrative varies from the DCF model. Drafting a decision based on the DCF model helps the STB improve the accuracy of the decision by creating a document that is traceable to the underlying calls, rationale, and evidence.

## **Control Activities**

1.5.1. OP attorneys draft the decision based on the calls documented in the Notes database

OP attorneys draft decisions using OE's calls and rationale from the Notes database.

1.5.2. OE analysts review draft decision and narratives

OE analysts review draft decisions and narratives to ensure uniformity with their associated calls.

1.5.3. OP attorneys conduct peer reviews

OP attorneys conduct informal peer reviews prior to supervisory and branch chief reviews.

1.5.4. OP team leader, OP branch chief, and OGC conduct initial narrative reviews

OP team leader, OP branch chief, and OGC review the narrative for issues (e.g., format, substance, and defensibility).

1.5.5. Chairman, Members, and staff perform subsequent review of the narrative decision and appendices

The Board and staff review the narrative and appendices to check for consistency with their recommended calls.

#### **Observations**

## 1.5.1. OP attorneys attempt to draft the decision based on the Notes database, but may require follow-up and additional information from analysts. OE currently uses the Notes database to share analysis, recommended calls, and rationale with OP line attorneys. Currently, the level of detail varies from call to call and analyst to analyst. The assessment team noted that this variability sometimes leads to challenges for the OP line attorneys attempting to draft the narrative based on the Notes database. When OP attorneys encounter either insufficient or overly complex rationale, it can result in delays due to the need for rework for analysts.

#### **Opportunities to Improve Quality**

1.5.1.a. Develop a standard for OE completion of the Notes database. OE and OP should collaboratively develop an example for what rationale is sufficient to complete the Notes database and training on the level of detail needed (1.3.2.a.) to support defensibility in an appeals court. This will help OE analysts complete the work appropriately the first time and alleviate some of the requests for additional information from the OP line attorneys. Over time, this can also simplify the case as similar situations arise and the analysts can approach the evidence using past rationale as precedent for the current situation. By standardizing the approach and making it more repeatable, the STB can reduce time conflicts and better support the quality assurance process. Additionally, the OE analyst should notify the OP attorney upon completing an area of analysis so that OP can quickly read the rationale and confirm that it is sufficient to begin drafting the narrative decision and appendices. This coordination between OE and OP should assist line attorneys in more efficiently drafting the narrative and help reduce rework throughout the SAC rate case process.



Observations	Opportunities to Improve Quality
1.5.2. OE analysts do not always review draft decision and narrative to confirm that the rationale is accurate. On some prior cases, OE analysts reviewed the draft decision to check for consistency between the narrative and the DCF model. This helps reduce the chance for variances between the calls and provides the OE analysts an opportunity to confirm that the rationale included in the narrative matches their original thought process when making the recommendation. In a recent case, there were several instances where the text of the Merits Decision stated that the Board adopted one parties' position while the associated work papers did not implement the specified call. These variances resulted in a misstated discounted cash flow analysis and the issuance of multiple technical corrections.	1.4.2.a. Articulate specific expectations for each level of review.
1.5.3. OP attorneys may conduct peer reviews as time permits. OP line attorneys may conduct informal peer reviews focused on formatting and content, depending on the time available. One of the challenges with peer reviews is the inability to compare one case directly to another, as a means of validating the rationale, examining defensibility, or verifying against precedent. Attorneys less familiar with prior rate cases will have more difficulty making comparisons across cases.	1.4.2.a. Articulate specific expectations for each level of review.
1.5.4. OP team leader, OP branch chief, and OGC may conduct reviews as time permits. In prior cases, the review process for the draft decision created a number of challenges. The assessment team noted that in a prior case the OP team leader, supervisor, branch chief, and OGC received the draft decision and appendices simultaneously. Providing the same draft to multiple levels of review simultaneously increases the likelihood of conflicting guidance, reduces the ability of each review to build upon the other, and can lead to process delays.	1.4.2.a. Articulate specific expectations for each level of review.
1.5.5. Chairman, Members, and staff review the narrative decision and appendices independently and generate multiple sets of comments. The Board and their staff review the narrative decision and appendices prior to voting. The intent of this review is to confirm that the narrative reflects the same rationale presented during the briefs to the Board and that the decision appropriately captures the calls made by the Board. This independent process creates opportunities to introduce technical errors while staff attempts to incorporate three different versions of changes.	1.4.2.a. Articulate specific expectations for each level of review.



#### **Summary of Analysis for Control Objective 1.5. Derive Decision from the DCF Model**

When analyzing opportunities to improve quality associated with deriving decisions from the DCF model, the assessment team identified the articulation of specific expectations for each level of review (1.4.2.a.) as carrying a higher priority relative to other options (**Figure 13**). To help address the STB's need for a consistent method to confirm the agreement between the DCF model and the narrative decision, the STB should work with its existing review process and refine it to divide the review responsibilities.

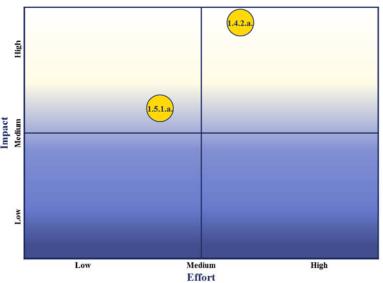


Figure 13. Impact and Effort for Opportunities to Address Control Objective 1.5



#### Control Objective 1.6. Manage the Process for Making Changes

Control Objective	The STB attempts to control changes to the decision through communication and coordination among the branches. By using a process to manage change, the STB looks to capture the changes and any downstream impacts in the decision, appendices, and DCF model. Managing the process for making changes helps the STB improve the accuracy of the decision by providing structure around decision making and reducing the risk of unexpected consequences of changes.	
Control	1.6.1. Hold recurring and ad hoc meetings	
Activities	The STB conducts meetings to discuss potential changes, make decisions, and provide guidance on implementation.	
	1.6.2. Team members communicate updates/changes	
	Team members are responsible for coordinating changes to the DCF model and narrative.	

#### **Observations**

1.6.1. The STB's reliance on meetings to coordinate among the team can lead to breakdowns in communication if all messages are not relayed. SAC rate case teams conduct many meetings during the rate case process, including, but not limited to weekly team member/team leader, weekly managers, biweekly supervisor/branch chief/director, and other ad hoc meetings. The assessment team noted that attorneys and analysts sometimes feel unsure of the outcomes of these meetings and cannot incorporate updates into their work. The line attorneys and analysts expressed particular frustration about a lack of communication around schedule changes, i.e., staff only learned of a changed deadline when they approached the original date. Failure to share meeting outcomes and project updates increases the risk of inconsistencies, technical errors, and omissions in the narrative and DCF model.

#### **Opportunities to Improve Quality**

1.6.1.a. Set guidelines for meetings. The complex nature of rate cases lends itself to a process full of meetings. One industry standard practice to leading meetings is to set an agenda (which includes stipulation of the purpose and expected outcome of the meeting), supply discussion points in advance, receive input from each person in attendance, send out a follow-up note with the major points (i.e., action items, outcomes) made throughout the meeting, and coordinate topics for subsequent meetings. The STB should also consider sharing meeting outcomes and action items beyond the scope of the attendees via email to improve dissemination from the deciders to the doers. It is also helpful to hold discussion and decision meetings separately and with different guidelines. This can help to encourage discussion in the appropriate forum, while forcing a decision when one is necessary.



1.6.2. Team members communicate updates/changes using a variety of tools. The attorneys and analysts indicated that changes to the narrative were generally expressed through redline emails while phone calls, emails, and meetings were used to communicate further changes. Line attorneys and analysts expressed that problems with coordinating schedules led to delays and other issues. The assessment team noted that OP and OE do not have a standardized method for communicating changes/updates to work papers and this can create inconsistencies due to the complex interactions in the DCF model and narrative. One of the other challenges with managing changes is the process for carrying out the downstream changes resulting from a changed call. This flow through process is time consuming, as each team member needs to validate the impact to his or her particular section and possibly update another output. If the team is not aware of and involved in the flow through process, it can lead to inconsistencies between the DCF model and the narrative.

#### **Opportunities to Improve Quality**

**1.6.2.a.** Formalize the process for authorizing and documenting changes. The STB should consider creating a central location and method for team members to evaluate, decide, and communicate updates/changes. Industry standard practices for managing the integration of changes into a complex process suggest the STB should record technical errors and changed calls to track them their source and identify preventative measures.

Change management logs/index should include:

- Date of change
- Name of person making the change
- Brief description of the change made
- Name of the person approving the change
- Brief recap of the validation test to assure change is appropriate and correct

This type of log may be too burdensome for analysts to complete when initially building the DCF model, but may be more appropriate once the team leader begins their review.

As an initial step to implementing a detailed change management process, the STB should implement an approach to record action items and outcomes of meetings. By documenting the results of meetings, the STB can begin to make change more deliberate and prepare the organization for the implementation of the formal change management process.

#### Summary of Analysis for Control Objective 1.6. Manage the Process for Making Changes

In looking at the STB's approach to managing the process for making changes, the assessment team compared the impact and effort to implement the identified opportunities to improve controls. Figure 14 graphically presents the outcomes of this analysis. Over the long term, a formal process to document change (1.6.2.a) could help the STB increase the consistency and accuracy of the final decision. The challenge with implementing a formal approach to manage change is that it requires a detailed plan for implementation and a shift in cultural behavior. While evaluating options for implementing a formal process, the STB can immediately implement guidelines for meetings (1.6.1.a.) for rate case related meetings. By managing change through the action items and outcomes from meetings, the STB can build the cultural momentum to implement a formal process for documenting changes and leading to better communication, improved accountability, and fewer technical errors.

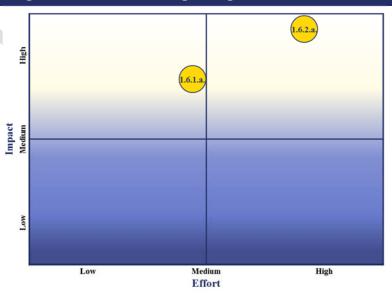


Figure 24. Impact and Effort for Opportunities to Address Control Objective 1.6



#### 3.2. Risk 2 – The decision issued by the STB is not timely

The STB strives to produce decisions in accordance with the procedural schedule. However, the number of staff involved in SAC rate cases and the many pieces of information inherently make managing the schedule a challenge. This could result in the STB having to make tradeoffs between quality and timeliness; it could also result in the STB issuing a late decision. To mitigate this risk, the STB relies on a number of control activities to help its personnel prevent and detect schedule delays throughout the SAC rate case process. The sections below present the assessment team's observations of these activities and potential opportunities for improvement.

#### Control Objective 2.1. Reduce the Number of Litigated Issues

Control Objective	Refer to Control Objective 1.1.	
Control Activities	Refer to Control Objective 1.1.	

Opportunities to Improve Quality
1.1.1.a. Develop a standard mediation process. 1.1.1.b. Continue to prepare staff to serve as mediators.
1.1.2.a. Hold a technical conference at the start of every
case.

#### Summary of Analysis for Control Objective 2.1. Reduce the Number of Litigated Issues

Refer to Control Objective 1.1.



#### Control Objective 2.2. Resolve Evidence Presentation Issues

Control Objective	Refer to Control Objective 1.2.	
Control	1.2.1. OE conducts analysis of the evidence submitted by the parties	
Activities	OE conducts an initial review of the evidence submitted by the parties and provides a recommendation on the workability of the proposed stand alone railroad (SARR).	

Observations	Opportunities to Improve Quality
1.2.1. OE assessment of evidence workability does not have the intended impact.	1.2.1.a. Assess evidence using objective criteria and resolve potential issues.

#### Summary of Analysis for Control Objective 2.2. Resolve Evidence Presentation Issues

To resolve evidence presentation issues, the assessment team identified the process to objectively assess the evidence and resolve issues (1.2.1.a.) as a powerful opportunity for the STB. Figure 15 highlights the potential impact and effort to address the poor quality of submitted evidence. Addressing the quality of evidence has a very high potential to influence both timeliness and accuracy as it reduces the amount of time spent by the STB trying to assess and correct the parties' submissions. The nature of this kind of change requires significant deliberation within the STB and may also in some instances be done through a Notice of Proposed Rulemaking. Though this approach could take from several months to a year or more and require a cultural change to support prescriptive evidentiary guidelines, the impact to improve the ease of use of the parties' evidence could greatly reduce the risk of the STB failing to produce a timely decision.

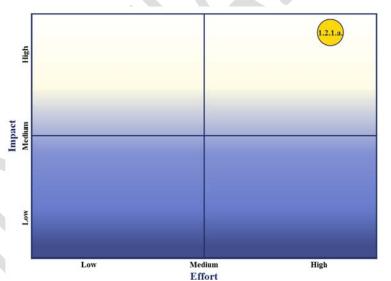


Figure 35. Impact and Effort for Opportunities to Address Control Objective 2.2



## Control Objective 2.3. Make Calls Based On Evidence, Precedent, Knowledge, and Experience

Control Objective	The STB makes calls based on the evidence through the lenses of precedent, knowledge and experience. By making and documenting calls based in this way, the STB uses a repeatable approach that enables planning and scheduling in support of producing a timely decision.
Control Activities	2.3.1. Prioritize calls  The STB prioritizes calls to support timely decision-making and allow for sufficient input from STB personnel.

Observations	Opportunities to Improve Quality
1.3.3. Staff completes issue spotting on an individual basis resulting in different approaches to the issues across the offices.	1.3.3.a. Decide all calls according to priority.

## Summary of Analysis for Control Objective 2.3. Make Calls Based On Evidence, Precedent, Knowledge, and Experience

The assessment team identified the potential impact of using a standard and consistent process to prioritize calls, resulting in sufficient time for gathering input and making decisions. By deciding all calls according to priority (1.3.3.a.), the STB can help protect the time necessary for each activity, from completing the analysis to obtaining input from the Board on every call, to reviewing the narrative decision. Developing an internal work product to support consistent prioritization by junior team members can help reduce the time required for prioritization, but if the Board does not provide guidance on all calls then changes will continue to occur late in the process.

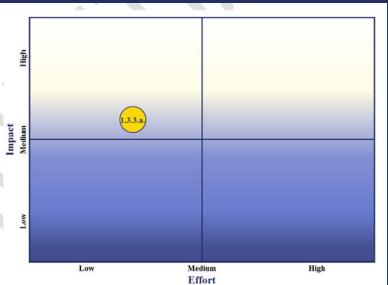


Figure 46. Impact and Effort for Opportunities to Address Control Objective 2.3



### Control Objective 2.4. Adhere to Procedural Schedule Milestones

Control	
Objective	

The STB sets the procedural schedule based on the parties' motions and in accordance with law; leading to the Board's issuance of a rate reasonableness decision within nine months of receiving the parties' briefs.

# **Control Activities**

2.4.1. Separate market dominance analysis from rate reasonableness decision

The STB uses a bifurcation decision to reduce the number of calls necessary within the nine-month statutory limit.

2.4.2. Adjudicate motions that may affect the procedural schedule.

The Board reviews and issues decisions on motions to amend the procedural schedule or other affect the procedural schedule.

month window.

### **Observations**

# **2.4.1.** Parties request separation of the market dominance and rate reasonableness decisions. The process of bifurcation separates the market dominance and rate reasonableness decisions. This process currently requires a motion from one of the parties because the default procedural schedule requires simultaneous submission of evidence on market dominance and rate reasonableness. Bifurcation allows the board to hold the rate reasonableness decision in abeyance until issuance of the market dominance decision, effectively reducing the number of disputed issues requiring adjudication during the nine-month statutory timeline.

### **Opportunities to Improve Quality**

**2.4.1.a.** Amend the default procedural schedule to separate rate reasonableness and market dominance. The STB should consider formally modifying the standard SAC rate case procedural schedule to address the market dominance and rate reasonableness decisions separately. This change will require both a change to existing regulation, as well as a new process. Although the railroad historically submits a request to bifurcate the decisions, the STB risks encountering a situation where neither party requests bifurcation and thus must produce and issue both decisions within nine months of the close of the record. Furthermore, while OE begins work on the analysis prior to the close of the record, the STB can better position itself to comply with the legal time limits by using procedural steps to reduce the volume of work to complete in the nine-

**2.4.2.** The STB adjudicates motions/petitions/errata after final briefs and may not adjust the procedural schedule accordingly. The STB uses rate case staff to review filings submitted after final briefs. On a recent case, the STB received five filings after the briefs. The Board's assessment of these filings required time and effort. These filings reduce the time available for the Board to evaluate the evidence and can increase the likelihood that it is unable to issue a timely decision.

**2.4.2.a.** Hold cases in abeyance to issue decisions on late filings. The Board requires time to review and respond to errata or other motions filed after the close of the record. Prior to the close of the record, the parties' regularly move to amend the procedural schedule and allow sufficient time to incorporate new evidence. The STB should similarly shift the procedural schedule upon receiving new evidence to mitigate the schedule pressure caused by inserting extra steps into the already tight timeline. Although the STB already uses this procedural tool in some instances, using it as a consistent approach may encourage the parties to improve the quality of their evidence to reduce the chance of further extending the case due to errata and other late filings.



### Summary of Analysis for Control Objective 2.4. Adhere to Procedural Schedule Milestones

In considering the opportunities to support adherence to the procedural schedule, the team assessed the relative effort of implementation and the degree of impact. **Figure 17** shows the results of this comparison. The potential benefit of holding the case in abeyance while producing a decision on filings after the close of the record (2.4.2.a.) appears more impactful and easier to implement because it is an internal approach and does not require issuing a separate decision or rulemaking. In fact, the STB already understands and uses this approach in some rate cases. Using this approach more consistently may help the STB mitigate any increased burden created by new motions filed by the parties after the submission of briefs and support the STB's ability to abide by the statutory deadline.

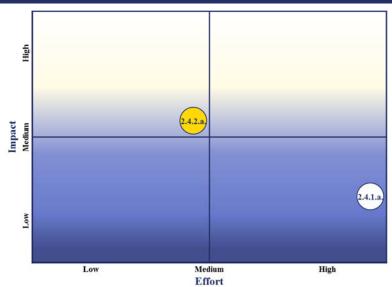


Figure 57. Impact and Effort for Opportunities to Address Control Objective 2.4



## Control Objective 2.5. Meet Internal Deadlines

Control Objective	The STB meets internal deadlines by developing a schedule that guides the rate case team through the case. By meeting internal deadlines, STB can reduce the risk of failing to deliver a decision within the nine-month statutory time limit.			
Control	2.5.1. The STB develops an internal schedule to support meeting the nine month statutory deadline			
Activities	The Chairman's office publishes a high-level schedule to establish rate case milestones.			
	2.5.2. OE develops a schedule for reviewing evidence and developing the DCF model			
	The OE Branch Chief creates an internal schedule to manage OE's work.			
	1.3.1. Assign a team to the case			
	OP, OE, and OGC select the rate case team and assign roles.			
	2.5.3. Hold kickoff meeting			
	The STB holds a meeting to initiate work on the rate case.			
	1.5.1. OP attorneys draft the decision based on the calls documented in the Notes database			
	OP attorneys draft decisions using OE's calls and rationale from the Notes database.			
	2.5.4. Informally circulate the draft decision among the Board for comments			
	The Board reviews the draft decision independently and provides comments.			
	1.6.1. Hold recurring and ad hoc meetings			
	The STB holds meetings to discuss issues and monitor the progress of a rate case.			

Observations	Opportunities to Improve Quality
2.5.1. The STB uses a schedule that may not provide sufficient detail to coordinate among the offices effectively. While the STB has started using high-level schedules to capture key internal milestones, the timelines may not provide sufficient detail to serve as a valuable management tool. For example, milestones are at such a high level (e.g., complete narrative, develop DCF model) that they may not be meaningful; review periods are generally not accounted for; and time allotted does not necessarily correlate with workloads (e.g., "OP completes issue spotting list for reply" in 107 days).	2.5.1.a. Develop a joint rate case schedule. The STB should consider increasing the detail of its internal schedule by decomposing the tasks to the lowest reasonable level (e.g., key activities within existing milestones), establishing task dependencies, task durations, and assigning these tasks to specific dates. The schedule should also identify assigned staff, including reviewers. A more detailed schedule may assist the STB in achieving greater cross-office coordination that can assist in raising issues before they result in schedule delays or quality issues.
2.5.2. OE develops an internal schedule without commitment that other offices can support the deadlines. The OE Branch Chief develops an internal schedule based on the procedural schedule. OE's schedule incorporates OE's core activities and provides more detail than the STB schedule, but contains an inherent level of uncertainty caused by the dependencies on the other offices. The combination of aggressive deadlines and hard dependencies regularly results in missed deadlines within OE.	2.5.1.a. Develop a joint rate case schedule.
1.3.1. OE, OP, and OGC assign staff to rate cases at different points in the process; these employees do not have defined roles and responsibilities.	1.3.1.a. Assign team members early and simultaneously from all offices. 1.3.1.b. Define rate case team member roles and responsibilities.



Observations	Opportunities to Improve Quality
2.5.3. OE holds a rate case kickoff meeting that does not include members from OP and OGC. OE holds an internal kickoff meeting for the SAC rate case. During the kickoff meeting, the OE Director, Deputy Director, and Branch Chief disseminate OE's internal schedule and brief the team on a variety of topics. This activity supports coordination within OE to reduce the likelihood of internal delays. The other offices do not have any representation during this meeting.	2.5.3.a. Develop a standard approach to the kickoff meeting. The STB should establish expectations to define an effective kickoff meeting. For example, at a minimum, the meeting should cover topics, such as the internal schedule and external procedure schedule; assigned employees and their roles/responsibilities; high priority issues; known risks; and communication protocols, including the method for communicating changes. During this meeting, the team lead – or a project manager – should establish a common understanding for case and confirm team members have access to tools, methodologies, and standard practices they need to complete their assigned work in a timely fashion. Additionally, the kickoff should include all of the assigned employees from OE, OP, and OGC. A single, integrated session should help the team establish communication channels, foster collaboration, and reduce rework that leads to missed deadlines.
1.5.1 OP attorneys draft the decision based on the calls documented in the Notes database.	1.5.1.a. Develop a standard for OE completion of the Notes database.
2.5.4 The Chairman, Members, and their staff review the narrative decision and appendices independently and generate multiple sets of comments.	1.3.3.a. Decide all calls according to priority. 2.5.1.a. Develop a joint rate case schedule.
1.6.1. The STB's reliance on meetings to coordinate among the team can leads to breakdowns in communication if all messages aren't relayed.	1.6.1,a. Set guidelines for meetings.

### **Summary of Analysis for Control Objective 2.5. Meet Internal Deadlines**

The assessment team compared identified opportunities for the STB to meet internal deadlines with regard to potential impact and anticipated effort to implement. Figure 18 graphically presents the results of the team's assessment. The STB should consider developing a joint rate case schedule (2.5.1.a.) as an immediate modification to its efforts to meet internal deadlines. The assessment team based this on the STB's existing practice of developing office specific schedules and the resulting challenges from conflicting priorities and timelines. Assigning team members early and simultaneously from all offices (1.3.1.a.) and establishing a consistent approach to the kickoff meeting (2.5.3.a.) may also help the expediency of a rate case, identifying the appropriate timing of "early" is key to their successful implementation.

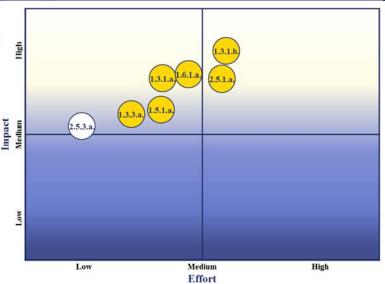


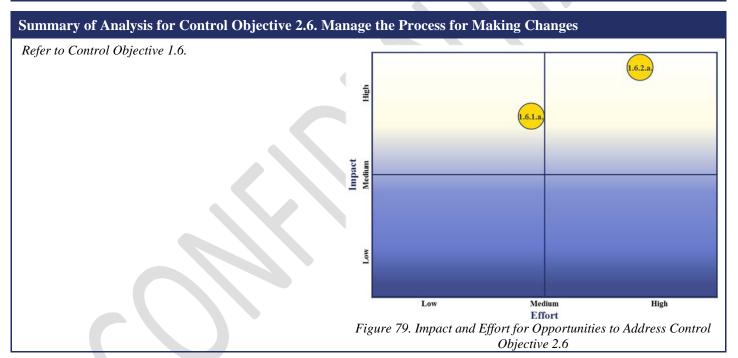
Figure 68. Impact and Effort for Opportunities to Address Control Objective 2.5



### Control Objective 2.6. Manage the Process for Making Changes

Control Objective	The STB strives to manage the process by which it authorizes, communicates, and integrates changes into rate cases. Managing changes effectively helps the STB reduce the likelihood that miscommunication/misinformation leads to rework that results in schedule delays.
Control Activities	<ul><li>1.6.1. Hold recurring and ad hoc meetings</li><li>The STB uses recurring and ad hoc meetings to discuss changes and make decisions.</li><li>1.6.2. STB team members communicate updates/changes</li></ul>
	Team members are responsible for coordinating changes to the DCF model, associated workpapers, and narrative.

Observations	Opportunities to Improve Quality
1.6.1. The STB's reliance on meetings to coordinate among the team can leads to breakdowns in communication if all messages are not relayed.	1.6.1.a. Set guidelines for meetings.
1.6.2. Analysts and line attorneys incorporate changes to call.	1.6.2.a. Formalize the process for authorizing and documenting changes.





# 4. Summary of Analysis

The assessment team identified a series of opportunities for the STB to improve the analysis and verification procedures for rate cases. These opportunities address the breadth of the rate case, from receiving the shipper's complaint through issuing the rate case decision. To help the STB share a common, high-level perspective of the SAC rate case process and understand the specific steps, risks, and controls discussed in this assessment, the team developed the observations, risk control matrix, and flow chart presented in **Section 3** and **Appendices A** and **B**, respectively.

**Figures 20 and 21** show the consolidated opportunities identified by the assessment team for improving the quality of the SAC rate case process by helping the STB further mitigate the likelihood that technical errors and/or delays result in an inaccurate or late decision, respectively. A number of identified opportunities address both accuracy and timeliness as a number of the suggested measures are designed to allow the STB more time to complete activities which inherently supports accuracy objectives. **Section 3. Observations** documents additional detail for each identified opportunity and its ranking relative to other solutions within a given control objective.

**Figure 20** presents the opportunities the assessment team identified associated with control objectives 1.1 through 1.6, which target the accuracy of SAC rate case analysis and verification procedures. In considering these opportunities to improve quality, the STB should assess which changes it can implement immediately versus those that may require additional planning. Here is one approach the STB may consider:

### • For Immediate Implementation (1 to 3 months):

- o **1.1.2.a.** Hold a technical conference at the start of every case. The STB can immediately begin holding technical conferences at the onset of a SAC rate case (1.1.2.a.) to encourage agreement by the parties on certain areas of the case in an effort to reduce the number of litigated issues. In the near term (3 to 12 months), the STB should work to establish a standard approach to facilitating technical conferences.
- o **1.3.1.a.** Assign team members early and simultaneously from all offices. The STB should immediately begin working with leaders from OE, OP, and OGC to assign team members from each of the offices upon receipt of a case. The act of designating team members at the onset of a case should assist the STB in making immediate improvements to the collaboration of rate case teams. In the near term (3 to 12 months), the STB can further enhance the effectiveness of this opportunity by defining and documenting team members' roles and responsibilities (1.3.1.b.).

### • For Near Term Implementation (3 to 12 months):

- o **1.3.3.a. Decide all calls according to priority.** The STB should develop a process to analyze all calls and escalate them to the board for a decision before drafting the narrative. In the near term, the Board may need to base this process on experience while developing criteria to improve long term consistency of future cases.
- 1.4.1.a. Formalize the approach to DCF model construction. In the near term, the STB can begin to capture the complex relationships between the parties evidence in the DCF model graphically. In the long term (12 to 36 months), the STB can take a more proactive approach by developing and implementing detailed MFRs that help reduce the complexity of joining the parties' evidence.



1.6.1.a. Set guidelines for meetings. The STB should develop expectations for meetings and create a tracker for action items and meeting outcomes. The guidelines should address how to determine quorum for a decision and different expectations for discussing issues and deciding them.

### • For Long Term Implementation (12 to 36 months):

- 1.3.2.a. Formalize the training process for rate cases. The STB should review the current training gaps to determine how to prioritize development of introductory and technical training. Training should include an overview of rate cases and team standards, as well as detailed technical instruction for each individual office.
- o 1.2.2.a. Develop an internal work product that outlines the expectations for OE analysts when correcting errors in the parties' evidence. The STB should work to establish a standard for documenting changes made to the parties' submitted evidence. The expectations should be tailored for each file type and outline the types of changes that analysts are permitted to make.
- 1.4.2.a. Articulate specific expectations for each level of review. The STB should assess the current review process to determine the tasks and levels necessary to accomplish a sufficient review in the time available. The STB should immediately begin the process of assessing the current reviews to determine the greatest value added tasks, as well as which tasks may be redundant.
- o 1.6.2.a. Formalize the process for authorizing and documenting changes. The STB should begin working with leaders from OE, OP, and OGC to develop a rate case change management process. This process should include members of each office and help control the changes made after completing the draft decision and DCF model. The process may include a change control board and a series of controls to confirm the successful implementation of changes.

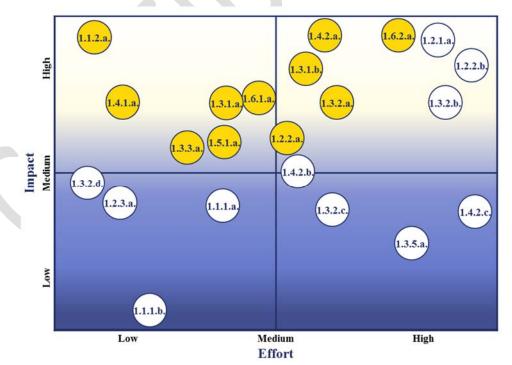


Figure 20. Impact and Effort for Risk 1- Accuracy



To support the STB's effort to issue a rate case decision within the timeline established by Congress, the assessment team identified several opportunities that could help expedite the rate case process to achieve a timely decision consistently. **Figure 21** highlights the opportunities for the STB to improve quality and address the timeliness of the decision. Though implementing some of these opportunities may require prolonged effort, the STB should identify the best opportunities to have immediate and longer term impacts when making implementation decisions. The STB may consider the following approach:

- For Immediate Implementation (1 to 3 months):
  - o 1.1.2.a. Hold a technical conference at the start of every case.
  - o 1.3.1.a. Assign team members early and simultaneously from all offices.
- For Near Term Implementation (3 to 12 months):
  - o **1.3.1.b. Define rate case team member roles and responsibilities.** The STB should use the team assignments as a baseline to begin assessing the current activities of each team member and the appropriateness of assigning the tasks to an individual. Leaders from OE, OP, and OGC should review the method for dividing work to identify opportunities to share the required tasks more appropriately. The eventual result of this effort should be a document that details the knowledge and skills required for each role, as well as an overview of the tasks that each team member needs to accomplish to support developing an accurate and timely decision.
  - 1.3.3.a. Decide all calls according to priority.
  - 2.5.1.a. Develop a joint rate case schedule. The STB should begin refining the recently developed milestone list into a joint rate case schedule. This may take several iterations to develop sufficiently robust template and incorporate input from all levels and offices.
  - 2.4.2.a Hold cases in abeyance to issue decisions on late filings. The STB should assess the
    opportunities to use procedural tools to mitigate risks introduced by the parties, particularly after
    the close of the record.
- For Long Term Implementation (12 to 36 months):
  - O 1.2.1.a. Assess evidence using objective criteria and resolve potential issues. The STB can begin assessing the potential for implementing detailed minimum filing requirements based on those used by utility regulatory agencies. The STB should begin the rulemaking process as soon as possible to obtain input from shippers and railroads and establish a standard framework within which they can operate.
  - 1.6.2.a. Formalize the process for authorizing and documenting changes.



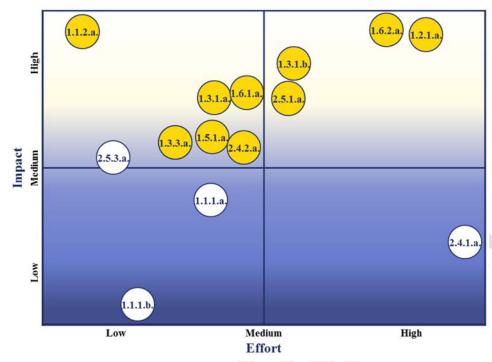


Figure 21. Impact and Effort for Risk 2- Timeliness

The assessment team identified 24 unique opportunities; seven of these can help the STB address opportunities for improvement associated with nearly half of the observations. **Figure 22** presents the seven opportunities with the broadest potential impact on the rate case process in descending order. The STB should consider the far-reaching effects of these opportunities when prioritizing next steps.

Opportunities to Improve Quality	Activities Associated with the Identified Opportunities
1.4.2.a. Articulate specific expectations for	<ul><li>1.4. Build a DCF model based on calls, evidence, precedent, knowledge, and experience</li><li>1.4.2. OE conducts peer review of model</li><li>1.4.3. OE team leader and supervisor conduct initial review of the DCF model and associated work papers</li><li>1.4.4. OE conducts a quality assurance roundtable</li></ul>
each level of review	1.5. Derive decision from the DCF model 1.5.2. OE analysts review draft decision and narratives 1.5.3. OP attorneys conduct peer reviews 1.5.4. OP team leader, OP branch chief, and OGC conduct initial narrative reviews 1.5.5. Chairman, Members, and staff perform subsequent review of the narrative decision and appendices



Opportunities to Improve Quality	Activities Associated with the Identified Opportunities		
1.3.3.a. Decide all calls according to priority	<ul><li>1.3. Make calls based on evidence, precedent, knowledge, and experience</li><li>1.3.3. OE and OP conduct issue spotting</li><li>1.3.4. OE management provides guidance on issues of first impression or complex issues</li><li>1.3.5. Chairman and staff provide guidance on calls</li></ul>		
	2.3. Make calls based on evidence, precedent, knowledge, and experience 2.3.1. Prioritize calls		
	<ul><li>2.5. Meet internal deadlines</li><li>2.5.4. Informally circulates the draft decision among the Board for comments</li></ul>		
1.6.1.a. Set guidelines for	1.6. Manage the process for making changes 1.6.1. Hold recurring and ad hoc meetings		
meetings	2.5. Meet internal deadlines 1.6.1. Hold recurring and ad hoc meetings		
	2.6. Manage the process for making changes 1.6.1. Hold recurring and ad hoc meetings		
2.5.1.a. Develop a joint rate case schedule	2.5. Meet internal deadlines 2.5.1. The STB develops an internal schedule to support meeting the nine month statutory deadline 2.5.2. OE develops a schedule for reviewing evidence and developing the DCF model 2.5.4. Informally circulates the draft decision among the Board for comments		
1.1.2.a. Hold a technical	1.1. Reduce the number of litigated issues 1.1.2. The STB convenes a technical conference (when applicable)		
conference at the start of every case	2.1. Reduce the number of litigated issues 1.1.2. The STB convenes a technical conference (when applicable)		
1.3.1.a. Assign team members	1.3. Make calls based on evidence, precedent, knowledge, and experience 1.3.1. Assign a team to the case		
early and simultaneously from all offices	2.5. Meet internal deadlines 1.3.1. Assign team to the case		
1.6.2.a. Formalize the	1.6. Manage the process for making changes 1.6.2. STB team members communicate updates/changes		
process for authorizing and documenting changes	2.6. Manage the process for making changes 1.6.2. STB team members communicate updates/changes		

Figure 22 – Summary of Higher Priority Opportunities to Improve Quality



# 5. Next Steps

To continue momentum of the analysis and verification assessment project, the project champions should work with STB leadership to consider the following next steps:

- 1. Solidify issues and recommendations: The project champions should collaborate with the Chairman, Board, and office directors to discuss the opportunities identified in this report. In doing so, they should consider how information from the assessment can be shared across the STB to begin building agreement on the case for change.
- 2. Develop an implementation strategy: The STB should develop a roadmap for transitioning operations to the desired state based on the effort to implement the selected opportunities. The STB should establish a timeframe for implementing specific changes and develop methods for following-up and measuring the success of applied changes. The STB should create a strategy for communicating change, enlisting staff involvement, removing implementation barriers, and following-up on a successful implementation.
- 3. Form a team and implement the first round of changes. The STB should identify staff with an understanding of the current rate case process and the selected opportunities. Employees assigned to major roles (e.g., change initiator, change manager, change advisory board) should be given distinct responsibilities. Assuming the STB chooses to move forward with at least those seven opportunities that appear to have the farthest reaching impacts, specific next steps for the implementation team may include, but not be limited to the following:
  - 1.4.2.a. Articulate specific expectations for each level of review: The STB implementation team should meet with personnel from across the offices to establish the specific expectations for rate case team members to help.
  - 1.3.3.a. Decide all calls according to priority. The implementation team should work with OE, OP, OGC, and the Board to identify criteria for prioritizing calls based on existing knowledge and experience.
  - 1.6.1.a. Set guidelines for meetings: The implementation team should work with key STB leaders to develop meeting ground rules and a process for tracking action items to completion. The STB should introduce a formal requirement to capture action items and outcomes from SAC rate case meetings.
  - 2.5.1.a. Create a joint rate case schedule: The implementation team should coordinate across OE, OP, OGC, and the Board's offices to identify the major milestones, develop a detailed task list, assign theoretical employees, estimate task durations, and create a standard rate case schedule.
  - 1.1.2.a. Hold a technical conference at the start of every case: The implementation team should work with OE, OP, and OGC management to define specific technical conference objectives, identify the types of issues that may be resolved in a technical conference, and develop a consistent approach to conducting a technical conference.
  - 1.3.1.a. Assign team members early and simultaneously from all offices. The implementation team should work with OE, OP, and OGC leadership to understand the factors that influence assignment of team members and build consensus around when to assign team members and their expected level of participation upon assignment.



- 1.6.2.a. Formalize the process for authorizing and documenting changes. The implementation team should help develop a process to coordinate changes to the DCF model and decision. The process should include steps to submit a change request, evaluate and approve the change, assign a team member to implement, and confirm the successful implementation.
- **4. Continue to identify new opportunities:** As the STB implements the selected opportunities and realizes the impacts to its operations and workforce, leadership may identify additional changes to realize further benefits. STB leadership should establish a regular process to review the rate case to assess whether new areas for improved performance and enhanced efficiency may exist. The STB should also look to expand this approach and address similar opportunities in other types of work conducted at the agency.



# Appendix A. - Risk and Control Matrix

The STB faces these risks when making SAC decisions	The STB seeks to avoid identified risks by meeting these objectives	To help the STB meet identified objectives, its staff		
		are already performing the following activities.	may look to improve the process the Board uses to perform the following activities.	
1. The decision issued by the STB is not accurate	1.1. Reduce the number of litigated issues		1.1.1. The STB leads mandatory mediation 1.1.1.a. Develop a standard mediation process 1.1.1.b. Continue to prepare staff to serve as mediators  1.1.2. The STB convenes a technical conference (when applicable) 1.1.2.a. Hold a technical conference at the start of every case	
	1.2. Resolve evidence presentation issues		1.2.1. OE conducts analysis of the evidence submitted by the parties 1.2.1.a. Assess evidence using objective criteria and resolve potential issues	
			1.2.2. OE analysts make minor corrections to submitted evidence 1.2.2.a. Develop an internal work product that outlines the expectations for OE analysts when correcting errors in the parties' evidence 1.2.2.b. Increase the willingness to introduce expert testimony from OE analysts into rate cases 1.2.3. OP requests clarification of submitted evidence	
			1.2.3.a. Develop an internal attorney work product describing the process for requesting clarification or missing evidence from the parties	
	1.3. Make calls based on evidence, precedent, knowledge, and experience	1.3.4. OE management provides guidance on issues of first impression or complex issues  1.3.3.a. Decide all calls according to priority	1.3.1. Assign a team to the case 1.3.1.a. Assign team members early and simultaneously from all offices 1.3.1.b. Define rate case team member roles and responsibilities	
			1.3.2. STB team members new to stand alone rate cases receive instructions  1.3.2.a. Formalize the training process for rate cases  1.3.2.b. Develop a formal process for knowledge capture  1.3.2.c. Plan the growth and development of staff  1.3.2.d. Acknowledge SAC rate case team accomplishments	
			1.3.3. OE and OP conduct issue spotting 1.3.3.a. Decide all calls according to priority	
			1.3.5. Chairman and staff provide guidance on calls  1.3.3.a. Decide all calls according to priority  1.3.5.a. Hold recurring public meetings as a platform for the Chairman and Members to discuss issues	



The STB faces these risks when making SAC decisions	The STB seeks to avoid identified risks by meeting these objectives	To help the STB meet identified objectives, its staff		
		are already performing the following activities.	may look to improve the process the Board uses to perform the following activities.	
1. The decision issued by the STB is not accurate (continued)	1.4. Build a DCF model based on calls, evidence, precedent, knowledge, and experience		1.4.1. OE develops the DCF model by combining the parties' evidence in accordance with calls 1.4.1.a. Formalize the approach to DCF model construction	
			1.4.2. OE conducts peer review of model 1.4.2.a. Articulate specific expectations for each level of review 1.4.2.b. Identify opportunities for knowledge sharing and cross-training 1.4.2.c. Widen the net for recruiting	
			1.4.3. OE team leader and supervisor conduct initial review of the DCF model and associated work papers  1.4.2.a. Articulate specific expectations for each level of review	
			1.4.4. OE conducts a quality assurance roundtable 1.4.2.a. Articulate specific expectations for each level of review	
	1.5. Derive decision from the DCF model	1.5.5. Chairman, Members, and staff perform subsequent review of the narrative decision and appendices  1.4.2.a. Articulate specific expectations for each level of review	1.5.1. OP attorneys draft the decision based on the calls documented in the Notes database 1.5.1.a. Develop a standard for OE completion of the Notes database	
			1.5.2. OE analysts review draft decision and narratives  1.4.2.a. Articulate specific expectations for each level of review	
			1.5.3. OP attorneys conduct peer reviews  1.4.2.a. Articulate specific expectations for each level of review	
			1.5.4. OP team leader, OP branch chief, and OGC conduct initial narrative reviews  1.4.2.a. Articulate specific expectations for each level of review	
	1.6. Manage the process for making changes		1.6.1. Hold recurring and ad hoc meetings 1.6.1.a. Set guidelines for meetings	
			1.6.2. STB team members communicate updates/changes  1.6.2.a. Formalize the process for authorizing and documenting changes	
2. The decision issued by the STB is not timely	2.1. Reduce the number of litigated issues		1.1.1 The STB leads mandatory mediation 1.1.1.a. Develop a standard mediation process 1.1.1.b. Continue to prepare staff to serve as mediators	
			1.1.2. The STB convenes a technical conference (when applicable) 1.1.2.a. Hold a technical conference at the start of every case	
	2.2. Resolve evidence presentation issues		1.2.1. OE conducts analysis of the evidence submitted by the parties 1.2.1.a. Assess evidence using objective criteria and resolve potential issues	
	2.3. Make calls based on evidence, precedent, knowledge, and experience		2.3.1. Prioritize calls 1.3.3.a. Decide all calls according to priority	
	2.4. Adhere to procedural schedule milestones	2.4.1. Separate market dominance analysis from rate reasonableness decision 2.4.1.a. Amend the default procedural schedule to separate rate reasonableness and market dominance		



The STB faces these risks when making SAC decisions	The STB seeks to avoid identified risks by meeting these objectives	To help the STB meet identified objectives, its staff		
		are already performing the following activities.	may look to improve the process the Board uses to perform the following activities.	
2. The decision issued by the STB is not timely (continued)		2.4.2. Adjudicate motions that may affect the procedural schedule 2.4.2.a. Hold cases in abeyance to issue decisions on late filings		
	2.5. Meet internal deadlines		2.5.1. The STB develops an internal schedule to support meeting the nine month statutory deadline 2.5.1.a. Develop a joint rate case schedule	
			2.5.2. OE develops a schedule for reviewing evidence and developing the DCF model 2.5.1.a. Develop a joint rate case schedule	
			1.3.1. Assign team to the case 1.3.1.a. Assign team members early and simultaneously from all offices 1.3.1.b. Define rate case team member roles and responsibilities	
			2.5.3. Hold kickoff meeting 2.5.3.a. Develop a standard approach to the kickoff meeting	
			1.5.1. OP attorneys draft the decision based on the calls documented in the Notes database 1.5.1.a. Develop a standard for OE completion of the Notes database	
			2.5.4. Informally circulates the draft decision among the Board for comments  1.3.3.a. Decide all calls according to priority  2.5.1.a. Develop a joint rate case schedule	
			1.6.1. Hold recurring and ad hoc meetings 1.6.1.a. Set guidelines for meetings	
	2.6. Manage the process for making changes		1.6.1. Hold recurring and ad hoc meetings 1.6.1.a. Set guidelines for meetings	
			1.6.2. STB team members communicate updates/changes  1.6.2.a. Formalize the process for authorizing and documenting changes	



# Appendix B. - SAC Rate Case Flow Chart

