

Quality Manual  
&  
100-Day Plan



Revision 0

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## PREFACE

The seeds for TVA's Quality Initiative were sown in the fall of 1990. The Quality Initiative has progressed rapidly and we have learned many things. Some have worked well, some not as well. This is not at all abnormal in the evolution of Total Quality in a company. Every company that has achieved high levels of success with Total Quality has gone through periods of growth and refocusing. In fact, evaluation and refocusing must become a routine and expected component of TVA's TQ effort if we are to improve at a rate faster than our competition. It is time to adopt a common core of basics and to execute these basics with a high level of proficiency in all of TVA.

Some organizations will want to do more than the basics. This is applauded and encouraged so long as two conditions are met:

1. The basic expectations are being performed.
2. New efforts are coordinated with other parts of TVA.

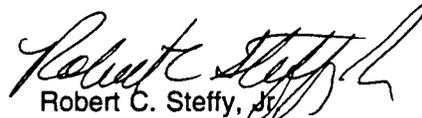
It is expected that each TVA organization will implement efforts to meet the Organizational Expectations listed below. There is more than one way to accomplish each of these items and, except for the standards listed later in this manual, each organization should pursue these in ways that make sense given its situation. For example, understanding customer requirements may require different techniques in the Resource Group than it does in Fossil and Hydro Power, but both organizations need to understand their customer's requirements.

The Organizational Expectations listed below should be an integral part of how TVA does its business. The intent is to have Total Quality as the way business is conducted at TVA, not a separate program.

Each major TVA organization unit is expected to:

1. Understand and communicate its internal and external customer's requirements and expectations and progress toward meeting them.
2. Determine critical success factors that the organization must accomplish in order for TVA to meet its goals. Assure that organizational objectives are aligned to support the critical success factors.

3. Establish and support teams to solve problems and improve processes to close gaps between performance and target set to meet objectives.
4. Establish a system for recognizing and celebrating both individual and team successes, as well as brave attempts at contributing to TVA goals.

  
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**100-Day Plan  
to  
Integrate Quality Into Daily Business**

# 100-Day Plan to Integrate Quality Into Daily Business

## Purpose of Plan

The purpose of this plan is to accelerate the integration of quality principles and concepts into the way we work at TVA. The 100-day plan calls for a set of business systems to be put in place to accomplish this. These systems deal with how we set goals, allocate resources, measure success, review our performance, and involve employees in improving processes. The 100-day plan is designed to address those very basic actions that we must take and to establish the foundation systems for success. The 100-day plan will solidify the foundation for future activities.

## Elements of the plan

The 100-day plan has six elements. They are:

1. Business planning and review method implemented.
2. Quality standards in place and followed.
3. TIRS (Team Information Reporting System) loaded with current and valid data.
4. Close training gaps for managers and advisors.
5. Team support indicators in place.
6. An assessment of management support of teams completed.

The plan is explained on the next seven pages of this document. The plan is supported by a set of quality standards and guidelines which make up the remainder of the document. The second part of this document is called the Quality Manual. The standards and guidelines in the Quality Manual spell out the requirements and expectations of the new systems that must be put in place. Many of the questions that you may have regarding the plan will be answered in the manual sections. The manual also contains guidelines for how to accomplish certain parts of the plan, especially business planning. Recommended or example formats for business plans are provided.

The schedule for the plan follows on the next two pages. The schedule is followed by a description of each of the elements of the plan.

## 100-Day Plan to Integrate Quality Into Daily Business

		Responsibility 0                      25                      50                      75                      100				
<b>1. Business Planning &amp; Review Method Implemented</b>  a. Develop requirements and process. Communicate to line organizations.  b. Develop business plan objectives, indicators, and priorities  c. Objectives, indicators, and priorities reviewed by appropriate chief officer  d. Complete business plans	Ref. Quality Manual sec. 1.0	Quality Resources	3/14	4/1		
		Line Org.		3/25	4/30	
		Line Org.			4/26	ongoing
		Line Org.			4/30	6/17 *
<b>2. Quality Standards In Place &amp; Followed</b>  a. Standards developed & published.  b. Baseline performance against standards. Determine gaps.  c. Action plans developed to close gaps.  d. Implementation of plans.	Ref. Quality Manual sec. (all)	Quality Resources	3/14			
		Line Org.		3/22	4/10	
		Line Org.			3/31	4/26
		Line Org.				4/26
<b>3. TIRS loaded with current and valid data.</b>  a. Organizations gather necessary data to load TIRS.  b. Provide means to input data (people trained, user IDs, input responsibilities assigned)  c. Input current data.	Ref. Quality Manual sec. 3.2,3.5,3.9	Line Org. <i>Item 2a</i>		3/22	4/3	
		Line Org.		3/14	4/30	
		Line Org.			4/7	5/26

\* This date is subject to change after this document is published. It must match the budget cycle dates provided by Finance & Admin.

### 100-Day Plan to Integrate Quality Into Daily Business

		Responsibility	0	25	50	75	100	
<b>4. Close Training Gaps for Managers &amp; Team Advisors</b> a. Assess training shortfall. Produce list to be trained. b. Schedule and arrange resources for training. c. Deliver training.	Ref. Quality Manual sec. 3.4	Line Org.		3/22				
		Line Org.		3/31				
		Line Org.			4/19			6/24
<b>5. Team Support Indicators In Place</b> a. Identify levels of deployment for MSI, and establish targets b. Communicate expectations to organization regarding accountabilities for MSI	Ref. Quality Manual sec. 3.7, 3.9	Line Org.				5/26	6/13	
		Line Org.				6/4	6/24	
<b>6. Assessment of Management Support of Teams &amp; Management of TQ Training</b> a. Determine areas where teams need additional support b. Determine areas where management of TQ training is insufficient. c. Determine root causes. d. Present findings & recommendations to appropriate managers. e. Management prepares action plans.	Ref. Quality Manual sec. 3.0	QR & Quality Coordinators	3/14		5/3			
		QR & Quality Coordinators	3/14		5/3			
		QR & Quality Coordinators		4/7			5/26	
		QR & Quality Coordinators			5/3		6/8	
		Applic. Org.					5/26	6/24
<b>Progress Reports on 100-Day Plan to appropriate chief officer</b>		Applic. Org.			(Every two weeks)			

## 1. Business planning and review method implemented.

### a. Develop requirements and process. Communicate to organizations.

The standards in section 1.0 of the Quality Manual are the requirements for business planning. The business planning guidelines and examples in the attachments give some guidance on format for a business plan.

### b. Develop business plan objectives, indicators, and priorities.

This is the first phase of business planning:

- Critical success factors, objectives, indicators, and targets should be complete at the major organization level (e.g. Resource Group, Customer Group, etc.).
- Indicators prioritized (Reason For Improvement worksheets completed including priority calculations).
- Objectives and targets deployed to the lower levels of each organization to begin developing improvement efforts.

### c. Objectives, indicators, and priorities reviewed by appropriate chief officer

Each organization should schedule business plan review sessions with the appropriate chief officer.

### d. Complete business plans

(see section 1.0 of standard)

## 2. Quality standards in place & followed

### a. Standards developed and published

The standards given in the Quality Manual satisfy this action item.

### b. Baseline performance against standards. Determine gaps.

Each organization will determine whether or not it is meeting the standards given and will document any shortcomings.

## **2. Quality standards in place & followed (cont.)**

### **c. Action plans developed to close gaps**

Each organization will develop a plan to comply with the standards. The plans might include items such as business plan review schedules, training schedules, positions to be posted and filled, a schedule and responsibility assignments for updating TIRS, etc. In the case of some standards, large organizations may need to produce process flowcharts or procedures detailing how their particular organization will apply the standard (examples: procedure for forming teams, procedure for reviewing teams).

### **d. Implementation of plans.**

(Self-explanatory).

## **3. TIRS (Team Information Reporting System) loaded with current and valid data.**

### **a. Organizations gather necessary data to load TIRS**

Each organization should review the standard regarding teams whose data must be entered into TIRS. Next, the organization should determine the current status of all teams and determine if existing TIRS data is accurate (recent audits indicate that most of the current data is inaccurate). Accurate data should be accumulated.

### **b. Provide means to input data**

Each organization should take steps to ensure that teams have a means to input data. In many cases this will call for people to be trained on the use of the TIRS system and given user IDs. In some cases, parts of the organization will not have access to the proper computer terminals and may need to mail data sheets to another location. Some organizations may opt to have all data entered by one or more designated individuals to ensure the accuracy of data.

### **c. Input current data**

Any needed updates or modifications will be made.

#### **4. Close Training Gaps for Managers and Advisors.**

a. Assess training shortfall. Produce list to be trained

Each organization should review the standard to determine training requirements for managers, team members, sponsors, and team advisors. The organization should produce lists of those who need to take specific courses.

b. Schedule and arrange for training

Each organization should arrange for the needed training. Organizations should conduct classes using their own certified personnel (team advisors) whenever possible. They may also arrange for additional training resources through Quality Resources or by borrowing certified personnel from other organizations. Each organization should produce a schedule.

c. Deliver training

(Self-explanatory). For organizations with large numbers of employees to train that cannot complete training by 6-24, a detailed schedule for completion of training should be developed. The schedule should show this item to be a high priority.

Note: Organizations will continue to track training as always. However, the Quality Resources staff will establish systems to track TQ training progress. QR will also establish a system of training indicators.

#### **5. Team Support Indicators In Place.**

a. Identify levels of deployment for MSI, and establish targets

Organizations should review the standard and determine the managers to whom it applies. Organizations may choose to calculate an MSI (Management Support Index) for other managers not specified in the standard. Since this index is calculated using TIRS data, this action item cannot be started until item three of this plan is complete. Organizations should set realistic goals for each applicable manager and his or her part of the organization. Goals should consider how many teams the organization can support with the resources available. Organizations that have few managers trained, few advisors certified, and few existing teams should set lower goals until these shortfalls are corrected. Staff groups that have few teams of their own but contribute members to several task teams should have lower goals than line organizations with many functional teams.

## 5. Team Support Indicators In Place (cont.)

b. Communicate expectations to organization regarding accountabilities for MSI.

The MSI goals should be included in performance appraisals for each applicable manager.

## 6. Assessment of Management Support of Teams & Management of TQ Training.

a. Determine areas where teams need additional support.

The Quality Coordinators for each organization working in conjunction with Quality Resources personnel will determine a method for identifying teams that need additional assistance to be effective. Existing teams will be analyzed and stratified into categories.

b. Determine areas where management of TQ training is insufficient.

The Quality Coordinators for each organization working in conjunction with Quality Resources personnel will develop indicators to measure how well TVA manages TQ training and reason for improvement statements.

c. Determine root causes.

The teams identified as most in need of assistance will be analyzed to determine causes. The training management problem areas will also be analyzed. This will be done by the Quality Coordinators and their staffs in conjunction with the Quality Resources staff.

d. Present findings and recommendations to appropriate managers.

The Quality Coordinator for each organization will present the findings and recommendations to the managers who commissioned the teams.

e. Management prepares action plans.

The managers receiving these reports will consider the recommendations and prepare action plans as they see fit.

# Quality Manual

## **1.0 Business Planning**

The purpose of this standard is to define:

- The definition and objectives of business planning
- The requirements for developing business plans (which organizations are responsible for developing business plans)
- The components of a business plan
- How management will review progress against business plans

See section 4 ("Terminology") for definitions of the terms used in this section.

### **1.1 Definition and Objectives of Business Planning**

TVA's preferred method for business planning is a system for integrating quality concepts into the way we do business.

The objectives of business planning are to:

- Identify the critical success factors for each organization to align with TVA's strategic goals.
- Identify customer requirements, requirements due to competitive pressures, and regulatory requirements and use them to set objectives, performance indicators, and performance targets.
- Deploy organizational objectives, indicators, and targets throughout the organization.
- Ensure that improvement activities are focused on problems that are critical to TVA's success.
- Align resources with objectives and performance targets.
- Ensure follow-up, analysis, and corrective action if objectives are not met.
- Operationalize the concepts of process management and continuous improvement.

## **1.2 Requirements for Developing Business Plans**

The following organizations will prepare business plans that meet this standard:

- Any line organization led by a Vice President.
- Any major site or facility, such as a fossil power plant or a customer service center.

Staff and support organizations will not be expected to produce business plans that fully comply with this standard during this budget cycle. This is because staff and support organizations need to align their plans to support line organization objectives and these will not be finalized in time. Staff and support organizations should produce traditional business plans and budgets for FY' 95.

A later revision of this document will give FY' 96 requirements for staff and support organization business plans. The guidelines for staff and support business plans will be developed and issued no later than 5-3-94.

## **1.3 Components of a Business Plan**

Each business plan document will, at a minimum, have these components:

- An Executive Summary
- A Business Alignment Matrix
- Reason for Improvement Worksheets
- An Operations Plan
- A Process Improvement Plan
- A Resource Plan\*

\*This includes budget and staffing requirements. Staffing requirements will result from the business planning process and workforce planning process. The Workforce Plan (which is not optional) does not have to be included in the business plan document.

### 1.3 Components of a Business Plan (cont.)

Additional Information about these Business Plan Components:

The Executive Summary is a compilation of major features and issues contained within the plan, along with a synopsis of the organization and major accountabilities.

The Business Alignment Matrix describes how the organization's critical success factors and objectives align with TVA goals. The matrix also displays the performance indicators and targets used to measure if the objectives were met.

Reason for Improvement Worksheets are documents that provide a method for identifying and prioritizing improvement activities based on an analysis of historical performance, predicted future performance, future performance targets, and customer requirements. RFI worksheets should:

- Graphically display performance for the indicator in question (showing actual performance, target performance, and future targets if known)
- Score current performance vs. target, trend, and forecast performance vs. future target (see examples attached)
- Include a customer value index.
- Calculate a priority score for this indicator (considering current performance vs. target, trend, forecast performance vs. future target, and customer value index).

The Operations Plan establishes operating requirements and identifies plans to meet these requirements for routine activities.

The Process Improvement Plan shows the plan and resources required to achieve process improvements. Line items (or projects) should show the performance indicator being addressed, the priority score, prior year performance, current and future target, and resource requirements.

The Resource Plan identifies financial (budget), staffing, and contractor needs to support the other parts of the business plan. (Note: Operations Plan budget resources plus Process Improvement Plan budget resources equals total budget for year.)

### **1.3 Components of a Business Plan (cont.)**

Organizations may also want to develop a Preliminary Business Plan. This Preliminary Plan would be developed to help negotiate specific targets and objectives among different levels of the organization.

Optional subordinate components of the business plan are:

- An Education and Training Plan
- An Information System Plan
- A Benchmarking Plan
- A Customer Relations Plan
- A Supplier/Partner Plan
- An Employee Issues Action Plan

The contents of these Business Plan Components are defined in the Guideline for Developing Business Plans. The Guideline also contains assistance for developing a Business Plan.

### **1.4. Business Plan Review**

The purpose of this standard is to define the business plan review.

- Objectives of the Business Plan Review
- Who is required to hold business plan review meetings
- Contents of the Business Plan Review meetings
- Output of a Business Plan Review
- Schedule of Business Plan Reviews

The business plan review is a periodic meeting to review the progress of the organization against the business plan. Expectations of this standard are:

- That follow-up against the plan will occur in a systematic manner.
- That analysis, and corrective action will occur if objectives are not met.
- That the concepts of process management and continuous improvement will be operationalized.

See section 4.0 for definitions of terms used in this section.

## 1.4. Business Plan Review (cont.)

### 1.4.1 Objectives of the Business Plan Review

Following are objectives to be achieved during the review meeting.

- The organization will provide regular feedback of its performance to the appropriate organizational managers (monthly) and to the vice-president or equivalent (quarterly).
- Feedback will be reflected in the performance indicators chosen in the business plan.
- The organization will provide root cause analysis if targets are not met as well as action plans to address those causes.
- The status of improvement efforts will be reviewed.
- The organization will identify needs for resources to senior management.
- Senior management will provide information to the organization on current TVA or system issues.
- Senior management will elevate system wide issues for resolution at the senior management level.

### 1.4.2 Who is required to hold business plan review meetings

Every organization required to prepare a business plan is required to have regular business plan review meetings. See section 1.2.

### 1.4.3 Contents of the Business Plan Review meetings

The standard for content of a business plan review meeting is as follows:

- Evidence is shown that the organization knows how they are doing as measured by key performance indicators.
- Evidence is shown that the organization is managing with data (such as root cause analysis when targets are not met).
- Evidence is shown that the organization is taking action to improve performance where targets are not being met (such as action plans to address root causes).

Business Plan Reviews typically include the following agenda items:

- Status of action items from the last review

#### 1.4.3 Contents of the Business Plan Review meetings (cont.)

The status of all indicators selected for the business plan should be reported as follows:

- YTD (Year-to-Date) actual results
- Year end forecast (predicted/estimated) results
- YTD actual to year end target gap (if a gap exists)
- Year end forecast to year end target gap (if a gap exists)

Note: Organizations who deal with indicators where data is gathered infrequently (e.g. once or twice per year) will typically report against these indicators less frequently.

If there are performance gaps, a process to eliminate the gap should be demonstrated, as noted below.

- Stratification of contributors to any YTD gap (the "whys" for these gaps) for indicators showing gaps
- Stratification of contributors to the year end forecast gap (whys) for indicators showing gaps
- Determination of the root causes of the major contributors to each YTD gap
- Determination of the root causes of the major contributors to each year end forecast gap
- Action plans to implement solutions to close each gap(s)
- Barriers to implementation and support and, resources needed to remove the barriers (money, people, down time etc.)

Other non-required agenda items can include: How indicators are communicated to employees, examples of how employees are improving business indicators, team presentations, plant or area tours, etc. Employees and/or supplier partners can be asked to attend the review meetings.

#### 1.4.4 Output of a Business Plan Review

- Action items with responsible person assigned, and completion date.

#### 1.4.5 Schedule of Business Plan Reviews

- There will be a monthly business plan review with appropriate organization managers.
- There will be a quarterly business plan review with the responsible executive.
- Each organization will publish a schedule of planned reviews.

## 2.0 Total Quality (TQ) Infrastructure

The purpose of this section is to define:

- The basic structure suggested for deployment of TQ
- The roles and responsibilities for members of the infrastructure
- Suggested selection criteria for infrastructure positions
- Career development opportunities provided through infrastructure

This section is applicable to all organizations within TVA; parts of this section are standards and parts are guidelines. Standard or required elements are denoted as "bold" under deployment.

### 2.1 Leadership and Management

The managerial infrastructure of the Agency is charged with specific responsibilities to lead and manage the business in accord with TQ principles and practices.

Responsibilities:

- Define business goals and objectives.
- Obtain the necessary training to support and review QI teams (see section 3.4).
- Define and integrate TQ principles and practices into the day-to-day business operations.
- Provide leadership and serve as a role model in establishing Total TQ based values and beliefs.
- Provide personal involvement in the communication and deployment of TQ.

Deployment:

- **Required at all levels** of the organization in **all positions** providing direction or Leadership of others in the implementation of TVA's Business plans and the management of business operations.

## **2.2 Senior Vice President, Quality Improvement**

Senior Vice President, Quality Improvement provides direct support to TVA's Chief Officers (Chief Operating Officer, Chief Nuclear Officer, and Chief Administrative Officer) assisting in the development and deployment of TQ operating strategies, including directional leadership for the Quality Resources Staff.

### **Responsibilities:**

- Support TVA's Chief Officers in the development of TQ operating and deployment strategies.
- Establish and lead a group of Quality Coordinators (see section 2.4).
- Advise the Quality Council on matters related to the deployment of Business Planning and other aspects of Total Quality.
- Provide Leadership and support for the Quality Resources Staff, which
  - Develops technical materials related to the implementation of TQ.
  - Provides advice and assistance to organizations engaged in the implementation of TQ.
  - Advises organizations regarding business planning and quality improvement principles and practices.
  - Administers Corporate level training and support activities related to Business Planning and other aspects of Total Quality.

### **Deployment:**

- One full-time position reporting directly to the Chief Operating Officer.

## **2.3 Quality Councils**

The Quality Councils are typically made up of individuals in leadership positions (management, non-management, and Union representatives) which provide overall direction and emphasis for business operations in their respective organizations. The Councils are positioned at various levels in the organization based on defined need for directional leadership and support.

### **2.3 Quality Councils (cont.)**

**Responsibilities:**

- Establish overall guidance for the implementation of TQ in their respective organizations.
- Propose targets and measures for TQ effort.
- Provide coaching and Leadership in communicating TQ values.
- Review TQ implementation and advise senior managers regarding modifications and improvements.

**Deployment:**

- Exists at top level
- Optional at all other levels

### **2.4 Quality Coordinator/Officer**

The Quality Coordinator/Officer positions typically include individuals from management, non-management, and union representatives who provide full-time or collateral duty support to the President, Senior Vice President or Executive Vice President of an operational unit.

**Responsibilities:**

- Support Senior Executive in the implementation of Quality Improvement principles and practices.
- Provide coaching and support to Quality Managers and Team Advisors.
- Represent the views and perspectives of their respective organizations in discussions related to the implementation of TQ throughout TVA.
- Provide a coordination focal point for TQ.
- Ensure additional organizational procedures are provided when necessary to implement quality standards.
- Advise the Leadership of their respective organizations in TQ implementation strategies.
- Participate as a member of a group of coordinators formed by the Senior VP, Quality Improvement.

## 2.4 Quality Coordinator/Officer (cont.)

### Deployment:

- **Required** position at the President, Senior Vice President or Executive Vice President Level. This position may be designated as a Quality Officer and may serve more than one organizational unit at the discretion of the organization. The Quality Coordinators will periodically meet with the Senior Vice President for Quality Improvement, and these meetings will include union representatives.

### Qualifications:

- Credible standing with line-management
- Experienced line-manager or non-manager well-versed in line or operations functions
- Effective TQ advocate and communicator
- Skilled coach, facilitator, team player
- Demonstrated commitment to TQ principles and practices
- Positive track record

## 2.5 Quality Manager

The Quality Manager is a full time or collateral position supporting one (or more) Vice President(s) in the implementation of TQ in their organization.

### Responsibilities:

- Support and facilitation of Quality Improvement Teams.
- Support line managers in their development of business plans.
- Facilitation and coordination of actions/activities with business partners.
- Support and coordination of organization-wide recognition activities.
- Coach and support of Team Advisors.
- Facilitate roll-up of customer focus process and critical customer coordination activities.

### Deployment:

- **Required** - Each Vice President will have access to the services of a Quality Manager. One Quality Manager may serve more than one Vice President. Typically a rotational assignment with 18-24 month tenure.

## **2.5 Quality Manager (cont.)**

### **Qualifications:**

- Credible with line-management
- Experienced line-manager or non-manager well versed in line or operations functions
- Effective TQ advocate and communicator
- Skilled coach, facilitator, team advisor
- Demonstrated commitment to TQ principles and practices
- Positive attitude and track record

### **Career Development Standards**

*When individuals are placed in Quality Manager or other "Quality" positions on rotational assignments for 18-24 months they are to meet certain qualifications as noted above and are provided certain assurances to include:*

- *Incumbents serve at least at the grade level occupied at the time of selection.*
- *Assignments are developmental in nature with the expectation that incumbents will be capable of assuming a broader assignment upon completion of their assignment.*
- *Upon returning to their respective organizations, incumbents will be provided positions at a level equal to or greater than those previously occupied.*

***Other infrastructure positions specifically related to the support of teams are defined in section 3.***

### 3.0 Quality Improvement Teams

The purpose of this standard is to define:

- The types of teams covered by this standard
- Required team support infrastructure and its responsibilities
- How QI teams will be commissioned or formed
- Training requirements
- Requirements for tracking QI team activities, progress, and results
- Documentation requirements for team data, conclusions, and results
- How QI teams will be reviewed and given feedback
- Criteria and method for recognizing team efforts
- Method for measuring and reinforcing QI team support

See section 4.0 for definitions of terms used in this section.

#### 3.1 Types of teams covered by this standard

*This standard will apply to all Quality Improvement Teams (QITs).*

*QIT Definition: All task and functional teams charged with improving processes and solving problems using one of the three TVA methods. The three methods are: problem solving (as taught in "Tools & Techniques"), Process Modification & Improvement, and Process Redesign. (A QIT may employ other methods; however, it is essential that the teams thoroughly grasp and understand the logic and concepts of the three methods before attempting others.)*

This standard does not apply to the many other working groups called "teams" throughout TVA. Examples are: business planning teams, strategic planning teams, goal setting teams, teams designing entirely new processes, teams managing customer or supplier relations, teams studying how others do business, etc.

### 3.1 Types of teams covered by this standard (cont.)

This standard does not apply to functional work groups called teams except when they are charged with improving a process or solving a problem using one of the three TVA methods. Example: A "self-directed work team" with no formal improvement efforts underway is not identified as a QIT. A "self-directed work team" that begins a formal improvement study then becomes a QIT.

### 3.2 Team support infrastructure and its responsibilities

*Each QIT will have a sponsor, a team leader, an assigned advisor, and a review team.*

Sponsor - An individual assigned to the QIT to ensure their success. For functional teams, the sponsor is usually their supervisor. For task teams, the individual is usually assigned on the basis of their expertise of the problem.

Responsibilities:

- The team sponsor has primary responsibility for the success of the team.
- Coordinate and monitor team activity.
- Monitor team progress and keep team on track.
- Provide resources for the team and remove barriers.
- Ensure that all team training, tracking, documentation, and review requirements are met.

Review Team - A team assigned to review the QI team's progress and recommendations. Review teams should be made up of the top managers of the organization owning a problem or a process and other members as appropriate. These same managers should be the group that commissions or forms the team (see section 3.3).

If an organization forms a team to study a problem whose root causes may exist outside the organization, the review team should be expanded to include managers from the appropriate organizations. The review team should likewise be expanded if the solutions call for actions and expenditures outside the organization forming the team.

### 3.2 Team support infrastructure and its responsibilities (cont.)

Responsibilities of review teams:

- Forms or commissions teams.
- Review team progress after each step (as outlined in section 3.7).
- Provide feedback and guidance.
- Approve acceptable and feasible solutions for implementation.

Team Leader - A team member who coordinates team activities; usually selected by the team members for a functional team and appointed for a task team. The leader can be a permanent position or rotated per the discretion of each organization.

Responsibilities:

- Lead team meetings.
- Schedule team meetings and meetings with the sponsor and review team.
- Arrange for meeting rooms and other team resources.
- Keep the team sponsor informed regarding team progress.
- Notify sponsor regarding barriers to progress.
- Give work assignments to team members.
- Arrange for the improvement activity summary to be completed, records to be kept, and tracking entries made into the Team Information and Reporting System (TIRS).

Advisor - A person trained to advise teams, sponsors, and review teams regarding quality principles and the tools and concepts of quality improvement.

Responsibilities:

- Train teams, sponsors, and review team members as needed.
- Advise teams, sponsors, and review team members as needed.
- Facilitate the interaction of the team, sponsor, and review team.
- Attend team meetings as needed (typically attends a high percentage of meetings when team is inexperienced).

### 3.3 How teams will be commissioned or formed

*Before a QIT is allowed to form, it must be approved by a management team designated for that purpose.*

Managing team formation is a critical issue. Each organization should design a process for managing team formation. The process should ensure that the organization forms no more teams than it is able to properly review and support.

Organizations should use standing "management teams" or other groups to approve team formation.

Management teams approving the formation of a QIT will have the following responsibilities:

- Ensure that the organization has adequate resources available to support an additional team.
- Ensure that the existing review team is willing to accept the new QIT or form a new review team.
- Appoint an appropriate team sponsor.
- Assign a team advisor to the team.
- If a task team, ensure that the team's objective is clear, that its purpose aligns to support TVA and organizational goals, and that the priority of the task warrants the formation of this team over another.

### 3.4 Training requirements

*The following are training requirements for those who participate on QITs or support QITs:*

Review teams and sponsors must be trained in the appropriate TQ curriculum prior to the formation of QI teams within the organization. Concurrent training is acceptable in organizations just starting to implement these standards but is not desirable.

The following table summarizes training requirements.

### 3.4 Training requirements (cont.)

	QI Team	Team Sponsor	Review Team	Team Advisor
Tools & Techniques	☑	☑	☑	☑
Tools & Techniques (Observe)				☑
Tools & Techniques Certification				☑
Team Leadership & Support		☑	☑	☑
Process Modification & Improvement	*	*	*	*
Process Modification & Improvement Certification				*
Process Redesign	*	*	*	*
Process Redesign Certification				*

☑ Required

\* Required if method is used by a team you are sponsoring, reviewing, advising, or serving on.

### 3.5 Requirements for tracking team activities, progress, and results

Each organization will establish a process for ensuring that the required TIRS data is input to the system.

All QITs will be registered in the existing TVA Team Information and Reporting System (TIRS).

TIRS will be updated promptly after each team meeting.

Team sponsors are responsible for ensuring that TIRS is updated.

Team leaders are responsible for arranging for TIRS data input.

For guidance on minimum requirements for input data, see the TIRS users guide.

### **3.6 Documentation requirements for team data, conclusions, and results**

*Each QIT is required to produce a summary of its findings, conclusions, recommendations, and supporting data. This summary will be called an "Improvement Activity Summary."*

The summary will:

- Clearly explain the logic used to make conclusions.
- Demonstrate that the objective of each process step (as explained in the training manuals) was met.

The summary should:

- Display data when necessary to explain the logic or to demonstrate that the objective of each process step was met. (The summary should not display excessive amounts of supporting data. Detailed data should be kept in the team's project files.)
- Use graphics to communicate where applicable.
- Demonstrate the proper use of quality tools when these tools are used.
- Be relatively self-explanatory to allow the summary to be shared across TVA. (Should contain enough explanation to be understood by persons not in the work group and not familiar with the issues and work process.)

Note: There is no standard form or format for IA summaries. Example IA summaries can be provided by Quality Resources.

### **3.7 How teams will be reviewed and given feedback**

*Review teams will review QIT progress after each step is completed. This standard may be waived by the sponsoring management in the case of task teams that are charged to make very rapid progress. However, it is recommended that this decision be carefully considered and that this option not be used often.*

Reviews will take place within two weeks after the QI team completes a step. Each QI team will be reviewed at least every 60 days regardless of whether they complete a step or not.

### **3.7 How teams will be reviewed and given feedback (cont.)**

After recommendations are heard, the review team will inform the QI team regarding the disposition of their recommendations in a timely manner.

### **3.8 Criteria and method for recognizing team efforts**

(Criteria and method for evaluating team performance and guidelines for recognizing QI teams will be provided in a future revision of this document.)

### **3.9 Method for measuring and reinforcing team support**

*Each organization headed by a vice president or higher will measure and track QIT support using the Management Support Index (MSI) or a similar index. If an index other than the one described below is used, it must be approved by the appropriate chief officer for that organization and used consistently across the entire organization.*

*Organizations should set team support goals for each vice president or higher and include this goal in their performance appraisal. Goals for other personnel may be set as each organization dictates.*

MSI = (% of Employees Participating on QITs) + (% of QITs meeting four hours or more per month) + (% of QITs reviewed within two weeks of step completion).

Data to calculate the MSI will be taken from the Team Information Reporting System (TIRS) reports.

Organizations may not count review team members, sponsors, and advisors actively supporting teams when calculating % of Employees Participating on QITs.

Teams not meeting the definition of a QIT (see section 3.1) will not be counted in the MSI calculation.

### 3.9 Method for measuring and reinforcing team support (cont.)

Note: When setting MSI targets, organizations should remember that the intent is to put an appropriate number of teams in place and properly support them. Targets need to be based on the QI team support resources available. Going over the target on percent participation by indiscriminately forming teams can be as bad as going under on the entire MSI.

## 4.0 Terminology

The purpose of this section is to provide a reference for standard terms that will be used to:

- Ensure consistent use of quality terms by TVA employees
- Ensure consistent use of quality terms in education and training materials

**Business Alignment Matrix** - The Business Alignment Matrix describes how the organization's critical success factors and objectives align with TVA goals. The matrix also displays the performance indicators and targets used to measure if the objectives were met.

**Business Plan** - Output of the business planning process.

**Business Planning** - A system for integrating quality concepts into the way we do business.

**Business Plan Review** - Periodic meetings to assess an organization's progress against the business plan.

**Catchball** - The iterative process where the different levels of an organization negotiate performance indicators and targets. It begins when upper management proposes overall targets. The organizations at the next level then submit how much improvement they can contribute to the target and the resources needed to reach the target. The proposals continue back and forth until a decision is reached, balancing resources with targets.

## 4.0 Terminology (cont.)

**Critical Success Factors** - The vital few things that must be done well in order for the organization to be successful.

**Customer Value Index** - An index applied to each business indicator that shows the relative value of that indicator to the customer. The values may be based on data if available. If not, they are based on subjective expert opinions.

**Functional Team** - A Quality Improvement Team whose membership is primarily made up of employees from the same functional group. Participation is voluntary. The team chooses their problems from within their functional area. At the completion of the current project the team will normally proceed to the next problem. (See Section 3.)

**Guideline** - provides direction and emphasis to follow including recommended application. Allows adaptation to given situations. Is not a requirement or standard.

**Improvement Activity Summary** - An output document/tool that illustrates the approach, methodology and results of a team's efforts to solve a problem area.

**Indicator** - A measuring unit by which performance toward achievement of an organization's objective is gauged.

**Key Process** - Processes that help create and keep customers, maintain competitive effectiveness, or support a strategic business goal.

**Management Support Index (MSI)** - A performance indicator to measure management's support of teams.  $MSI = (\% \text{ of employees participating on QITs}) + (\% \text{ of QITs meeting four hours or more per month}) + (\% \text{ of QITs reviewed within two weeks of step completion})$ .

**Measures** - See Indicator

## 4.0 Terminology (cont.)

**Objective** - A desired outcome. Objectives are specific high-level approaches aimed at achieving Critical Success Factors. In the business planning process, the alignment sequence is TVA Goals, Critical Success Factors, then Objectives, then Indicators.

**Operations Plan** - Establishes operating requirements and identifies plans to meet these requirements for routine activities. (See appendix "Guideline for Developing Business Plans")

**Preliminary Business Plan** - Necessary step in which organization performance objectives and indicators are evaluated along with relevant planning assumptions/constraints and performance targets are negotiated/established for a multi-year (five year) time frame. Also includes prior year(s) results, current year projections, and the basis and justification for proposed outyear year targets (performance and resource).

**Priority Score** - A priority ranking number for a performance indicator. In the business planning process it is calculated by considering current performance versus target, overall trend for the indicator, current performance versus future target, and value to the customer.

**Process Improvement** - An increase in the effectiveness and/or efficiency of the process.

**Process Improvement Plan** - The Process Improvement Plan identifies contributors to performance gaps for each deployed performance indicator, and describes action plans to close performance gaps including schedules, accountabilities, and resource requirements.

**Process Modification and Improvement (PM&I)** - The TVA methodology for simple basic streamlining of processes.

**Process Redesign** - The TVA methodology designed to achieve breakthrough process improvement. It is best used on cross-functional processes needing major performance improvement. Used only when there is a license for major change.

## 4.0 Terminology (cont.)

**Quality Coordinator** - An individual designated by his/her respective organization to meet periodically with the Chief Quality Officer and support the overall coordination of TQ implementation. A leadership position in full-time or collateral support of the President or Senior Vice President of an operational unit. (See Section 2.)

**Quality Councils** - A group typically made up of individuals in leadership positions which provide overall direction and emphasis for business operations in their respective organizations. (See Section 2.)

**Quality Improvement Teams (QIT)** - All task and functional teams charged with improving processes and solving problems using one of three TVA methods. The three methods are: problem solving as taught in ("Tools & Techniques"), Process Modification and Improvement, and Process Redesign. (See Section 2.)

**Quality Manager** - A position to support the Vice President in the implementation of TQ in the organization. (See Section 2.)

**Resource Plan** - identifies financial and staffing needs to support the business plan.

**Reason for Improvement Worksheets** - documents used in the business plan that provide the logic and a methodology for prioritizing improvement activities based on an analysis of historical performance, predicted future performance, future performance targets, and customer requirements.

**Review Team** - A group assigned to review the QI team's progress and approve the recommended solutions. (See Section 3.)

**Root Cause** - The underlying reason for the occurrence of a problem or nonconformance of a process.

## 4.0 Terminology (cont.)

**Self-Directed Work Team** - A highly trained group of employees, from 6 to 18 on average, who complete a well defined segment of work and make most of the associated day-to-day operating decisions (i.e., plan, set priorities, organize, coordinate, measure, set goals, take corrective action). Management sets strategic direction.

**Six Step Problem Solving Process** - TVA's method for solving problems. It is a structured, disciplined approach which uses data to find and eliminate root causes.

**Standard** - A defined requirement.

**Targets** - A specific indicator value to be achieved. Targets may be based on one or more of the following inputs: customer requirements, TVA strategic goals, competitive analysis, or world class benchmarks.

**Task Team** - A Quality Improvement Team whose members are appointed by management based on their expertise and are provided a problem to work on. The team disbands when the results are satisfactory and the process is standardized. (See Section 3.)

**Team Advisor** - An individual member trained to advise QI teams, sponsors, and review teams regarding quality principals and the tools and concepts of quality improvement. May have been referred to as Facilitator.

**Team Information and Reporting System (TIRS)** - An automated mainframe system for tracking of all QIT data. (See Section 3.)

**Team Leader** - A team member who leads/coordinates team activities through the approval process.

**Team Leadership and Support** - A TVA course that clarifies the leadership roles and responsibilities necessary to support QITs. The course covers the leadership behavior specifically associated with the "human side" of team involvement.

#### 4.0 Terminology (cont.)

**Team Sponsor** - A non-team member assigned to a QIT to foster their success. For functional teams, the sponsor is usually their supervisor. For task teams the individual is usually assigned on the basis of their expertise of the problem. (See Section 3.)

**Tools & Techniques** - The TVA course that teaches the six-step problem solving process and basic quality tools focusing on logic, flow, and consistency in problem solving.

# **Guidelines for Development of Business Plans**

# Guidelines for Development of Business Plans

## **Purpose of this Guideline**

The purpose of this guideline is to provide assistance to managers about the Business Planning process. The guideline is written for people who have had little or no experience in developing business plans, but should also be useful to as a refresher for people who have developed plans in the past.

## **What is Contained in this Guideline**

### Introduction

1. Why do Business Planning
2. What Do I Need to Do Before Attempting Business Planning
3. Summary of What is in a Typical Business Plan
4. Steps in the Business Planning Process

## **Introduction**

"Create constancy of purpose for improvement of product and service ... Constancy of purpose ... is vital." - W. Edwards Deming, from "Out of the Crisis"

"A system must be managed. It will not manage itself.... The secret is cooperation between components towards the aim of the system." - W. Edwards Deming, from "Out of the Crisis"

So ... you are an executive or a manager (or a member of a management team), and you want to develop a "business plan" for your organization.

You naturally have lots of questions about this: Where do you start? What do you do? What is expected of you? What are your ongoing responsibilities?

This guideline is to provide assistance to managers about these and other issues related to the TVA Business Planning process. The aim of the guide is help managers be successful in this process. It is written for people who have had little or no experience in developing business plans, but should also be useful to as a refresher and reference for people who have developed plans in the past.

### **1. Why do Business Planning**

The strategic and business planning processes identify the overall aim of TVA's businesses and set the framework for cooperation among the many varied parts of TVA, to serve customers by achieving our common aim. Strategic and business planning are used within TVA to align the activities and direction of individual work organizations with TVA's overall strategic direction, and to promote cooperation within the organization. Strategic and business planning is a key management responsibility.

Strategic planning is conducted on a TVA-wide level. Strategic goals are developed for key areas to guide the long-term business. TVA's strategic goals are:

- Competitive Rates
- Employees First
- Environmental Leadership

Business planning, briefly, is the process for translating these TVA strategic goals and customer expectations into critical success factors, objectives, indicators (with targets), and specific activities that address customer needs and improve TVA's performance. The business planning process is a dynamic one that incorporates continual learning and improvement into the planning process, resulting in dynamic plans that address evolving business requirements and promote cooperation across the agency.

The business planning process is also an important part of TVA's effort to become a learning organization. Business planning, including periodic reviews of business plans, is a key way by which an organization can learn about itself, its processes, its customers, and its business. It is also a key for developing improvements to the business.

The balance of this guideline is aimed at helping you understand the process and apply it to successfully develop a business plan

## **2. What Do I Need to Do Before Attempting Business Planning**

Here are four recommended activities that you need to consider before attempting business planning:

- Determine who will be doing business planning

Business Planning is a key responsibility of the management of an organization. Top management in an organization will need to determine who will actually be responsible for participating in the business planning process. This is not an individual effort, but rather requires the involvement of organization management teams, and the employees of the organization as well. This includes development of the plan itself (which is described in this document) as well as periodic reviews of the business plans.

- Learn the TVA Business Planning Process

The details of the business planning process should be understood by all managers and/or executives (and others) who will be participating in the planning process. Learning activities about the process might include any (or all) of these:

- Reading this document about developing business plans
- Participating in briefings about how to develop and review business plans
- Attending business plans reviews in other parts of TVA (as an observer)
- Talk with other managers/executives in TVA who have previously participated in the business planning process

- Learn the TVA 6-step Problem-solving process

A major part of the business planning process is the development of "Reason For Improvement" worksheets (also know as RFI worksheets). The development of these RFI worksheets requires a good working knowledge of TVA's 6-step problem-solving process. Those developing the business plan should know this problem-solving process. This is taught in TVA's "Total Quality Tools and Techniques" education course.

- Gather together information that may help you in the planning process

Before starting the planning process, you should gather together relevant information that may help you in the planning process. This information might include:

- Data about customer needs and expectations (such as the data available from "Partnership Profiles")
- The Generation Plan
- Generating unit outage and startup schedules
- Construction schedules
- Schedules for items that TVA has made contractual delivery agreements
- Employee issues, from the TVA Employee Survey and other sources
- Resource constraints
- Regulatory issues / requirements
- Technology issues
- Integrated Resource Plan (IRP) information
- Financial rate review schedules and requirements (and needs of the financial models that support this review process)
- Past trends/future targets (if that data is available)

### **3. Summary of What is in a Typical Business Plan**

Items listed below in *italic print* are required; other items listed are valuable optional parts of the Business Plan.

The typical contents of a Business Plan document are:

#### **1.0 *Executive Summary***

- 1.1 *Features - a summary of the major features of the organization*
- 1.2 *Organization and Accountabilities - the organizational structure, and major accountabilities of each part of the organization*
- 1.3 *Major Issues - A summary of the major issues facing the organization for the last fiscal year, for the current fiscal year, and for the next fiscal year*
- 1.4 *Other (as needed)*

#### **2.0 *Planning Assumptions***

Examples:

- 2.1 Workload Forecast
- 2.2 Budget Guidelines / Resource Constraints
- 2.3 Generating Plan criteria and expected outputs
- 2.4 Reservoir Operating Forecast
- 2.5 Organizational operating requirements and projections
- 2.6 Other important assumptions

#### **3.0 *Business Alignment Matrix***

#### **4.0 *Business Plan Components***

- 4.1 *Operations Plan*
- 4.2 *Process Improvement Plan*
- 4.3 Customer Relations Plan
- 4.4 Supplier/Partner Plan
- 4.5 Employee Issues Action Plan
- 4.6 Education and Training Plan
- 4.7 Information System Plan
- 4.8 Benchmarking Plan
- 4.9 *Resource Plan*

5.0 *Appendix*

- 5.1 Operation Plan Detail
- 5.2 Process Improvement Plan Detail
- 5.3 *Reason for Improvement Worksheets*
- 5.4 Backup Material (as needed)

For your information, several of these components of the Business Plan are also used in annual "Business Plan Summary Submissions for Board Review" requested by the Chief Financial Officer. Annual Business Plan Summary Submissions are the documents reviewed by TVA's Board of Directors for budgeting and rate review purposes. These are noted below:

<b>BUSINESS PLANNING ITEM</b>	<b><i>BUSINESS PLAN SUMMARY SUBMISSION FOR BOARD REVIEW</i></b>
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- |                                                                                                                                                                                                           |                                  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| 1. Business Alignment Matrix                                                                                                                                                                              | <i>Business Alignment Matrix</i> |
| The Business Alignment Matrix from the Business Plan is reformatted (as shown in figure 3 later in this guideline) for use in "Business Plan Summary Submissions."                                        |                                  |
| 2. Organizational Summary                                                                                                                                                                                 | <i>Organizational Summary</i>    |
| The Organizational Summary from the Business Plan is also used in Board Submissions.                                                                                                                      |                                  |
| 3. Planning Assumptions                                                                                                                                                                                   | <i>Planning Assumptions</i>      |
| The Planning Assumptions from the Business Plan are also used in Board Submissions.                                                                                                                       |                                  |
| 4. Process Improvement Plan                                                                                                                                                                               | <i>New Initiatives</i>           |
| The major, large-cost activities from the Process Improvement Plan are summarized in the "New Initiatives" portion of the Board Submission.                                                               |                                  |
| 5. Resource Plan (budget portion)                                                                                                                                                                         | <i>Resource Requirements</i>     |
| The budget portion of the Resource Plan is summarized in the "Resource Requirements" portion of the Board Submission.                                                                                     |                                  |
| 6. Resource Plan (staffing portion)                                                                                                                                                                       | <i>Employment Summary</i>        |
| The staffing portion of the Resource Plan is summarized in the "Employment Summary" portion of the Board Submission. Detailed staffing information is developed using the TVA Workforce Planning Process. |                                  |

#### **4. Steps in the Business Planning Process**

Business Planning is a system for integrating quality concepts into the way we do business. It is an organization-wide, customer-focused approach for planning, monitoring, and executing a few key actions.

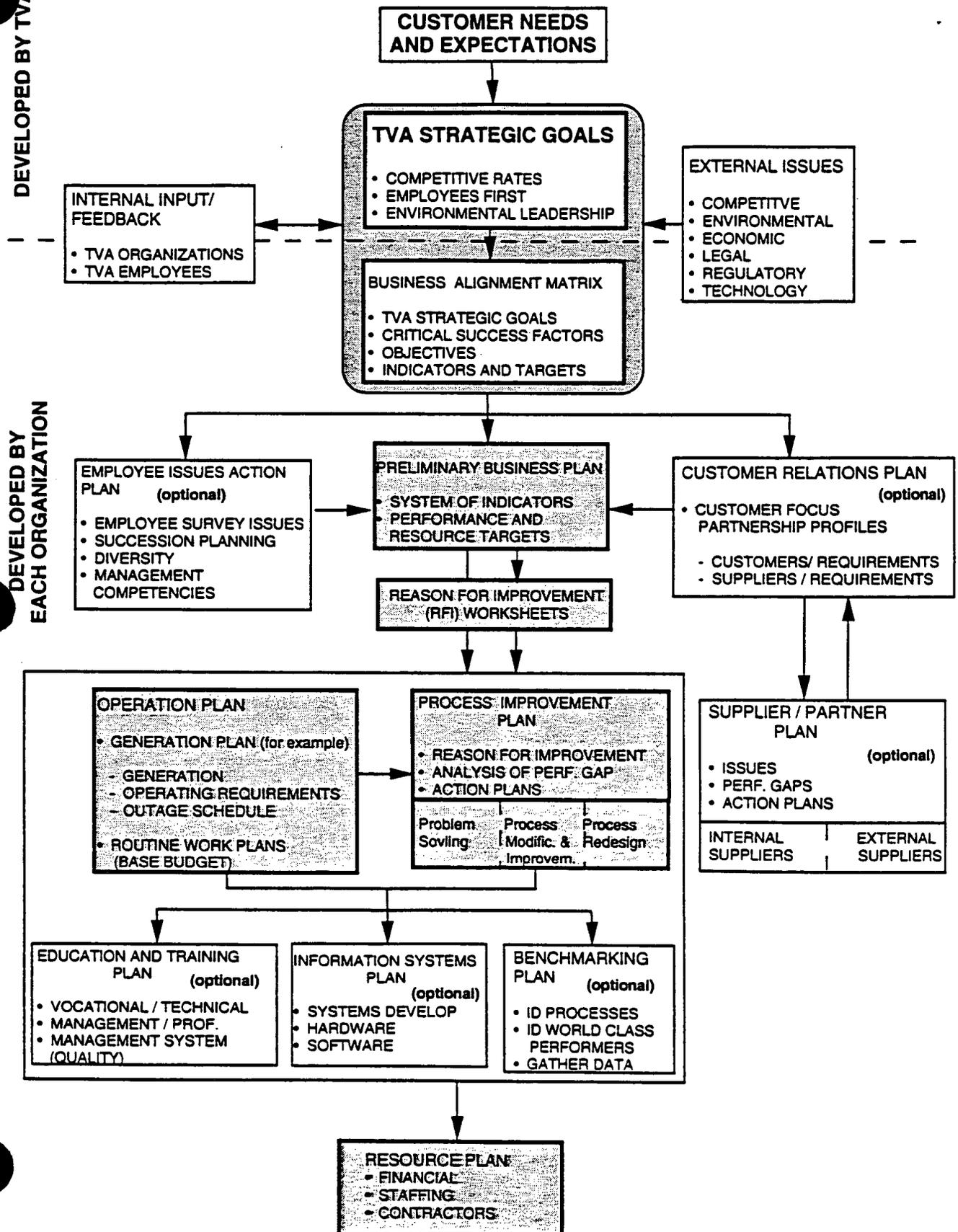
The overall process for developing, reviewing, and revising business plans is shown in figure 1, "The Business Planning Model". The steps for developing the plan are:

- STEP 1.        Develop a Business Alignment Matrix
- STEP 2.        Develop A Preliminary Business Plan / Play "Catchball"
- STEP 3a.       Develop Reason for Improvement Worksheets
- STEP 3b.       Develop the Process Improvement Plan
- STEP 4.        Develop the Operations Plan
- STEP 5.        Develop the Resource Plan
- STEP 6.        Develop Other Optional Supporting Plans
  - Education and Training Plan
  - Information System Plan
  - Benchmarking Plan
  - Supplier/Partner Plan
  - Customer Relations Plan
  - Employee Issues Action Plan
- STEP 7.        Compile the Executive Summary / Appendices / Planning Assumptions, and Assemble the Business Plan

Each of these steps is explained in the following sections.

FIGURE 1

FIGURE 1: TVA BUSINESS PLANNING MODEL



## STEP 1. Develop a Business Alignment Matrix

A Business Alignment Matrix describes how the organization's critical success factors and objectives are aligned with TVA's goals. The matrix also displays the performance indicators and targets used to measure if the objectives were met. The Matrix is one of the primary means that executives and managers have for aligning the direction of all parts of the organization towards a common purpose.

Developing the Matrix itself consists of several activities:

1. Developing Critical Success Factors for the Organization
2. Developing Objectives
3. Developing Performance Indicators
4. Developing Targets

An example of a complete matrix is shown in figure 2. This example is the Business Alignment Matrix for Fossil and Hydro Power. Figure 3 shows the format that the Business Alignment Matrix should take for Board Summaries.

Each of these sub-steps is described in more detail below.

### Activity 1: Developing Critical Success Factors for the Organization

The first step in developing a business plan is to understand the set of **critical success factors (CSFs)** for the organization, and how those CSFs link into TVA's strategic goals. CSFs are those vital few things that must be done extremely well in order for the organization to be successful in contributing to TVA's Strategic Goals. CSFs describe the "desired states" that need to exist in the future. There are typically fewer than a 10 CSFs for any particular organization.

At the top level of an organization, these CSFs may not exist (or may not be current), and will need to be developed (or revised). When the "top-level" of an organization is referred to, this means organizations like Customer Group or Resource Group. Subordinate organizations will use the same set of CSFs as developed at the top-level of the organization. For instance, both the Transmission Division and the East Area within Customer Group will use the same set of CSFs, which is the set of CSFs developed for all of Customer Group.

BUSINESS ALIGNMENT MATRIX GOALS, PERFORMANCE INDICATORS, AND TARGETS ORGANIZATION FOSSIL & HYDRO POWER FY 1994								
CRITICAL SUCCESS FACTORS	ORGANIZATION OBJECTIVES	PERFORMANCE INDICATOR	FY 1992 ACTUAL	FY 1993 TARGET	FY 1993 ACTUAL	FY 1994 PROPOSED	FY 2000 PROPOSED	BASIS PAGE
FINANCIAL PERFORMANCE	MANAGE COSTS TO ACHIEVE FINANCIAL STRATEGIC GOALS	PRODUCTION EXPENSE (MILLS / kWh)	15.31	15.04	14.25	14.38	13.34	A-2
		CAPITAL PROJECTS MAJOR MILESTONES MET (%)	82.00	91.00	91.00	93.00	95.00	A-4
		CAPITAL PROJECTS COST PERFORMANCE INDEX	0.85	0.88	0.93	0.95	1.02	A-5
		COMPETITIVE RATE COST INDICATOR (%)	N/A	N/A	15.60	14.50	13.20	A-6
		COST RECOVERY FACTOR (%)	N/A	N/A	(2.7)	0 < 1	0 < 3	A-7
	ACHIEVE LOWEST SYSTEM FUEL COST	DELIVERED COAL COST (CENTS/MMBtu)	125.30	123.80	122.1	121.7	116.0	A-8
		COAL STOCKPILE (DAYS' SUPPLY)	26	15	25	14	12	A-10
		FUEL HANDLING EXPENSE (\$/TON RECEIVED)	0.78	0.74	0.73	0.68	0.58	A-12
		BY-PRODUCT UTILIZATION (TONS)	654,000	605,000	645,000	700,000	1,135,000	A-14
		NET HEAT RATE (Btu / kWh)	10,019	9,983	9,959	9,920	9,752*	A-16
		PLANT PERFORMANCE	ACHIEVE UNIT RELIABILITY COMMITMENTS	GWh AVAILABLE (GWh X 1,000)	156.30	159.02	167.93	163.077
EQUIVALENT AVAILABILITY FACTOR - FOSSIL (%)	82.30			85.00	85.2	83.80	87.30	A-20
EQUIVALENT FORCED OUTAGE RATE - FOSSIL (%)	6.00			5.90	5.50	5.60	3.00	A-22
PLANNED OUTAGE RATE - FOSSIL (%)	8.00			6.70	5.60	7.22	6.30	A-24
MWh LOSSES DUE TO PLANNED OUTAGE EXTENSION (MWh)	715			600	395	400	100	A-26
WATER CHEMISTRY SPECIFICATION EXCEEDANCES								A-27
FORCED OUTAGE FACTOR - COMBUSTION TURBINE (%)	N/A			2.00	1.13	1.50	0.50	A-28
EQUIVALENT AVAILABILITY FACTOR - CONVENTIONAL HYDRO (%)	94.18			93.20	96.93	94.90	93.60	A-30
EQUIVALENT AVAILABILITY FACTOR - PUMPED STORAGE (%)	92.05			85.30	88.75	83.30	90.00	A-31
FORCED OUTAGE RATE - CONVENTIONAL HYDRO (%)	1.50			3.20	1.43	0.94	0.50	A-33
FORCED OUTAGE RATE - PUMPED STORAGE (%)	1.50		3.30	1.92	2.00	1.40	A-34	
PLANNED OUTAGE RATE - CONVENTIONAL HYDRO (%)	3.50		3.40	1.52	3.90	5.80	A-36	
PLANNED OUTAGE RATE - PUMPED STORAGE (%)	7.30		11.20	9.82	13.60	6.90	A-37	
ACHIEVE UNIT OPERATING COMMITMENTS	SYSTEM STARTUP PERFORMANCE INDEX - FOSSIL (%)		72.80	85.00	84.00	90.00	90.00	A-39
	SYSTEM STARTUP PERFORMANCE INDEX - CT (%)		95.10	95.00	95.17	96.00	99.00	A-41
ENVIRONMENT/ RIVER	OPERATE WITH NO NOTICE OF VIOLATIONS	ENVIRONMENTAL NONCOMPLIANCES	67	50	53	38	0	A-43
		REGULATORY NOTICES OF VIOLATION	8	15	15	21	0	A-45
WORKFORCE	RECRUIT & TRAIN EMPLOYEES TO MEET CURRENT & FUTURE WORKFORCE REQUIREMENTS	UNFILLED OPENING (% OF STAFF)	N/A	1.00	3.60	1.00	1.00	A-47
		PIPELINE TRAINING STATUS (%)	9.00		6.00			A-48
PERSONNEL SAFETY	REDUCE TOTAL INJURIES	LOST-TIME INJURY INCIDENT RATE	0.47	0.26	0.04	0.18	0.07	A-49
		RECORDABLE INJURY INCIDENT RATE	2.91	2.20	1.40	1.80	0.90	A-51

Business Alignment Matrix FY 95 Objectives, Indicators, and Targets					
Organization _____					
TVA Strategic Goals	Critical Success Factors	Organization Objectives	Performance Indicators	Performance Targets	
				FY 1995	FY 2000
<p><b>Employees First:</b> To make the TVA family first in trust, teamwork, diversity, and performance.</p>					
<p><b>Environmental Leadership:</b> TVA will create a national center for environmental research, develop a comprehensive plan for environmental management, implement an environmental advisory process, and make environmental leadership part of everyones job.</p>					
<p><b>Competitive Rates:</b> TVA's power rates need to be among the lowest and customer satisfaction must be the highest. TVA will not raise additional revenue through rate increases through 1997.</p>					

## STEP 1. Develop a Business Alignment Matrix (cont.)

For front-line departments, this step is simply a matter of finding out what the organization's CSFs are. These will have been previously developed by top management in the organization, and will be provided to front-line departments by the organization's executives.

To develop CSFs, you need to start with the TVA strategic goals and information about our customers. The TVA Strategic Goals are:

- Competitive Rates
- Employees First
- Environmental Leadership

Information about your customers is also important in the development of CSFs and is critical in understanding their priorities. It is also crucial in the development of valid objectives and indicators.

An example of CSFs developed for Fossil and Hydro Power is listed below:

- Attract and retain a sufficient number of qualified personnel (Workforce)
- Electricity to remain a good value for the money (Financial Performance)
- Have a sufficient capacity to meet customer demand (Plant Performance)
- Protect the environment (Environment)
- Operate in a safe manner to protect the public, employees, and contractors (Personnel Safety)
- Improve community, economic, and resource partnerships (Economic Development)

### Activity 2: Developing Objectives

After obtaining a set of CSFs, the next step is to develop **objectives** for the organization. Objectives are specific high-level approaches aimed at achieving the CSFs.

Each organization should examine each CSF to determine one objective (or a few objectives) that the organization will concentrate on to accomplish the CSF.

Objectives are developed for an entire top-level organization, such as Customer Group or Resource Group.

## **STEP 1. Develop a Business Alignment Matrix (cont.)**

Each subordinate-level organization then takes this same set of objectives and examines it to determine which of those objectives the organization can contribute to. Those objectives that the subordinate-level organization can contribute to are included in their business plans; the others are not.

For example, F&HP's objectives (and the 6 CSFs that they are related to) might be:

CSF: Attract and retain a sufficient number of qualified personnel

- Objective: Recruit and Train Employee to meet current and future workforce requirements
- Objective: Provide the opportunity for employee participation on functional teams

CSF: Electricity to Remain a good value for the money

- Objective: Manage costs to achieve financial strategic goals
- Objective: Achieve lowest system fuel cost

CSF: Have a sufficient capacity to meet customer demand

- Objective: Achieve unit reliability commitments
- Objective: Achieve unit operating commitments

CSF: Protect the environment

- Objective: Operate with no notices of violations

CSF: Operate in a safe manner to protect the Public, Employees, and Contractors

- Objective: Reduce total injuries

CSF: Improve Community, Economic, and Resource partnerships

- Objective: Improve Customer/Supplier Relationship

Environmental Affairs (EA) is one F&HP organization. EA reviewed the F&HP objectives, and determined that its business could contribute to these F&HP objectives:

CSF: Attract and retain a sufficient number of qualified personnel

- Objective: Recruit and Train Employees to meet current and future workforce requirements
- Objective: Provide the opportunity for employee participation on functional teams

## STEP 1. Develop a Business Alignment Matrix (cont.)

CSF: Electricity to Remain a good value for the money

- Objective: Manage costs to achieve financial strategic goals

CSF: Protect the environment

- Objective: Operate with no notices of violations

CSF: Operate in a safe manner to protect the Public, Employees, and Contractors

- Objective: Reduce Total Injuries

EA determined that its operations did not have a major contribution to the F&HP objectives for other two CSFs, and so did not include these in its business plan.

### Activity 3: Developing Performance Indicators

After the organization determines its objectives, its next task is to develop a **performance indicator** (or several indicators) for each objective. An indicator is a measuring unit by which performance toward achievement of an organizational objective is gauged. Figure 4 provides some examples of performance indicators. The entire set of performance indicators for an organization is known as a "System of Indicators", or SOI.

There are two distinct types of indicators:

- Those that are primary performance drivers, and need to have a Reason for Improvement (RFI) worksheet completed (as described in step 3a)
- Those that are important measures of results, but which (many times) are simply combinations of the primary performance drivers noted above. These need to be monitored, but action plans will be prepared only when it will cause a significant impact.

For example, Equivalent Forced Outage Rate (EFOR) is a primary indicator of reliability for the fossil power plant system. Equivalent Availability Factor (EAF) is also a primary indicator of reliability for the fossil power plant system, and is made up of EFOR, Planned Outage Rate (POR), and Maintenance Outage Rate (MOR). In this example, EFOR is the primary driver which needs analysis; EAF, POR, and MOR are important indicators which need monitoring, but which will not have action plans associated with them unless a significant problem with them develops.

## FOSSIL AND HYDRO POWER SYSTEM OF INDICATORS

FIGURE 4

TVA GOAL	F&HP CRITICAL SUCCESS FACTOR	F&HP OBJECTIVES	BUSINESS PLAN PERFORMANCE INDICATORS			
			DEPLOY TARGETS, (PERFORM REASON FOR IMPROVEMENT ANALYSIS)	ACCOUNTABILITY	DEPLOY TARGETS, (MONITOR / TRACK RESULTS - PREPARE ACTION PLANS AS NECESSARY)	ACCOUNTABILITY
<b>PUT EMPLOYEES FIRST</b>	ATTRACT AND RETAIN A SUFFICIENT NUMBER OF QUALIFIED PERSONNEL	RECRUIT AND TRAIN EMPLOYEES TO MEET CURRENT AND FUTURE WORKFORCE REQUIREMENTS	UNFILLED OPENINGS PIPELINE TRAINING STATUS	8 8	DIVERSITY - % NEW HIRES SERVICE REVIEWS SICK LEAVE TAKEN EMPLOYEE GRIEVANCES	ALL 8 8 8
		PROVIDE THE OPPORTUNITY FOR EMPLOYEE PARTICIPATION ON FUNCTIONAL TEAMS	MANAGEMENT SUPPORT INDEX	ALL	TEAM ACTIVITIES	7
	OPERATE IN A SAFE MANNER TO PROTECT THE PUBLIC, EMPLOYEES, AND CONTRACTORS	REDUCE TOTAL INJURIES	RECORDABLE INJURY RATE - LOST-TIME INJURY RATE	ALL ALL		
<b>MAINTAIN COMPETITIVE RATES</b>	HAVE SUFFICIENT CAPACITY TO MEET FUTURE CUSTOMER DEMAND	ACHIEVE UNIT RELIABILITY COMMITMENTS	EFOR - FOSSIL FOF - CT FOR - HYDRO EFOR DUE TO COAL QUALITY EFOR FOLLOWING PLANNED OUTAGE MWH LOSSES - PLANNED OUTAGE MATERIALS SERVICE LEVEL MATERIALS INVENTORY ERRORS	1 1 4 6 2 2 3 3	GWH AVAILABLE EAF - FOSSIL EAF - CT EAF - HYDRO POR - FOSSIL POR - HYDRO MOR - FOSSIL MOR - HYDRO	1,2 1 1 4 1 4 1 4
		ACHIEVE UNIT OPERATING COMMITMENTS	SYSTEM STARTUP PERF - FOSSIL SYSTEM STARTUP PERF - CT AGC PERFORMANCE	1 1 1	MINIMUM LOAD COMP DEV.	1
	ELECTRICITY TO REMAIN A GOOD VALUE FOR THE MONEY	MANAGE COSTS TO ACHIEVE FINANCIAL STRATEGIC GOALS	BUDGET DIFFERENCES - O&M BUDGET DIFFERENCES - CAPITAL CAPITAL COST PERF. INDEX CAPITAL MAJOR MILESTONES MET COMPETITIVE RATE COST INDICATOR COST RECOVERY FACTOR	ALL ALL 5 5 3 3	PRODUCTION EXPENSE INVENTORY REDUCTION	1,2 3
PERFORMANCE ACCOUNTABILITY:                    1 - FOSSIL OPERATIONS - PLANTS                    2 - FOSSIL OPERATIONS - STAFFS                    3 - FOSSIL OPERATIONS - M&TS                    4 - HYDRO OPERATIONS                    5 - PROJECTS                    6 - FUELS                    7 - BUSINESS SERVICES                    8 - HUMAN RESOURCES						

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#### Activity 4: Developing Targets

After determining the appropriate performance indicators, the organization must next develop **targets** for each indicator. A target is a specific value to be achieved for an indicator. Targets are set after reviewing relevant data, which may include looking at one (or more) of the following:

- past performance (if available),
- future expectations,
- customer requirements,
- TVA strategic goals,
- competitive analysis,
- world-class benchmarks.

The manager (or team of managers) who is developing the business plan needs to determine which of these methods is appropriate for developing targets.

Targets should be set for the current fiscal year and for outyear years as defined by organizational management (usually, five years). A basis and assumptions for establishing the targets should be clearly defined.

For example, the Fossil and Hydro Power organization Business Alignment Matrix (see figure 2) gives several examples of targets.

#### **STEP 2. Develop A Preliminary Business Plan / Play "Catchball"**

The next step is to develop a **Preliminary Business Plan**. The development of the Preliminary Business Plan is a necessary step in which organization performance objectives and indicators are evaluated along with relevant planning assumptions/constraints and performance targets are negotiated/established for a multi-year (five year) time frame. It also includes prior year(s) results, current year projections, and the basis and justification for proposed outyear targets (performance and resource).

The Preliminary Business Plan provides for the deployment and negotiation of specific targets throughout the organization, using a “catchball” process between levels of the organization. Catchball is the iterative process where the different levels of an organization negotiate performance targets. It begins when upper management proposes overall targets. The organizations at the next level then submit how much improvement they can contribute to the target and the resources needed to reach the target. The proposals continue back and forth until a decision is reached.

The activities needed to produce the Preliminary Business Plan include:

- identification and analysis of performance gaps.
- obtaining organizational management “buy-in” to the general direction set by the plan.
- a preliminary allocation of resources among the various components of the plan.
- a checking of the reasonableness of the plan (and its assumptions) from one level of management to the next one through a series of “catchball” activities.
- development of the bases and assumptions that support the proposed performance targets.

### **STEP 3a. Develop Reason for Improvement Worksheets**

We have separated out one of the parts of the Process Improvement Plan as a separate step in the planning process, since it helps determine much of what is in the the component plans. This step is the development of **Reason for Improvement Worksheets** (also known as RFI worksheets).

RFI worksheets are documents that provide the logic and a methodology for prioritizing improvement activities based on an analysis of historical and current performance, predicted future performance, future performance targets, and customer requirements.

An RFI worksheet is developed for each performance indicator that is identified as a primary performance driver in the Business Alignment Matrix. An example of an RFI worksheet is shown in Figure 5.

GOAL: Achieve Fossil Unit  
Reliability Commitments

**REASON FOR IMPROVEMENT WORKSHEET**  
**FOSSIL PLANT XYZ**

PERFORMANCE DATA (A)	CURRENT SITUATION			CUSTOMER VALUE INDEX (E)	TOTAL SCORE (B)x(C)x(D)x(E)	PRIORITY
	CURRENT PERFORMANCE VS. TARGET (B)	FUTURE PERFORMANCE VS. TARGET				
		TREND* (C)	FORECAST TARGET (D)			
<p>LEGEND:</p> <ul style="list-style-type: none"> <li>○ ACTUAL</li> <li>▲ PAST TARGET</li> <li>△ FUTURE TARGET</li> </ul>	BETTER 0.6 OKAY 1.0 WORSE 2.0	GOOD DIRECTION 0.6 NO CHANGE 1.0 BAD DIRECTION 2.0	LESS DIFFICULT 0.6 SAME 1.0 MORE DIFFICULT 2.0			
<p><b>EFOR - UNIT 1</b></p> <p>ASSUMPTIONS:</p>	2.0	2.0	2.0	8.70	69.60	

\* Trend without significant effort.

The worksheet for any particular indicator shows the following:

- A graph displaying data about the indicator. This includes actual historic performance to date for this indicator and targets for the indicator.
- Assumptions about performance.
- The overall priority score used to prioritize the indicator relative to the other indicators.

The last point, about prioritizing the indicator relative to others, is a key activity in developing the RFI worksheet. A priority score is a priority ranking number for a performance indicator. In the business planning process it is calculated by considering current performance versus target, overall trend for the indicator, current performance versus future target, and value to the customer. This is done via a "scoring" scheme, such as the one that follows:

1. The current performance versus target is evaluated. If the current performance is better than the target, a score of 0.5 is assigned to it. If the performance is at or near the target, a score of 1.0 is assigned to it. If the performance is worse than target, a score of 2.0 is assigned to it. This is entered into column "B" on the RFI Worksheet.
2. In similar manner, the anticipated future performance versus the target trend is evaluated. If the trend direction is "good", a value of 0.5 is assigned to it. If there is no change in trend anticipated, a score of 1.0 is assigned to it. If a trend in a "bad" direction is anticipated, a score of 2.0 is assigned to it. This is entered into column "C" on the RFI Worksheet.

This should reflect the trend of this data that would occur with no significant improvement efforts. It is important to use management judgment here, and not simply fit a line through a set of points.

3. In similar manner, the anticipated future performance versus the forecast target is evaluated. If the forecast target is less difficult than future performance, a value of 0.5 is assigned to it. If the forecast target is about the same as the anticipated future performance, a score of 1.0 is assigned to it. If the forecast target is more difficult than future performance, a score of 2.0 is assigned to it. This is entered into column "D" on the RFI Worksheet.

4. A Customer Value Index is entered into Column "E" of the RFI worksheet. Customer Value Index is an index applied to each business indicator that shows the relative value of that indicator to the customer. These values are derived from a management review of how important this indicator is relative to other indicators, from the viewpoint of the customer. This can be done by using quantitative data gathered directly from customers, or by using management judgment of the relative impact of indicators on value to the customer (although the former is preferred).
5. The values from columns B, C, D, and E (steps 1 through 4 above) are multiplied together, and placed into column F "Total Score" on the RFI worksheet.

Determining priority provides data as to when resources should be deployed to achieve the most benefit to the customer.

After scoring, each indicator is evaluated to identify and stratify problems with the processes that drive the indicator. This includes determination of which quality improvement process (problem-solving, process modification and improvement, or process redesign) would be appropriate for solving high-priority problems.

### **STEP 3b. Develop the Process Improvement Plan**

The **Process Improvement Plan** identifies contributors to performance gaps for each deployed performance indicator, and describes action plans to close performance gaps including schedules, accountabilities, and resource requirements.

An example of a Process Improvement Plan is shown in figure 6.

Based on the priority using RFI worksheets, the Process Improvement Plan is developed, which includes:

- problems and their impact on current year and outyear performance.
- proposed solution(s) and the expected performance benefits for each problem.
- the schedule for proposed actions.
- accountabilities for executing the proposed action plans.
- resource requirements for the proposed solutions.

Organizations:  
 Plant/Site/Dept: FOSSIL PLANT  
 Fiscal Year: 1994

Process Improvement Plan Performance Trend Report  
 Performance Indicators: EFDR - FOSSIL  
 Unit Number: 01 RFI Score: 1.09

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(Problem) Solution	(Gads)	Projected Performance Trend			Projected Impact					Resource Requirements			
		(PY Act)	(CY Tar)	(CY Proj)	FY94	FY95	FY96	FY97	FY98	Prior Year \$	Curr Year \$	Outyear Est \$	Total Project
PRIMARY SUPERHEATERS TUBE LEAKS	1040	2.41	1.60	1.75	3.10	3.30	3.50	3.80	4.10				
REPLACE PRIMARY SUPERHEATER WITH MODIFICATION		(03/01/93)	JRT	(03/10/94)	-2.50	-3.30	-3.50	-3.80	-4.10	515	3035	0	3550
Cumulative Solution Impacts					-2.50	-3.30	-3.50	-3.80	-4.10	515	3035	0	3550
DETERIORATED HYDROGEN COOLERS	4611	0.00	0.00	0.08	1.90	2.40	2.90	3.40	3.80				
REPLACE HYDROGEN COOLERS		( / / )	JRT	( / / )	-1.60	-2.40	-2.90	-3.40	-3.80	18	180	0	198
Cumulative Solution Impacts					-1.60	-2.40	-2.90	-3.40	-3.80	18	180	0	198
BLR, SCR, LW, OR SLAG SCR (WAT TUBE)		0.00	0.00	0.00	1.22	1.50	2.00	2.50	3.00				
BOILER ASSESSMENT		(01/08/94)		(03/10/94)	0.00	0.00	0.00	0.00	0.00	0	75	0	75
REPLACE FAULTY LOWER SLOPE TUBES		( / / )	JRT	( / / )	-0.35	-0.50	-1.00	-1.50	-2.00	0	0	0	0
Cumulative Solution Impacts					-0.35	-0.50	-1.00	-1.50	-2.00	0	75	0	75
REHEAT TUBE LEAKS	1060	0.00	0.38	0.00	1.00	2.00	3.00	4.00	5.00				
REPLACE REHEAT SUPERHEATER		(03/01/93)	JRT	(03/10/94)	-0.80	-2.00	-3.00	-4.00	-5.00	495	3169	0	3664
Cumulative Solution Impacts					-0.80	-2.00	-3.00	-4.00	-5.00	495	3169	0	3664
FIRST TIME EVENTS		0.06	1.48	0.42	1.00	1.00	1.00	1.00	1.00				
OPTIMIZE PH PROGRAM		( / / )	JRT	( / / )	-0.02	-0.02	-0.02	-0.02	-0.02	0	0	0	0
Cumulative Solution Impacts					-0.02	-0.02	-0.02	-0.02	-0.02	0	0	0	0
HIGH CIRCULATING WATER TEMPERATURE	3280	0.00	0.00	1.53	0.70	0.70	0.70	0.70	0.70				
		( / / )	JJL	( / / )	0.00	0.00	0.00	0.00	0.00	0	0	0	0
Cumulative Solution Impacts					0.00	0.00	0.00	0.00	0.00	0	0	0	0

#### **STEP 4. Develop the Operations Plan**

An **Operations Plan** establishes operating requirements and identifies plans to meet these requirements for routine activities. It is typically broken out by several simple categories (such as capital costs, maintenance costs, and so forth). An example of an Operations Plan is shown in Figure 7.

These resource requirements are determined through management by evaluating key processes and determining the resources needed to fund the routine operations and the improvement of the organization's processes.

Operations Plans include the following:

- identification of key business processes.
- identification of associated activities and tasks.
- justification of needs for routine business activities, including alignment (and evaluation) of routine work activities with customer needs and operating requirements, and alignment with business processes.
- development of work plans with identification of resource requirements.
- evaluation of work activities for possible improvements in efficiency and effectiveness.

#### **STEP 5 Develop the Resource Plan**

The **Resource Plan** identifies the resources needed to support the other elements of the plan. It is a rollup of the resource requirements from the Operations Plan and Process Improvement Plan. It contains information about:

- Financial needs (budgetary information)
- Staffing needs
- Needs for external contractors

Staffing need are derived from an analysis of workforce requirements, using the TVA Workforce Planning Process.

An example of a Resource Plan is shown in figure 8.

Resource Plan breakdowns may include historical data, current plan year rollups (proposed budgets), and outyear expenditure estimates.

Organization: FOSS-OPS  
 Plant/Site/Dept:  
 Fiscal Year: 1994

Operations Plan Summary Report - Process Area / Unit

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 Date: 02/22/94

FOSSIL PLANT

ROUTINE WORK ACTIVITIES (NON-OUTAGE)		RESOURCE REQUIREMENTS THOUSANDS OF DOLLARS					MANHOURS		\$ TOTALS
Process Area	Unit	O & M	Capital	Fuel	Support	Multipse	TVA	Contractor	
ADMINISTRATION	X	34	0	0	0	0	0	0	34
ALLOCATION AND DISTRIBUTI	X	0	72	0	0	0	12	12	72
BUSINESS MANAGEMENT	X	43	0	0	0	0	18400	0	43
EMPLOYEE RELATIONS	X	55	0	0	0	0	3200	0	55
FUEL MANAGEMENT	X	537	0	0	0	0	21880	0	537
HARDWARE MANAGEMENT	X	58	0	0	0	0	0	0	58
HEALTH AND SAFETY	X	10	0	0	0	0	0	0	10
MAINTENANCE	X	317	0	0	0	0	9600	0	317
OPERATIONS	X	820	0	0	0	0	28060	0	820
ROUTINE WORK ACTIVITY TOTALS		1874	72	0	0	0	81152	12	1946

SCHEDULED OUTAGE ACTIVITIES		RESOURCE REQUIREMENTS THOUSANDS OF DOLLARS					MANHOURS		\$ TOTALS
Process Area	Unit	O & M	Capital	Fuel	Support	Multipse	TVA	Contractor	
SCHEDULED OUTAGE TOTALS		0	0	0	0	0	0	0	0
TOTALS		1874	72	0	0	0	81152	12	1946

RESOURCE PLAN - SUMMARY REPORT BY BUDGET CATEGORY

BUDGET CATEGORY		FY 1993 ACTUAL	FY 1994 ACTUAL	FY 1994 ACTUAL	FY 1995 BUS PL	FY 1996 TARGET	FY 1997 TARGET	FY 1998 TARGET	FY 1999 TARGET	FY 2000 TARGET	FY 2001 TARGET
CAPITAL	OUTAGE	1	1	1	0	1	1	1	1	1	1
	NON-OUTAGE	1	1	1	0	1	1	1	1	1	1
	TOTAL	2	2	2	0	2	2	2	2	2	2
FUEL EXPENDITURES	OUTAGE	2	2	2	0	2	2	2	2	2	2
	NON-OUTAGE	2	2	2	0	2	2	2	2	2	2
	TOTAL	4	4	4	0	4	4	4	4	4	4
MULTIPURPOSE	OUTAGE	3	3	3	0	3	3	3	3	3	3
	NON-OUTAGE	0	0	0	0	0	0	0	0	0	0
	TOTAL	3	3	3	0	3	3	3	3	3	3
OPERATIONS &	OUTAGE	12	12	12	0	12	0	0	0	0	0
	NON-OUTAGE	0	0	0	1874	12	12	12	12	12	12
	TOTAL	12	12	12	1874	24	12	12	12	12	12
SUPPORT	OUTAGE	0	0	0	0	0	0	0	0	0	0
	NON-OUTAGE	4	4	4	0	4	4	4	4	4	4
	TOTAL	4	4	4	0	4	4	4	4	4	4
BUDGET TOTALS	OUTAGE	18	18	18	0	18	6	6	6	6	6
	NON-OUTAGE	7	7	7	1874	19	19	19	19	19	19
	TOTAL	25	25	25	1874	37	25	25	25	25	25

## **STEP 6      Develop Other Optional Supporting Plans**

Other supporting plans are optional, but are often useful for directing specified activities within the organization. These supporting plans are:

- Education and Training Plan
- Information System Plan
- Benchmarking Plan
- Supplier/Partner Plan
- Customer Relations Plan
- Employee Issues Action Plan

Each of these is described in additional detail on the following pages

### **STEP 6a.    Develop Other Supporting Plans:    The Education and Training Plan**

The **Education and Training Plan** is used to define the education and training development/delivery requirements for the organization to support changes and activities identified in other parts of the business plan. An example is given in figure 9.

The Education and Training Plan takes education and training requirements as defined in the Operations Plan and Process Improvement Plan, and organizes them. The typical data on an Education and Training Plan includes:

- The type of training / education that the organization will undertake, along with a short description.
- An identification of the total number of employees who will receive the training /education.
- Instructor requirements
- Scheduling details
- An estimate of the cost of the education.

### **STEP 6b.    Develop Other Supporting Plans:    The Information Systems Plan**

The **Information Systems Plan** is used to define the information systems development/delivery requirements for the organization to support process improvements, changes, and other activities identified in other parts of the business plan. An example is given in figure 10.

## EDUCATION AND TRAINING PLAN SUMMARY

ORGANIZATION \_\_\_\_\_  
 PLANT / SITE / DEPT. \_\_\_\_\_

FISCAL YEAR (FY) 199\_\_

Prepared by \_\_\_\_\_  
 Date Prepared \_\_\_\_\_  
 Revision Number \_\_\_\_\_

FIGURE 9

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TYPE OF TRAINING	TRAINING DESCRIPTION	TOTAL NUMBER OF EMPLOYEES	TOTAL NUMBER OF DAYS	TOTAL ESTIMATED COST

# INFORMATION SYSTEMS PLAN

FISCAL YEAR 199\_

ORGANIZATION \_\_\_\_\_

SITE \_\_\_\_\_

Prepared by: \_\_\_\_\_

Date Prepared: \_\_\_\_\_

Revision Number: \_\_\_\_\_

Activity Description	Responsible Manager	Hardware Description	Software Description	Systems Requirements	Schedule		Status
					Start	Finish	

The **Information Systems Plan** takes information systems needs as defined in the Operations Plan and Process Improvement Plan, and organizes them. The typical data on an information Systems Plan includes:

- A description of the information systems activity planned, along with a reference to what is driving this activity.
- A manager in the organization responsible for this activity.
- A description of hardware, software, and or systems development requirements for this activity.
- An estimate of on-going support requirements (Required support from IS).
- Schedule requirements, milestones.

#### **STEP 6c. Develop Other Supporting Plans: The Benchmarking Plan**

Benchmarking, when properly done, is a disciplined business approach to improve processes, as opposed to organized tourism. The **Benchmarking Plan** is used to define and document specific plans for visits to other organizations to gather data to compare TVA's operations to the operations of other well-performing organizations. An example is shown in figure 11.

The Benchmarking Plan takes benchmarking needs as defined in the Operations Plan and Process Improvement Plan, and organizes them. The typical data on an Benchmarking Plan includes:

- Identification of the improvement activity that will include a benchmarking component.
- Identification of results to be obtained.
- A method of follow-up and indicators of results achieved.
- Sources of benchmarking data for each item.
- Organizations that will be used in the benchmarking endeavor.
- A lead TVA person for the benchmarking endeavor.

#### **STEP 6d. Develop Other Supporting Plans: The Supplier/Partner Plan**

The **Supplier/Partner Plan** takes output from the Customer Relations Plan and uses it to establish the basic methods, requirements, and elements to be used in establishing external supplier quality and partnering relationships. An example is shown in figure 12.

**BENCHMARK PLAN**  
FISCAL YEAR (FY) 199\_\_

ORGANIZATION \_\_\_\_\_  
PLANT / SITE / DEPT. \_\_\_\_\_

Prepared by \_\_\_\_\_  
Date Prepared \_\_\_\_\_  
Revision Number \_\_\_\_\_

FIGURE 11

OPERATION / PROCESS IMPROVEMENT PLAN ACTIVITY	SOURCES OF BENCHMARK DATA	COMPANIES TO VISIT				TVA SPONSOR/ LEAD PERSON	STATUS
		NAME OF COMPANY	LOCATION (CITY, STATE)	PROJECTED SCHEDULE	CONTACT PERSON		

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SUPPLIER / PARTNER PLAN						Prepared by _____
FISCAL YEAR (FY) 199__						Date Prepared _____
ORGANIZATION _____						Revision Number _____
PLANT / SITE / DEPT. _____						
EXTERNAL SUPPLIER	ISSUE	ACTIVITY	RESPONSIBLE INDIVIDUAL	SCHEDULE		STATUS
				START	FINISH	

FIGURE 12

The Supplier Relations Plan typically shows these items:

- Each Key internal or external supplier
- A key issue with each supplier
- A planned activity to address this key issue
- The person(s) responsible for working on this issue.
- Scheduled start and end dates for this activity.

#### **STEP 6e. Develop Other Supporting Plans: The Customer Relations Plan**

A **Customer Relations Plan** is a set of activities aimed at meeting customer expectations through better communications and cooperation with TVA's customers.

An example is shown in figure 13.

The Customer Relations Plan typically shows these items:

- Each Key internal or external customer
- A key issue with each customer, aimed at improving the relationship with that customer.
- A planned activity to address this key issue
- The person(s) responsible for working on this issue.
- Scheduled start and end dates for this activity.

#### **STEP 6f. Develop Other Supporting Plans: The Employee Issues Action Plan**

An **Employee Issues Action Plan** is a plan used to resolve issues identified in the TVA Employee Opinion Survey and other workforce initiatives.

An example is shown in figure 14.

The Employee Issues Action Plan typically shows these items:

- Key issues about the workforce.
- A planned activity to address each key issue
- The person(s) responsible for working on this issue.
- Scheduled start and end dates for this activity.

CUSTOMER RELATIONS PLAN						Prepared by _____
FISCAL YEAR (FY) 199__						Date Prepared _____
ORGANIZATION _____						Revision Number _____
PLANT / SITE / DEPT. _____						
CUSTOMER						
CUSTOMER	ISSUE	ACTIVITY	RESPONSIBLE INDIVIDUAL	SCHEDULE		STATUS
				START	FINISH	
SUPPLIER						
SUPPLIER	ISSUE	ACTIVITY	RESPONSIBLE INDIVIDUAL	SCHEDULE		STATUS
				START	FINISH	

<b>EMPLOYEE ISSUES ACTION PLAN</b>					<i>Prepared by:</i> _____	
FISCAL YEAR 199_					<i>Date Prepared:</i> _____	
ORGANIZATION _____					<i>Revision Number:</i> _____	
SITE _____						
Issue	Activity	Responsible Manager	Schedule		Status	
			Start	Finish		

**STEP 7.      Compile The Executive Summary / Appendices / Planning Assumptions, and Assemble the Business Plan**

The last step is compile the **executive summary, planning assumptions, and appendices**, and assemble the business plan.

The executive summary contains this information:

- Features - a summary of the major features of the organization.
- Organization and Accountabilities - the organizational structure, and major accountabilities of each part of the organization. Note: the organizational structure is also used in Board Submissions.
- Major Issues - A summary of the major issues facing the organization for the last fiscal year, for the current fiscal year, and for the next fiscal year.
- Other information, as needed.

The planning assumptions lists the assumptions and information that was used as a basis for developing the Business Plan, and may include items such as:

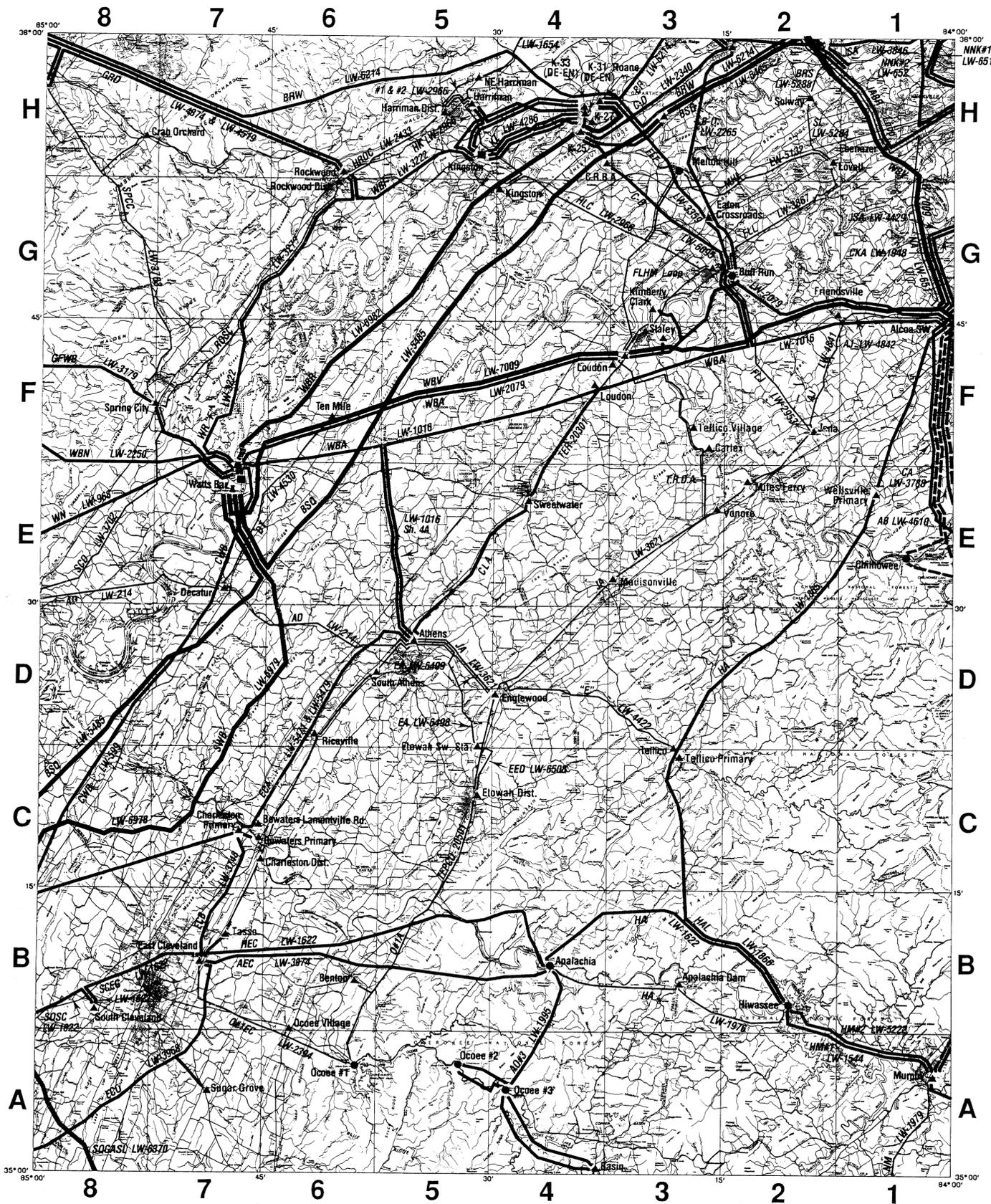
- Workload Forecast
- Budget Guidelines / Resource Constraints
- Generating Plan criteria and expected outputs
- Reservoir Operating Forecast
- Organizational operating requirements and projections
- Other important assumptions

Note: Planning assumptions are also used in Board Submissions.

The Appendices include any kind of detail needed to support information in the main text of the Business Plan, including:

- Operations Plan Detail
- Process Improvement Plan Detail
- Reason for Improvement Worksheets (*required*)
- Basis and Backup Material (if needed)

Finally, these items along with all of the component plans are assembled into the Business Plan document itself.



**LINE DESIGNATIONS**  
 BSQ = BULL RUN - SEQUOYAH 500kV  
 (LOOP TO WATTS BAR)  
 SWB = SEQUOYAH - WATTS BAR 500kV #2  
 WBV = WATTS BAR - VOLUNTEER 500kV

50-390  
 9410210080  
 9/21/94

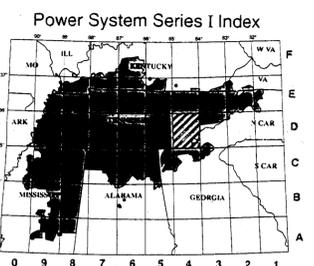
Scale 1:253,440  
 0 5 10 miles  
 0 5 10 kilometers  
 One Inch Represents 4 Miles  
 Map base compiled from 1:100,000-scale national series maps  
 Power system information provided by TVA Transmission  
 National map series indices available from  
 TVA Maps and Surveys, HB1A,  
 1101 Market Street, Chattanooga, TN 37402-2801  
 Phone 615-751-MAPS



**Legend**

<b>Substations</b>	TVA	OTHERS
	▲	△
<b>Generation Facilities</b>		
Pumped Storage	◆	◇
Hydro	●	○
Fossil	■	□
Nuclear	⊠	⊡
<b>Transmission Lines*</b>		
500 kV	≡≡≡	
345 kV	≡≡	
230 kV	≡	
161 kV	≡	
69 kV or less	≡	
<b>Interconnections</b>	— — —	

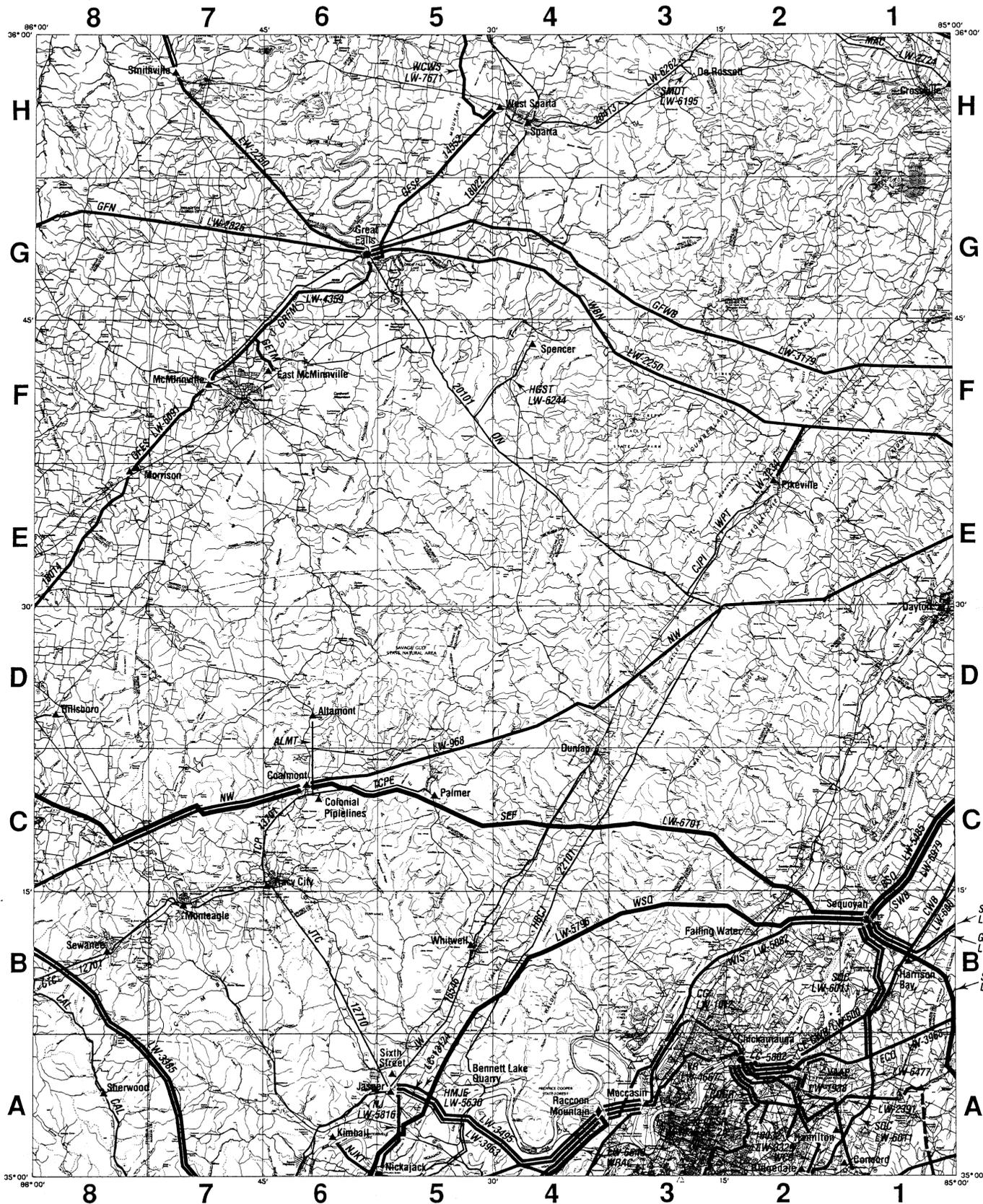
\*TVA transmission lines are identified by plan and profile drawing numbers and property tract symbols



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9410210097-01

J



**LINE DESIGNATIONS**  
 SWB - SEQUOYAH - WATTS BAR 500KV #2

SEC LW-5156  
 GHB LW-5475  
 SGL LW-6370

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Scale 1:253,440  
 0 5 10 miles  
 0 5 10 kilometers  
 One Inch Represents 4 Miles

Map base compiled from 1:100,000-scale national series maps  
 Power system information provided by TVA Transmission  
 National map series indices available from  
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**Legend**

**Substations**

TVA: ▲  
 OTHERS: △

**Generation Facilities**

Pumped Storage: ◆  
 Hydro: ●  
 Fossil: ■  
 Nuclear: ○

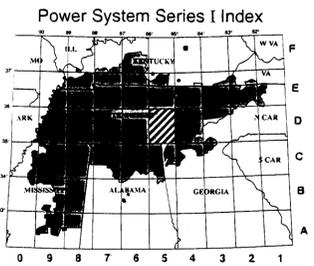
**Transmission Lines\***

500 kV: [thick line]  
 345 kV: [medium-thick line]  
 230 kV: [medium line]  
 181 kV: [thin line]  
 69 kV or less: [dotted line]

**Interconnections**

8 7 6 5 4 3 2 1  
 A B C D E F

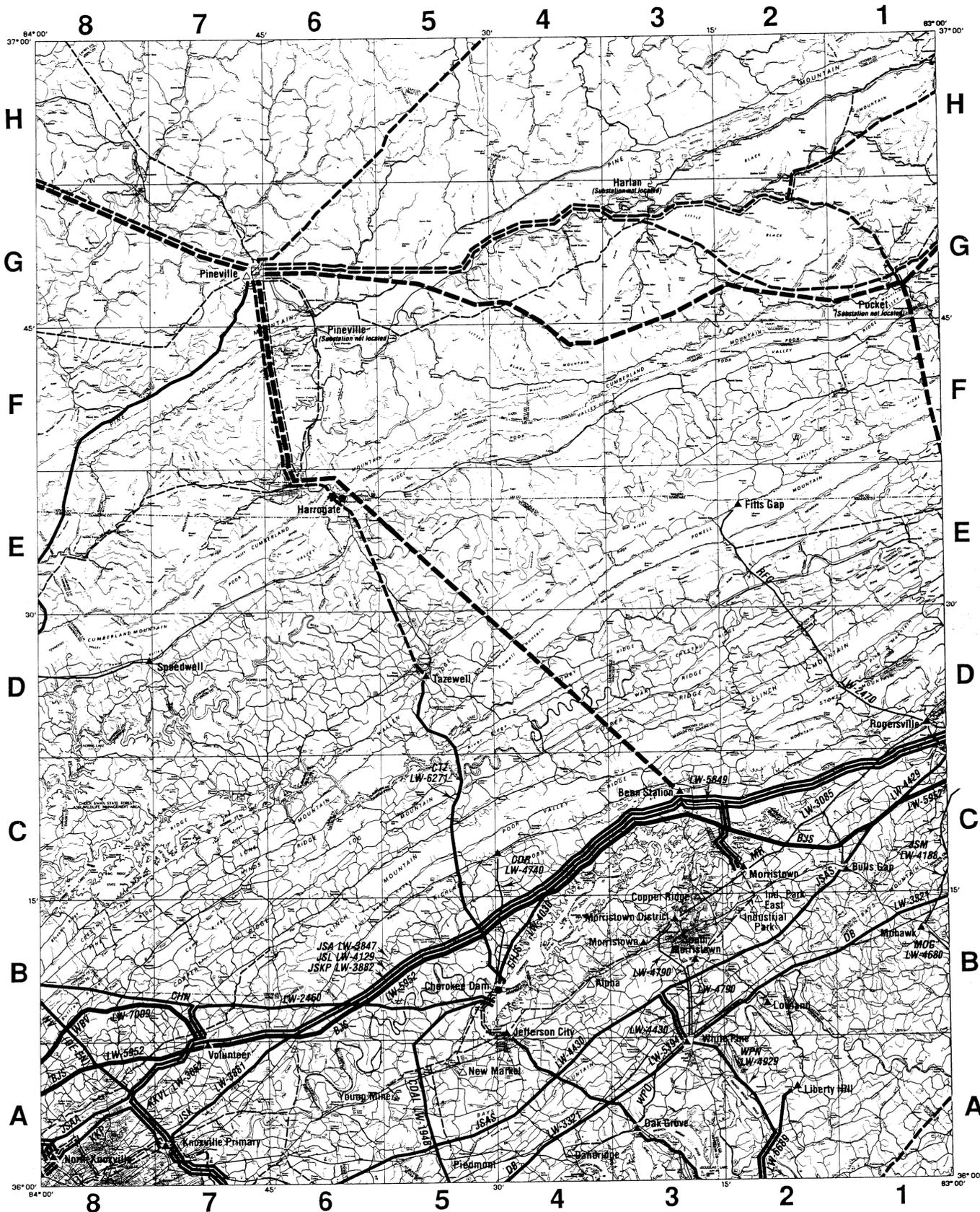
Alphanumeric grid represents 7.5-minute national series maps



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**D5**

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**LINE DESIGNATIONS**  
WBV - WATTS BAR - VOLUNTEER 500kV

ANSI  
9/2/94

Scale 1:253,440  

 One inch Represents 4 Miles  
 Map base compiled from 1:100,000-scale national series maps  
 Power system information provided by TVA Transmission

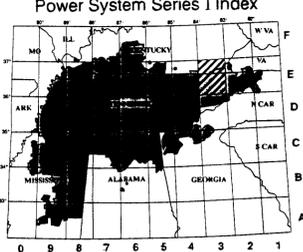


National map series indices available from  
 TVA Maps and Surveys, HB1A,  
 1101 Market Street, Chattanooga, TN 37402-2801  
 Phone 615-751-MAPS

**Legend**

<b>Substations</b>	TVA	OTHERS
	▲	△
<b>Generation Facilities</b>		
Pumped Storage	◆	◇
Hydro	◊	◊
Fossil	■	□
Nuclear	⬢	⬢
<b>Transmission Lines*</b>		
500 kV	▬▬▬▬▬▬	▬▬▬▬▬▬
345 kV	▬▬▬▬▬▬	▬▬▬▬▬▬
230 kV	▬▬▬▬▬▬	▬▬▬▬▬▬
161 kV	▬▬▬▬▬▬	▬▬▬▬▬▬
69 kV or less	▬▬▬▬▬▬	▬▬▬▬▬▬
<b>Interconnections</b>	▬▬▬▬▬▬	▬▬▬▬▬▬

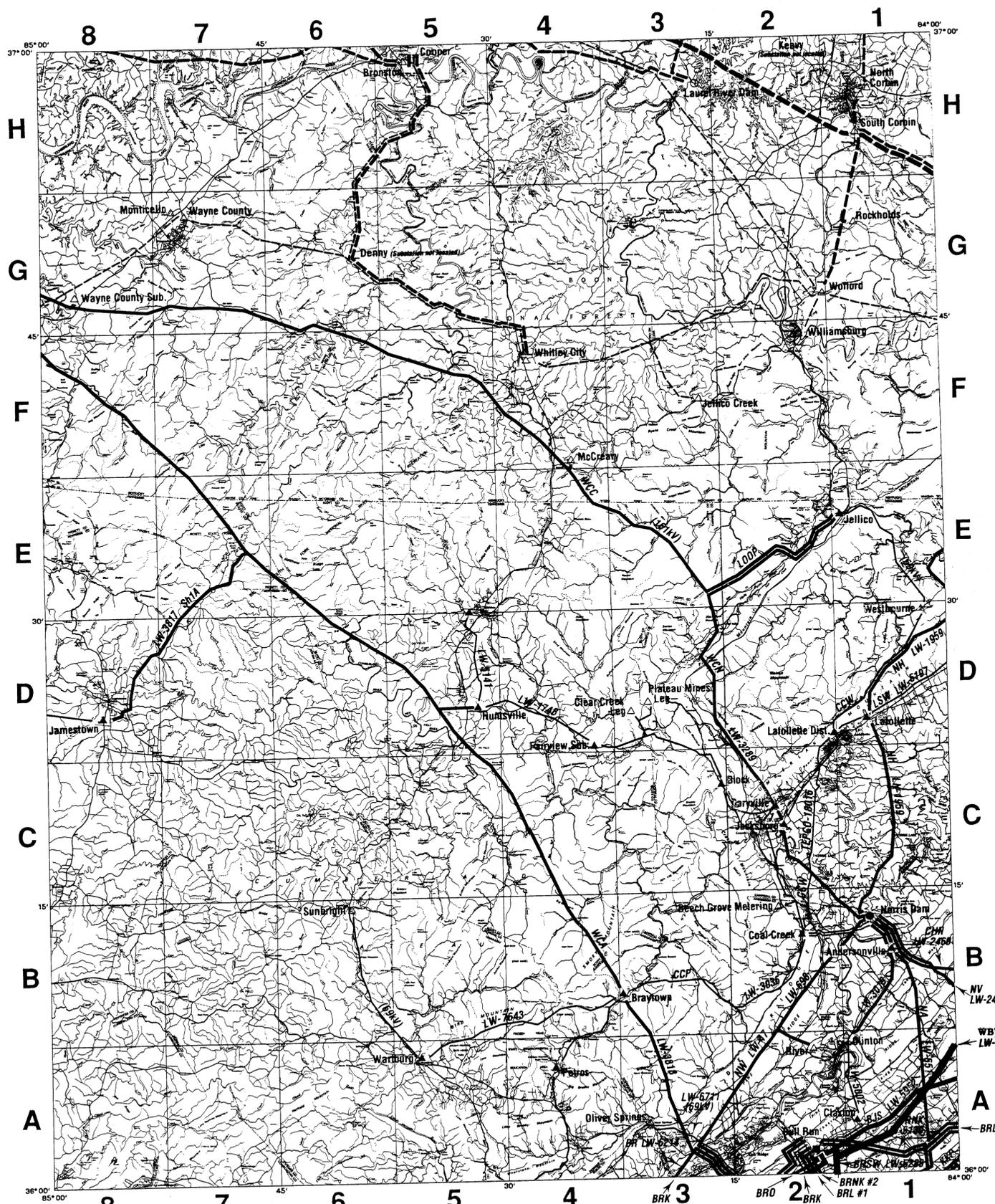
\*TVA transmission lines are identified by plan and profile drawing numbers and property tract symbols



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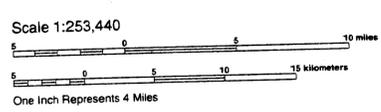
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 9410210097-03  
 9/2/94

9410210097-03



**LINE DESIGNATIONS**  
WBV - WATTS BAR - VOLUNTEER 500kV

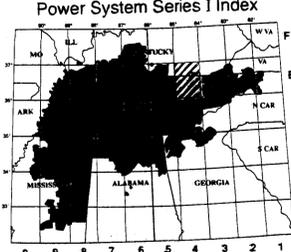
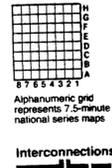
ANSTED APERTURE CARD



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- Legend**
- |                            |     |        |
|----------------------------|-----|--------|
| <b>Substations</b>         | TVA | OTHERS |
| Generation Facilities      | ▲   | △      |
| Pumped Storage             | ◆   | ◇      |
| Hydro                      | ●   | ○      |
| Fossil                     | ■   | □      |
| Nuclear                    | ⊠   |        |
| <b>Transmission Lines*</b> |     |        |
| 500 kV                     | —   |        |
| 345 kV                     | —   |        |
| 230 kV                     | —   |        |
| 161 kV                     | —   |        |
| 69 kV or less              | —   |        |



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