

**TENNESSEE VALLEY AUTHORITY**

**TRANSMISSION SERVICE  
GUIDELINES  
2005 Edition**



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**FOREWORD**

These Guidelines provide the terms and conditions by which any Eligible Customer can obtain from the Tennessee Valley Authority (TVA) Transmission Service determined by TVA to be in excess of its needs to use the TVA Transmission System to carry out its statutory responsibilities to provide an ample supply of power to the TVA area at the lowest feasible cost in accordance with the TVA Act. Such available Transmission Service shall be used for the delivery of electric capacity and energy over the TVA Transmission System from Delivering Parties to Receiving Parties in such manner as does not interfere with TVA's use of its Transmission System for carrying out its statutory purposes. Such Transmission Service to others is to be provided by TVA in accordance with these Guidelines, applying Good Utility Practice and in accordance with all applicable laws, including the Energy Policy Act of 1992, the Energy Policy Act of 2005, and the TVA Act, and reasonably consistent with Order 888. Certain specific provisions of these Guidelines expressly refer to Policies of the North American Electric Reliability Council or any successor organization (NERC). TVA shall follow such NERC Policies to the extent TVA determines that following such policies is consistent with TVA carrying out its responsibilities under the TVA Act.

**I. COMMON SERVICE PROVISIONS****1 Definitions**

Whenever the terms defined below appear in the Guidelines (including any Schedules and Attachments) whether in the singular or in the plural form or in the past or the present tense, the terms have the meanings set forth in this section.

**1.1 Ancillary Services**

Those services that are necessary to support the transmission of capacity and energy from resources to loads while maintaining reliable operation of TVA's Transmission System in accordance with Good Utility Practice.

**1.2 Annual Transmission Costs**

The total annual cost of the Transmission System for purposes of Network Integration Transmission Service shall be the amount specified in Attachment H until amended by TVA.

**1.3 Application**

A request by an Eligible Customer for Transmission Service pursuant to the provisions of the Guidelines.

**1.4 Available Transmission Capability**

The amount of power, as determined by TVA, that can be transferred from a Point of Receipt to a Point of Delivery consistent with Good Utility Practice, applicable reliability criteria, and other considerations affecting the TVA system.

**1.5 Balancing Authority**

The entity that integrates resource plans ahead of time, maintains load-interchange-generation balance within its metered boundary (its Control Area), and supports system frequency in real time.



**1.6 Commission or FERC**

The Federal Energy Regulatory Commission.

**1.7 Completed Application**

An Application that satisfies all of the information and other requirements of the Guidelines, including any required deposit.

**1.8 Control Area**

An electric power system or combination of electric power systems to which a common automatic generation control scheme is applied in accordance with Good Utility Practice in order to:

- (A) match, at all times, the power output of the generators within the electric power system(s) and capacity and energy purchased from entities outside the electric power system(s), with the load within the electric power system(s);
- (B) maintain scheduled interchange with other Control Areas;
- (C) maintain the frequency of the electric power system(s) within reasonable limits; and
- (D) provide sufficient generating capacity to maintain operating reserves.

**1.9 Curtailment**

As the context requires, a reduction in Firm or Non-Firm Point-To-Point Transmission Service or Network Integration Transmission Service in response to a transmission capacity shortage as a result of system reliability conditions.

**1.10 Daily Service**

Transmission Service reserved for a calendar day, which begins at 00:00 a.m. Central Prevailing Time and ends at 12:00 midnight Central Prevailing Time.

**1.11 Delivering Party**

The entity supplying capacity and energy to be transmitted at Point(s) of Receipt.

**1.12 Designated Agent**

Any entity that performs actions or functions required under the Guidelines on behalf of TVA, an Eligible Customer, or the Transmission Customer.

**1.13 Direct Assignment Facilities**

Facilities or portions of facilities that are constructed by TVA for the sole use/benefit of a particular Transmission Customer requesting service under the Guidelines. Direct Assignment Facilities shall be specified in the Service Agreement that governs service to the Transmission Customer.

**1.14 Eligible Customer**

Any electric utility (including TVA and any power marketer), Federal power marketing agency, or any person generating electric energy for sale for resale is an Eligible Customer under the Guidelines. Electric energy sold or produced by such entity may be electric energy produced in the United States, Canada or Mexico. However, such entity is not eligible for Transmission Service that the Commission is prohibited from ordering by Sections 212(f), 212(h), and 212(j) of the Federal Power Act.

**1.15 Facilities Study**

A preliminary engineering design study conducted by TVA to determine the required modifications to TVA's Transmission System, including the estimated cost and scheduled completion date for such modifications, that will be required to provide the requested Transmission Service.

**1.16 Facilities Study Agreement**

An agreement between TVA and the Eligible Customer that sets forth the terms and conditions under which TVA agrees to perform the preliminary engineering design studies related to construction of modifications to TVA's Transmission System and under which the Eligible Customer agrees to compensate TVA for such studies.

**1.17 Firm Point-To-Point Transmission Service**

Transmission Service under these Guidelines that is reserved (Reserved Capacity) and scheduled between specified Points of Receipt and Delivery pursuant to Parts I and II of these Guidelines.

**1.18 Good Utility Practice**

Any of the practices, methods and acts engaged in or approved by a significant portion of the electric utility industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region.

**1.19 Hourly Service**

Transmission Service reserved for one or more sixty (60) minute intervals commencing on the clock hour in a calendar day.

**1.20 Interruption**

A reduction in Non-Firm Point-To-Point Transmission Service due to economic reasons pursuant to Section 14.7 (Curtailment or Interruption of Non-Firm Transmission Service).

**1.21 Load Ratio Share**

Ratio of a Transmission Customer's Network Load to TVA's total load computed in accordance with Sections 34.2 (Determination of Network Customer's Monthly Network Load) and 34.3 (Determination of TVA's Monthly Transmission System Load) of the Network Integration Transmission Service under Parts I and III of the Guidelines and calculated on a rolling average twelve month basis.

**1.22 Load Shedding**

The systematic reduction of system demand by temporarily decreasing load in response to transmission system or area capacity shortages, system instability, or voltage control considerations under Parts I and III of the Guidelines.

**1.23 Long-Term Firm Point-To-Point Transmission Service**

Firm Point-To-Point Transmission Service under Parts I and II of the Guidelines with a term of one year or more.

**1.24 Monthly Service**

Transmission Service reserved for a calendar month. A calendar month begins at 00:00 a.m. Central Prevailing Time on the first day of the month and ends at 12:00 midnight Central Prevailing Time on the last day of the month.

**1.25 Native Load Customers**

The municipal and cooperative distributors of TVA power and directly served industrial customers and Federal installations for which TVA has undertaken to plan, construct, and operate its system to provide reliable and economical power supply.

**1.26 NERC Holiday**

NERC Holidays currently are: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day.

**1.27 Network Customer**

An entity receiving Transmission Service pursuant to the terms of TVA's Network Integration Transmission Service under Parts I and III of the Guidelines.

**1.28 NERC Policy**

Reliability Standards promulgated by NERC.

**1.29 Network Integration Transmission Service**

The Transmission Service provided under Parts I and III of the Guidelines.

**1.30 Network Load**

The load that a Network Customer designates for Network Integration Transmission Service under Parts I and III of the Guidelines. The Network Customer's Network Load shall include all load served by the output of any Network Resources designated by the Network Customer. A Network Customer may elect to designate less than its total load as Network Load but may not designate only part of the load at a discrete Point of Delivery. Where an Eligible Customer has elected not to designate a particular load at discrete points of delivery as Network Load, the Eligible Customer is responsible for making separate arrangements under Parts I and II of the Guidelines for any Point-To-Point Transmission Service that may be necessary for such non-designated load.

**1.31 Network Operating Agreement**

An executed agreement that contains the terms and conditions under which the Network Customer shall operate its facilities and the technical and operational matters associated with the implementation of Network Integration Transmission Service under Parts I and III of the Guidelines.

**1.32 Network Operating Committee**

A group made up of representatives from the Network Customer(s) and TVA established to coordinate operating criteria and other technical considerations required for implementation of Network Integration Transmission Service under Parts I and III of these Guidelines.

**1.33 Network Resource**

Any designated generating resource owned, purchased or leased by a Network Customer under the Network Integration Transmission Service provisions of the

Guidelines. Network Resources do not include any resource, or any portion thereof, that is committed for sale to third parties or otherwise cannot be called upon to meet the Network Customer's Network Load on a non-interruptible basis.

**1.34 Network Upgrades**

Modifications or additions to transmission-related facilities that are integrated with and support TVA's overall Transmission System for the general benefit of all users of such Transmission System.

**1.35 Non-Firm Point-To-Point Transmission Service**

Point-To-Point Transmission Service under the Guidelines that is reserved (Reserved Capacity) and scheduled on an as-available basis and is subject to Curtailment or Interruption as set forth in Section 14.8 (Curtailment or Interruption of Non-Firm Transmission Service) under Parts I and II of these Guidelines. Non-Firm Point-To-Point Transmission Service is available on a stand-alone basis for periods ranging from one hour to one month.

**1.36 Open Access Same-Time Information System (OASIS)**

The information system and standards of conduct contained in Part 37 of the Commission's regulations and all additional requirements implemented by subsequent Commission orders dealing with OASIS.

**1.37 Optional Ancillary Services Load Ratio Share**

Ratio of a Transmission Customer's Network Load to TVA's optional ancillary services load computed in accordance with Sections 34.2 (Determination of Network Customer's Monthly Network Load) and 34.4 (Determination of TVA's Monthly Optional Ancillary Services Load) of the Network Integration Transmission Service under Parts I and III of the Guidelines and calculated on a rolling average twelve month basis.

**1.38 Part I**

Guidelines definitions and common service provisions contained in Sections 1 through 11.

**1.39 Part II**

Guidelines Sections 12 through 27 pertaining to Point-To-Point Transmission Service in conjunction with the applicable Common Service Provisions of Part I and appropriate Schedules and Attachments.

**1.40 Part III**

Guidelines Sections 28 through 35 pertaining to Network Integration Transmission Service in conjunction with the applicable Common Service Provisions of Part I and appropriate Schedules and Attachments.

**1.41 Parties**

TVA and the Transmission Customer receiving service under the Guidelines.

**1.42 Point(s) of Delivery**

Point(s) on TVA's Transmission System where capacity and energy transmitted by TVA will be made available to the Receiving Party under the Guidelines. The Point(s) of Delivery shall be specified in accordance with the Service Agreement.

**1.43 Point(s) of Receipt**

Point(s) of interconnection on TVA's Transmission System where capacity and energy will be made available to TVA by the Delivering Party under the Guidelines. The Point(s) of Receipt shall be specified in accordance with the Service Agreement.

**1.44 Point-To-Point Transmission Service**

The reservation and transmission of capacity and energy on either a firm or non-firm basis from the Point(s) of Receipt to the Point(s) of Delivery under Parts I and II of the Guidelines.

**1.45 Power Purchaser**

The entity that is purchasing the capacity and energy to be transmitted under the Guidelines.

**1.46 Receiving Party**

The entity receiving the capacity and energy transmitted by TVA to Point(s) of Delivery.

**1.47 Redispatch Cost**

The additional power supply costs resulting from modifying the dispatch of any generation facilities or purchased resources to a level other than that determined under TVA's applicable standard economic dispatch procedures, or revising the maintenance schedule of its generation or transmission facilities, in order to provide requested Transmission Service. This also includes incremental costs incurred by TVA resulting from increased environmental compliance costs in order to provide requested Transmission Service.

**1.48 Regional Transmission Group (RTG)**

A voluntary organization of transmission owners, transmission users and other entities approved by the Commission to efficiently coordinate transmission planning (and expansion), operation and use on a regional (and interregional) basis.

**1.49 Reserved Capacity**

The maximum amount of capacity and energy that TVA agrees to transmit for the Transmission Customer over TVA's Transmission System between the Point(s) of Receipt and the Point(s) of Delivery under Parts I and II of the Guidelines. Reserved Capacity shall be expressed in terms of whole megawatts on a sixty (60) minute interval (commencing on the clock hour) basis.

**1.50 Service Agreement**

The initial agreement and any amendments or supplements thereto entered into by the Transmission Customer and TVA for service under the Guidelines.

**1.51 Service Commencement Date**

The date TVA begins to provide service pursuant to the terms of an executed Service Agreement.

**1.52 Short-Term Firm Point-To-Point Transmission Service**

Firm Point-To-Point Transmission Service under Parts I and II of the Guidelines with a term of less than one year.

**1.53 System Impact Study**

An assessment by TVA of (i) the adequacy of the Transmission System to accommodate a request for either Firm Point-To-Point Transmission Service or Network Integration Transmission Service and (ii) whether any additional costs may be incurred in order to provide Transmission Service, including costs for modifications to the TVA Transmission System and Redispatch Costs.

**1.54 System Impact Study Agreement**

An agreement between TVA and the Eligible Customer that sets forth the terms and conditions under which TVA agrees to perform a System Impact Study and under which the Eligible Customer agrees to compensate TVA for such study.

**1.55 Third-Party Sale**

Any sale for resale in interstate commerce (interchange sale) by TVA or a Network Customer to a Power Purchaser that is not designated as part of Network Load under the Network Integration Transmission Service or is not part of the load of a Native Load Customer.

**1.56 Transmission Customer**

Any Eligible Customer (or its Designated Agent) that executes a Service Agreement with TVA. This term is used in the Part I Common Service Provisions to include customers receiving Transmission Service under Part II and Part III of these Guidelines.

**1.57 Transmission Operator**

The entity that operates transmission facilities, executes switching orders, and maintains configuration control over all Transmission System assets.

**1.58 Transmission Service**

As the context requires, Point-To-Point Transmission Service provided under Parts I and II of the Guidelines on a firm and non-firm basis or Network Integration Transmission Service provided under Parts I and III of the Guidelines.

**1.59 Transmission Service Provider**

The entity that provides Transmission Service to Transmission Customers on the Transmission System.

**1.60 Transmission System**

The facilities owned, controlled or operated by TVA that are used to provide Transmission Service under Parts I and II and Parts I and III of the Guidelines.

**1.61 TVA Business Day**

Any day except Saturday, Sunday, or a weekday that is observed by TVA as a Federal Holiday. Federal holidays currently are New Year's Day, Martin Luther King, Jr.'s Birthday, Presidents Day, Memorial Day, Independence Day, Labor Day, Columbus Day, Veterans Day, Thanksgiving Day, and Christmas Day.

**1.62 TVA's Monthly Transmission System Peak**

The maximum firm usage of TVA's Transmission System in a calendar month.

**1.63 Weekly Service**

Transmission Service reserved for a calendar week, which begins at 00:00 a.m. Central Prevailing Time Monday morning and ends at 12:00 midnight Central Prevailing Time on Sunday.

**2 Initial Allocation and Renewal Procedures for Firm Service****2.1 Initial Allocation of Available Transmission Capability for Firm Service**

For purposes of determining whether existing capability on TVA's Transmission System is adequate to accommodate a request for firm service under these Guidelines, all Completed Applications for new firm Transmission Service received during the initial sixty (60) day period commencing with the date these Guidelines were initially placed in effect by TVA (January 1, 1997) will be deemed to have been filed simultaneously. A lottery system shall be used to assign priorities for Completed Applications filed simultaneously. All Completed Applications for firm Transmission Service received after the initial sixty (60) day period shall be assigned a priority pursuant to Section 13.2 (Reservation Priority).

**2.2 Reservation Priority for Existing Firm Service Customers**

- (A)** Subject to paragraph (B), below, existing firm service customers (wholesale requirements and transmission-only, with a contract term of one-year or more), have the right (i.e., the right of first refusal) to continue to take transmission service from TVA when the contract expires, rolls over, or is renewed. This transmission reservation priority is independent of whether the existing firm service customer continues to purchase capacity and energy from TVA or elects to purchase capacity and energy from another supplier. If at the end of the contract term TVA's Transmission System cannot accommodate all of the requests for transmission service, the existing firm service customer must agree to accept a contract term at least equal to a competing request by any new Eligible Customer for firm service and to pay the current charges for such service. This transmission reservation priority for existing firm service customers is an ongoing right that may be exercised at the end of all firm contract terms of one-year or longer by written notice to TVA not less than sixty (60) days prior to the end of the contract term. As between existing firm service customers, when transmission capacity is limited, rollover rights of the Transmission Customer whose initial Transmission Service request predates the other Transmission Customers' initial requests shall have priority. Further provisions for processing Transmission Service rollover requests are stated in TVA's Business Practices.
- (B)** Such existing firm service customers can obtain from TVA only that Transmission Service determined by TVA to be in excess of its needs to use the TVA Transmission System to carry out its statutory responsibilities to provide an ample supply of power to the TVA area at the lowest feasible cost in accordance with the TVA Act. Accordingly, any right (i.e., any right of first refusal) to continue to take Transmission Service from TVA when the contract expires, rolls over, or is renewed is not vested unless and until TVA determines anew that, for the requested additional term of service, TVA continues to have transmission capacity available in excess of its needs. If TVA determines that insufficient transmission capacity is available for such

term, the existing firm service customer has no right to continue to take Transmission Service from the existing transmission capacity of the TVA Transmission System beyond its current contractual term of service. Such existing firm service customer may have a right (i.e., a right of first refusal) for partial interim service, in accordance with Section 19.7 of these Guidelines. If there is sufficient time to construct and place in service facility additions, upgrades, or other modifications to the TVA Transmission System, such existing customer may also be able to continue to take the Transmission Service by paying for those facilities that TVA studies identify as being necessary for increasing the transmission capacity of the TVA Transmission System sufficiently so as to be able to grant the requested Transmission Service.

### **3 Ancillary Services**

Ancillary Services are needed with Transmission Service to maintain reliability within and among the Control Areas affected by the Transmission Service. With Transmission Service provided by TVA, TVA will provide, and the Transmission Customer is required to purchase, the following Ancillary Services: (i) Scheduling, System Control and Dispatch and (ii) Reactive Supply and Voltage Control from Generation Sources.

TVA will provide as requested the following Ancillary Services only to the Transmission Customer serving load within the TVA Control Area: (i) Regulation and Frequency Response, (ii) Energy Imbalance, (iii) Operating Reserve - Spinning, and (iv) Operating Reserve - Supplemental. With Transmission Service provided by TVA, the Transmission Customer serving load within TVA's Control Area is required to acquire these Ancillary Services, whether from TVA, from a third party, or by self-supply. The Transmission Customer may not decline TVA's offer of Ancillary Services unless it reasonably demonstrates to TVA (applying Good Utility Practice) that it has acquired the Ancillary Services from another source. The Transmission Customer must list in its Application which Ancillary Services it will purchase from TVA.

The specific Ancillary Services, prices and/or compensation methods are described in Schedules 1 through 6 that are attached to and made a part of the Guidelines. Three principal requirements apply to discounts for Ancillary Services provided by TVA in conjunction with its provision of transmission service as follows: (1) any offer of a discount made by TVA must be announced to all Eligible Customers solely by posting on the OASIS, (2) any customer-initiated requests for discounts (including requests by TVA for its own Third-Party Sales transactions) must occur solely by posting on the OASIS, and (3) once a discount is negotiated, details must be immediately posted on the OASIS. A discount agreed upon for an Ancillary Service must be offered for the same period to all Eligible Customers on TVA's system. Sections 3.1 through 3.6 below list the six Ancillary Services.

#### **3.1 Scheduling, System Control and Dispatch Service**

The rates and/or methodology are described in Schedule 1.

#### **3.2 Reactive Supply and Voltage Control from Generation Sources Service**

The rates and/or methodology are described in Schedule 2.

#### **3.3 Regulation and Frequency Response Service**

Where applicable the rates and/or methodology are described in Schedule 3.



**3.4 Energy Imbalance Service**

Where applicable the rates and/or methodology are described in Schedule 4.

**3.5 Operating Reserve - Spinning Reserve Service**

Where applicable the rates and/or methodology are described in Schedule 5.

**3.6 Operating Reserve - Supplemental Reserve Service**

Where applicable the rates and/or methodology are described in Schedule 6.

**4 Open Access Same-Time Information System (OASIS) and Standards of Conduct**

TVA will provide an OASIS and implement standards of conduct consistent with the terms, conditions, and standards set forth in 18 CFR Parts 37 and 358 of the Commission's regulations (Open Access Same-Time Information Systems and Standards of Conduct for Transmission Providers).

In the event Available Transmission Capability as posted on the OASIS is insufficient to accommodate a request for firm Transmission Service, additional studies may be required as provided by these Guidelines pursuant to Sections 19 (Additional Study Procedures for Firm Point-to-Point Transmission Service Requests) and 32 (Additional Study Procedures for Network Integration Transmission Service Requests).

**5 Reciprocity**

A Transmission Customer receiving Transmission Service under these Guidelines agrees to provide comparable Transmission Service that it is capable of providing to TVA on similar terms and conditions over facilities used for the transmission of electric energy owned, controlled or operated by the Transmission Customer and over facilities used for the transmission of electric energy owned, controlled or operated by the Transmission Customer's corporate affiliates. A Transmission Customer that is a member of a power pool or Regional Transmission Group also agrees to provide comparable Transmission Service to the members of such power pool and Regional Transmission Group on similar terms and conditions over facilities used for the transmission of electric energy owned, controlled or operated by the Transmission Customer and over facilities used for the transmission of electric energy owned, controlled or operated by the Transmission Customer's corporate affiliates.

This reciprocity requirement applies not only to the Transmission Customer that obtains Transmission Service under the Guidelines, but also to all parties to a transaction that involves the use of Transmission Service under the Guidelines, including the power seller, buyer and any intermediary, such as a power marketer. This reciprocity requirement also applies to any Eligible Customer that owns, controls or operates transmission facilities that uses an intermediary, such as a power marketer, to request Transmission Service under the Guidelines. If the Transmission Customer does not own, control or operate transmission facilities, it must include in its Application a sworn statement of one of its duly authorized officers or other representatives that the purpose of its Application is not to assist an Eligible Customer to avoid the requirements of this provision.

## 6 Billing, Payment and Suspension of Service

### 6.1 Billing Procedure

Unless otherwise agreed upon, within a reasonable time after the first day of each calendar month, TVA shall submit an invoice(s) to the Transmission Customer for the charges for all services furnished under the Guidelines during the preceding month.

The invoice shall be paid by the Transmission Customer within twenty (20) days after the date of the bill. All payments shall be made in immediately available funds payable to TVA, or by electronic transfer to an appropriate account designated by TVA.

Pending the availability of actual data, billings hereunder shall be based on estimates made by TVA, subject to true-up when actual data are known.

### 6.2 Interest on Unpaid Balances

Interest on any unpaid amounts (including amounts placed in escrow) shall be calculated in accordance with the methodology specified for interest on refunds in the Commission's regulations at 18 CFR § 35.19a(a)(2)(iii). Interest on delinquent amounts shall be calculated from the due date of the bill to the date of payment. TVA will submit an invoice to the Transmission Customer for such added charge, which shall be due and payable upon receipt. When payments are made by mail, bills shall be considered as having been paid on the date of receipt by TVA.

### 6.3 Customer Default

**(A) Customer Default for Non-Payment:** In the event the Transmission Customer fails, for any reason other than a billing dispute as described below, to make payment to TVA on or before the due date as described above, and such failure of payment is not corrected within ten (10) business days after TVA notifies the Transmission Customer of its intention to suspend Transmission Service, a default by the Transmission Customer shall be deemed to exist. Upon the occurrence of a default, TVA may suspend service under these Guidelines.

In the event of a billing dispute between TVA and the Transmission Customer, TVA will continue to provide service under the Service Agreement as long as the Transmission Customer (i) continues to make all payments not in dispute, and (ii) pays into an independent escrow account the portion of the invoice in dispute, pending resolution of such dispute. If the Transmission Customer fails to meet these two requirements for continuation of service, then TVA may provide notice to the Transmission Customer of its intention to suspend service as provided above.

**(B) Other Customer Default:** Suspension of Transmission Service may also be precipitated by failure to comply with other material terms and conditions of these Guidelines, the Service Agreement, or the Network Operating Agreement, if applicable. TVA will give the Transmission Customer thirty (30) calendar days notice of TVA's intention to suspend Transmission Service for any such failure. TVA will not suspend Transmission Service

under these Guidelines if the Transmission Customer corrects its performance within the thirty (30) day period indicated in the notice.

## **7 Accounting for TVA's Use of the Guidelines**

TVA shall record the following amounts, as outlined below.

### **7.1 Transmission Revenues**

Include in a separate operating revenue account or subaccount the revenues TVA receives from Transmission Service when making Third-Party Sales under Parts I and II of the Guidelines.

### **7.2 Study Costs and Revenues**

Include in a separate transmission operating expense account or subaccount, costs properly chargeable to expense that are incurred to perform any System Impact Studies or Facilities Studies which TVA conducts to determine if it must construct new transmission facilities or upgrades necessary for its own uses, including making Third-Party Sales under the Guidelines; and include in a separate operating revenue account or subaccount the revenues received for System Impact Studies or Facilities Studies performed when such amounts are separately stated and identified in the Transmission Customer's billing under the Guidelines.

## **8 Revision of Transmission Service Guidelines; Treatment of Previous Transmission Service Arrangements**

### **8.1 Previous Firm Transmission Service Arrangements**

Any Transmission Customer receiving firm transmission service under other transmission service agreements entered into prior to the date these Guidelines were initially placed in effect by TVA (January 1, 1997) will be able to continue to receive such transmission service for the remaining duration of such arrangements, subject to the terms and conditions contained therein.

### **8.2 Revision of Transmission Service Guidelines**

The calculations to establish charges under these Guidelines may be updated on an annual basis. The terms and conditions under which Transmission Service is provided and the methodologies for establishing charges for the provision of Transmission Service are also subject to modification, as determined by TVA.

Nothing contained in the Guidelines, any Service Agreement, or any Network Operating Agreement shall be construed as affecting in any way the ability of any Party receiving service under the Guidelines to exercise its rights under the Federal Power Act and pursuant to the Commission's rules and regulations promulgated thereunder.

## **9 Force Majeure and Indemnification**

### **9.1 Force Majeure**

An event of Force Majeure means any act of God, labor disturbance, act of the public enemy, war, insurrection, riot, fire, storm or flood, explosion, breakage or accident to machinery or equipment, any Curtailment, order, regulation or restriction imposed by governmental, military or lawfully established civilian authorities, or any

other cause reasonably beyond a Party's control. A Force Majeure event does not include an act of negligence or intentional wrongdoing by the Party claiming Force Majeure. Neither TVA nor the Transmission Customer will be considered in default as to any obligation under these Guidelines if prevented from fulfilling the obligation due to an event of Force Majeure, except that an event of Force Majeure shall not be deemed to prevent the performance of payment obligations under these Guidelines. However, a Party whose performance under these Guidelines is hindered by an event of Force Majeure shall make all reasonable efforts to perform its obligations under these Guidelines.

## **9.2 Indemnification**

The Transmission Customer shall at all times indemnify, defend, and save TVA harmless from, any and all damages, losses, claims, including claims and actions relating to injury to or death of any person or damage to property, demands, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties, arising out of or resulting from TVA's performance of its obligations under these Guidelines on behalf of the Transmission Customer, except in cases of negligence or intentional wrongdoing by TVA.

## **9.3 Limitation of Liability**

TVA will use Good Utility Practice to furnish the Transmission Service and Ancillary Services in accordance with these Guidelines, but does not guarantee uninterrupted Transmission Service or Ancillary Services. TVA shall not be liable for any claim for damage or loss attributable to TVA's exercise of its rights to interrupt, curtail, or reduce Transmission Service or Ancillary Services due to, but not limited to, the following:

- (A)** Emergencies or Force Majeure and any other cause which TVA could not reasonably have foreseen and made provision against;
- (B)** Any operating decisions that, in TVA's judgment, were necessary to maintain reliable operation and protect facilities of the TVA Transmission System and the interconnected electrical network;
- (C)** Any operating steps taken by TVA in compliance with rules, guidelines, or procedures established by NERC, the Southeastern Electric Reliability Council (SERC), or any entity to which TVA belongs that is authorized to promulgate regional or national reliability standards;
- (D)** Operation of devices installed for power system protection;
- (E)** Necessary or routine maintenance, repairs, replacements, or installations of equipment, or the investigation of such equipment;
- (F)** System operating conditions, if any, during which Transmission Service is interrupted or curtailed as set forth in these Guidelines or the Service Agreement between TVA and the Transmission Customer; or TVA's exercise of its rights to interrupt, curtail, or reduce Transmission Service or Ancillary Services in order to meet commitments of higher priority and as otherwise provided in these Guidelines or in the Service Agreement.

## **10 Creditworthiness**

For the purpose of determining the ability of the Transmission Customer to meet its obligations related to Transmission Service hereunder, TVA may require reasonable credit review procedures. This review shall be made in accordance with standard commercial practices. For the purpose of determining creditworthiness, Transmission Customers are required to provide TVA the following information:

- (A) Audited financial statements for the three (3) most recent years, if available, that include balance sheets, income statements, statements of cash flows, and notes to the financial statements, or an annual report on Form 10-K for the three (3) most recent years, if available, and
- (B) Interim financial statements for the most recent fiscal period or quarterly financial statements on Form 10-Q for the most recent fiscal period.

In order to satisfy TVA's creditworthiness requirements, TVA may require the Transmission Customer to provide and maintain in effect during the term and until full and final payment and performance under the Service Agreement, credit assurance in the form of an unconditional and irrevocable letter of credit issued by a financial institution that has a long-term debt rating by Standard & Poor's of A- or better, or by Moody's Investors Service of A3 or better, as security to meet its responsibilities and obligations under the Guidelines, or an alternative form of security proposed by the Transmission Customer and acceptable to TVA and consistent with commercial practices established by the Uniform Commercial Code that protects TVA against the risk of non-payment. When a deposit is held by TVA as an alternative form of security, applicable interest shall be computed at an average rate of TVA's short-term borrowings for each calendar quarter. The applicable average rate for each calendar quarter shall be the arithmetic mean, to the nearest one-hundredth of one percent, for the fourth, third, and second months preceding the first month of the calendar quarter. The interest required to be paid shall be compounded quarterly and shall be calculated from the day the deposit check is credited to TVA's account. The amount and form of the credit assurance may change over time given the extent of the obligations and creditworthiness of the Transmission Customer as determined by TVA.

## **11 Dispute Resolution Procedures**

### **11.1 Internal Dispute Resolution Procedures**

Any dispute between a Transmission Customer and TVA involving Transmission Service under the Guidelines shall be referred to a designated senior representative of TVA and a senior representative of the Transmission Customer for resolution on an informal basis as promptly as practicable. In the event the designated representatives are unable to resolve the dispute within thirty (30) days (or such other period as the Parties may agree upon), by mutual agreement such dispute may be submitted to arbitration and resolved in accordance with the arbitration procedures set forth below.

### **11.2 External Arbitration Procedures**

Any arbitration initiated under the Guidelines shall be conducted before a single neutral arbitrator appointed by the Parties. If the Parties fail to agree upon a single arbitrator within ten (10) days of the referral of the dispute to arbitration, each Party shall choose one arbitrator who shall sit on a three-member arbitration panel. The two arbitrators so chosen shall within twenty (20) days select a third arbitrator to chair the arbitration panel. In either case, the arbitrators shall be knowledgeable in electric utility matters, including electric transmission and bulk power issues, and shall not have any current or past substantial business or financial relationships with any Party to the arbitration (except prior arbitration). The arbitrator(s) shall provide each of the Parties an opportunity to be heard and, except as otherwise

provided herein, shall generally conduct the arbitration in accordance with the Commercial Arbitration Rules of the American Arbitration Association.

### **11.3 Arbitration Decisions**

Unless otherwise agreed, the arbitrator(s) shall render a decision within ninety (90) days of appointment and shall notify the Parties in writing of such decision and the reasons therefor. The arbitrator(s) shall be authorized only to interpret and apply the provisions of the Guidelines and any Service Agreement entered into under the Guidelines and shall have no power to modify or change any of the above in any manner. The decision of the arbitrator(s) shall be final and binding upon the Parties, and judgment on the award may be entered in any court having jurisdiction. The decision of the arbitrator(s) may be appealed solely on the grounds that the conduct of the arbitrator(s), or the decision itself, violated the standards set forth in the Federal Arbitration Act and/or the Administrative Dispute Resolution Act.

### **11.4 Costs**

Each Party shall be responsible for its own costs incurred during the arbitration process and for the following costs, if applicable:

- (A) the cost of the arbitrator chosen by the Party to sit on the three member panel and one half of the cost of the third arbitrator chosen or
- (B) one half the cost of the single arbitrator jointly chosen by the Parties.

### **11.5 Rights Under the Federal Power Act**

Nothing in this section shall restrict the rights of any Party to file a complaint with the Commission under relevant provisions of the Federal Power Act.

## **II. POINT-TO-POINT TRANSMISSION SERVICE**

### **Preamble**

TVA will provide Firm and Non-Firm Point-To-Point Transmission Service pursuant to the applicable terms and conditions of these Guidelines. Point-To-Point Transmission Service is for the receipt of capacity and energy at designated Point(s) of Receipt and the transmission of such capacity and energy to designated Point(s) of Delivery.

### **12 Type of Transmission Service**

The type of Transmission Service provided in accordance with these Guidelines will be specified in a Service Agreement between TVA and the Eligible Customer. Under Parts I and II of these Guidelines, TVA will make available Long-Term Firm Point-To-Point Transmission Service, Short-Term Firm Point-To-Point Transmission Service and Non-Firm Point-To-Point Transmission Service.

### **13 Nature of Firm Point-To-Point Transmission Service**

Firm Point-To-Point Transmission Service provides for the reserved use of transmission capability on TVA's Transmission System deemed to be available above TVA's own planned use of the TVA Transmission System to meet Native Load Customers' needs for

reliable and economical service, to meet other previously arranged firm commitments, and to account for reliability considerations affecting the TVA Transmission System and interconnections with others.

### **13.1 Term**

The minimum term of Firm Point-To-Point Transmission Service shall be one day and the maximum term shall be specified in the Service Agreement.

#### **(A) Long-Term Firm Transmission Service**

Long-Term Firm Transmission Service is made available for a minimum duration of one year and a maximum duration specified in the Service Agreement.

#### **(B) Short-Term Firm Transmission Service**

Short-Term Firm Transmission Service is made available for a minimum duration of one day and a maximum duration of less than one year.

### **13.2 Reservation Priority**

Long-Term Firm Point-To-Point Transmission Service shall be available on a first-come, first-served basis (i.e., in the chronological sequence in which each Transmission Customer has reserved service). Reservations for Short-Term Firm Point-To-Point Transmission Service will be conditional based upon the length of the requested transaction. If the Transmission System becomes oversubscribed, requests for longer term service may preempt requests for shorter term service up to the following deadlines: by 12:00 noon Central Prevailing Time one day before the commencement of Daily Service, by 12:00 noon Central Prevailing Time one week before the commencement of Weekly Service, and by 12:00 noon Central Prevailing Time 30 days before the commencement of Monthly Service. If the day indicated is not a TVA Business Day, the deadline shall occur on the previous TVA Business Day. Before the conditional reservation deadline, if Available Transmission Capability is insufficient to satisfy all Applications, an Eligible Customer with a conditional reservation for shorter term firm service has the right of first refusal to match any longer short-term firm reservation before losing its reservation priority.

A longer term competing request for Short-Term Firm Point-To-Point Transmission Service will be granted if the Eligible Customer with the right of first refusal does not agree to match the competing request within 24 hours (or earlier if necessary to comply with the scheduling deadlines provided in Section 13.8) from being notified by TVA of a longer-term competing request for Short-Term Firm Point-To-Point Transmission Service. After the conditional reservation deadline, service will commence pursuant to the terms of Parts I and II of the Guidelines. Firm Point-To-Point Transmission Service will always have a reservation priority over Non-Firm Point-To-Point Transmission Service under the Guidelines. All Long-Term Firm Point-To-Point Transmission Service will have equal reservation priority with Native Load Customers and Network Customers. Reservation priorities for existing firm service customers are provided in Section 2.2 (Reservation Priority for Existing Firm Service Customers).

**13.3 Use of Firm Transmission Service by TVA**

TVA will be subject to the rates, terms and conditions of Parts I and II of these Guidelines when making Third-Party Sales under agreements executed on or after the Guidelines were initially placed in effect by TVA (January 1, 1997). TVA will maintain separate accounting, pursuant to Section 7 (Accounting for TVA's Use of the Guidelines), for any use of the Point-To-Point Transmission Service to make Third-Party Sales.

**13.4 Service Agreements**

TVA shall offer a standard form Firm Point-To-Point Transmission Service Agreement (Attachment A) for Transmission Service from Available Transmission Capability to an Eligible Customer when it submits a Completed Application for Firm Point-To-Point Transmission Service. A condition of an Eligible Customer's acceptance of the Service Agreement is that, along with scheduling information, such customer will provide tagging information that meets the specifications of the applicable NERC Policy.

**13.5 Transmission Customer Obligations for Facility Additions or Redispatch Costs**

In cases where TVA determines that the Transmission System is not capable of providing Firm Point-To-Point Transmission Service without (1) degrading or impairing the reliability of service to Native Load Customers, Network Customers and other Transmission Customers taking Firm Point-To-Point Transmission Service, or (2) interfering with TVA's ability to meet prior firm contractual commitments to others, TVA will be obligated to expand or upgrade its Transmission System pursuant to the terms of Section 15.3 (Obligation to Provide Transmission Service that Requires Expansion or Modification of the Transmission System). The Transmission Customer must agree to compensate TVA for any necessary transmission facility modifications pursuant to the terms of Section 27 (Compensation for Modifications and Redispatch Costs). To the extent TVA can relieve any system constraint more economically by redispatching TVA's resources than through constructing Network Upgrades, it shall do so, provided that the Eligible Customer agrees to compensate TVA pursuant to the terms of Section 27 (Compensation for Modifications and Redispatch Costs). Any Redispatch Costs or Network Upgrade or Direct Assignment Facilities costs to be charged to the Transmission Customer on an incremental basis under the Guidelines will be specified in the Service Agreement prior to initiating service.

**13.6 Curtailment of Firm Transmission Service**

In the event that a Curtailment on TVA's Transmission System, or a portion thereof, is required to maintain reliable operation, Curtailments will be made, using the applicable NERC Policy, on a non-discriminatory basis to the transaction(s) that effectively relieve the constraint.

If multiple transactions require Curtailment, to the extent practicable and consistent with Good Utility Practice, TVA will curtail service to Network Customers and Transmission Customers taking Firm Point-To-Point Transmission Service on a basis comparable to the curtailment of service to TVA's Native Load Customers. TVA also will discontinue or reduce service



to the firm Transmission Customer to the extent that deliveries for transmission are discontinued or reduced by others at the Point(s) of Receipt or Point(s) of Delivery. This shall not relieve the Transmission Customer of payment obligations to TVA. All Curtailments will be made on a non-discriminatory basis, however, Non-Firm Point-To-Point Transmission Service shall be curtailed (or interrupted) before firm Transmission Service. TVA reserves the right to curtail, in whole or in part, any firm Transmission Service provided under the Guidelines when, in TVA's sole discretion, an emergency or other unforeseen condition impairs or degrades the reliability of its Transmission System. TVA will notify all affected Transmission Customers in a timely manner of any scheduled Curtailments to the extent practicable and consistent with Good Utility Practice. When advance notice cannot be provided by TVA consistent with Good Utility Practice, the Transmission Customer shall make the required reductions immediately upon request by TVA.

### **13.7 Classification of Firm Transmission Service:**

- (A)** The Transmission Customer taking Firm Point-To-Point Transmission Service may (1) change its Points of Receipt and Points of Delivery to obtain service on a non-firm basis consistent with the terms of Section 22.1 (Modifications on a Non-Firm Basis) or (2) request a modification of the Points of Receipt or Points of Delivery on a firm basis pursuant to the terms of Section 22.2 (Modifications on a Firm Basis).
- (B)** The Transmission Customer may purchase Transmission Service to make sales of capacity and energy from multiple generating units that are on TVA's Transmission System. For such a purchase of Transmission Service, the resources will be designated as multiple Points of Receipt, unless the multiple generating units are at the same generating plant in which case the units would be treated as a single Point of Receipt.
- (C)** TVA shall provide firm deliveries of capacity and energy from the Point(s) of Receipt to the Point(s) of Delivery. Each Point of Receipt at which firm transmission capacity is reserved by the Transmission Customer shall be set forth in the Firm Point-To-Point Transmission Service Agreement for Long-Term Firm Transmission Service along with a corresponding capacity reservation associated with each Point of Receipt. Points of Receipt and corresponding capacity reservations shall be as mutually agreed upon by the Parties for Short-Term Firm Transmission. Each Point of Delivery at which firm transmission capacity is reserved by the Transmission Customer shall be set forth in the Firm Point-To-Point Transmission Service Agreement for Long-Term Firm Transmission Service along with a corresponding capacity reservation associated with each Point of Delivery. Points of Delivery and corresponding capacity reservations shall be as mutually agreed upon by the Parties for Short-Term Firm Transmission. The sum of the capacity reservations at the Point(s) of Delivery shall be the Transmission Customer's Reserved Capacity. The Transmission Customer will be billed for its Reserved Capacity under the terms of SCHEDULE 7. The Transmission Customer may not exceed its firm capacity reserved at any Point of Receipt or Point of Delivery except as otherwise specified in Section 22 (Changes in Service Specifications). In the event that a

Transmission Customer (including Third-Party Sales by TVA) exceeds its firm Reserved Capacity at any Point of Receipt or Point of Delivery, the Transmission Customer will pay for the amount that exceeds the Reserved Capacity as specified in SCHEDULE 7. The payment of this amount for unauthorized use shall be subject to the same terms and conditions as payment for Transmission Service as described in Section 6 (Billing, Payment and Suspension of Service).

### **13.8 Scheduling of Firm Point-To-Point Transmission Service**

Unless and until TVA adopts another scheduling method, schedule requests and notification of schedule acceptance or non-acceptance shall be by electronic communication.

Schedules, along with tagging information as specified in the applicable NERC Policy, for each hour that capacity and energy is to be delivered by TVA in accordance with these Guidelines shall be provided to:

Interchange Authority  
Tennessee Valley Authority  
1101 Market Street, MR BA  
Chattanooga, Tennessee 37402-2801  
Telephone: (423) 751-3141

Schedules for the Transmission Customer's Firm Point-To-Point Transmission Service must be submitted to TVA no later than 2:00 p.m. Central Prevailing Time of the TVA Business Day prior to commencement of such service. Schedules submitted after 2:00 p.m. Central Prevailing Time will be accommodated, if practicable. Hour-to-hour schedules of any capacity and energy that is to be delivered must be stated in increments of 1,000 kW per hour. Transmission Customers within the TVA service area with multiple requests for Transmission Service at a Point of Receipt, each of which is under 1,000 kW per hour, may consolidate their service requests at a common point of receipt into units of 1,000 kW per hour for scheduling and billing purposes. Scheduling changes will be permitted up to twenty (20) minutes before the start of the next clock hour provided that such changes can be practicably accommodated and the Delivering Party and Receiving Party also agree to the schedule modification. A scheduling change consists of a request to modify the kilowatts scheduled on a path in one or more hours in a day. TVA will confirm with the Delivering Party's system operator, hour-to-hour schedules equal to those furnished by the Receiving Party (unless reduced for losses) and shall deliver the capacity and energy provided by such schedules. Should the Transmission Customer, Delivering Party or Receiving Party revise or terminate any schedule, such party shall immediately notify TVA, and TVA shall have the right to adjust accordingly the schedule for capacity and energy to be received and to be delivered.

### **14 Nature of Non-Firm Point-To-Point Transmission Service**

Non-Firm Point-To-Point Transmission Service provides for the reserved use of transmission capability on TVA's Transmission System on an interruptible basis to the extent transmission system capability is available for the delivery of capacity and energy after TVA's use of the TVA Transmission System to meet Native Load Customers' needs

for reliable and economical service, to meet firm commitments, and to account for reliability considerations affecting the TVA Transmission System and interconnections with others.

#### **14.1 Term**

Non-Firm Point-To-Point Transmission Service will be available for periods ranging from one (1) hour to one (1) month and will be provided from Available Transmission Capability. However, a Transmission Customer purchasing Non-Firm Point-To-Point Transmission Service will be entitled to reserve a sequential term of service (such as a sequential monthly term without having to wait for the initial term to expire before requesting another monthly term) so that the total time period for which the reservation applies is greater than one month, subject to the requirements of Section 18.3 (Reservation of Non-Firm Point-To-Point Transmission Service).

#### **14.2 Reservation Priority**

Non-Firm Point-To-Point Transmission Service shall be available from transmission capability in excess of that needed for reliable and economical service to Native Load Customers, Network Customers and other Transmission Customers taking Long-Term and Short-Term Firm Point-To-Point Transmission Service. A higher priority will be assigned to non-firm reservations with a longer duration of service. In the event the Transmission System is constrained, competing non-firm requests of equal duration will be prioritized based on the highest price offered by the Eligible Customer for the Transmission Service. Eligible Customers that have already reserved shorter term non-firm service have the right of first refusal to match any longer term non-firm reservation before being preempted. A longer term competing request for Non-Firm Point-To-Point Transmission Service will be granted if the Eligible Customer with the right of first refusal does not agree to match the competing request: (a) immediately for hourly Non-Firm Point-To-Point Transmission Service after notification by TVA; and, (b) within 24 hours (or earlier if necessary to comply with the scheduling deadlines provided in Section 14.6) for Non-Firm Point-To-Point Transmission Service other than hourly transactions after notification by TVA. Transmission Service for Network Customers from resources other than designated Network Resources will have a higher reservation priority than any Non-Firm Point-To-Point Transmission Service. Non-Firm Point-To-Point Transmission Service over Secondary Receipt and Delivery Point(s) will have the lowest reservation priority under the Guidelines.

#### **14.3 Use of Non-Firm Point-To-Point Transmission Service by TVA**

TVA will be subject to the rates, terms and conditions of Parts I and II of the Guidelines when making (i) Third-Party Sales under agreements executed on or after the Guidelines were initially placed in effect by TVA (January 1, 1997) or (ii) new Third-Party Sales under agreements executed prior to the aforementioned date. TVA will maintain separate accounting, pursuant to Section 7 (Accounting for TVA's Use of the Guidelines), for any use of Non-Firm Point-To-Point Transmission Service to make Third-Party Sales.

**14.4 Service Agreements**

TVA shall offer a standard form Non-Firm Point-To-Point Transmission Service Agreement (Attachment B) for Transmission Service from Available Transmission Capability to an Eligible Customer when it first submits a Completed Application for Non-Firm Point-To-Point Transmission Service pursuant to the Guidelines. A condition of an Eligible Customer's acceptance of the Service Agreement is that, along with scheduling information, such customer will provide tagging information that meets the specifications of the applicable NERC Policy.

**14.5 Classification of Non-Firm Point-To-Point Transmission Service**

Non-Firm Point-To-Point Transmission Service shall be offered under terms and conditions contained in Parts I and II of the Guidelines. TVA undertakes no obligation under the Guidelines to plan its Transmission System in order to have sufficient capacity for Non-Firm Point-To-Point Transmission Service. Parties requesting Non-Firm Point-To-Point Transmission Service for the transmission of firm power do so with the full realization that such service is subject to availability and to Curtailment or Interruption under the terms of the Guidelines. The sum of the capacity reservations at the Point(s) of Delivery shall be the Transmission Customer's Reserved Capacity. The Transmission Customer will be billed for its Reserved Capacity under the terms of SCHEDULE 8. In the event that a Transmission Customer (including TVA when making Third-Party Sales) exceeds its non-firm Reserved Capacity, the Transmission Customer will pay for the amount that exceeds the Reserved Capacity as specified in SCHEDULE 8. The payment of this amount for unauthorized use shall be subject to the same terms and conditions as payment for Transmission Service as described in Section 6 (Billing, Payment and Suspension of Service). Non-Firm Point-To-Point Transmission Service shall include transmission of energy on an Hourly Service basis and transmission of short-term capacity and energy on a Daily Service, Weekly Service, or Monthly Service basis, but shall not exceed one month's reservation for any one Application, under Schedule 8.

**14.6 Scheduling of Non-Firm Point-To-Point Transmission Service**

Unless and until TVA adopts another scheduling method, schedule requests and notification of schedule acceptance or non-acceptance shall be by electronic communication.

Schedules, along with tagging information as specified in the applicable NERC Policy, for each hour that capacity and energy is to be delivered by TVA in accordance with these Guidelines shall be provided to:

Interchange Authority  
Tennessee Valley Authority  
1101 Market Street, MR BA  
Chattanooga, Tennessee 37402-2801  
Telephone: (423) 751-3141

Schedules for the Transmission Customer's Non-Firm Point-To-Point Transmission Service must be submitted to TVA no later than 12:00 noon Central Prevailing Time of the TVA Business Day prior to commencement of such service. Schedules

submitted after 12:00 noon Central Prevailing Time will be accommodated, if practicable. Hour-to-hour schedules of any capacity and energy that is to be delivered must be stated in increments of 1,000 kW per hour. Transmission Customers within the TVA service area with multiple requests for Transmission Service at a Point of Receipt, each of which is under 1,000 kW per hour, may consolidate their service requests at a common Point of Receipt into units of 1,000 kW per hour for scheduling and billing purposes. Scheduling changes will be permitted up to twenty (20) minutes before the start of the next clock hour provided that such changes can be practicably accommodated and the Delivering Party and Receiving Party also agree to the schedule modification. A scheduling change consists of a request to modify the kilowatts scheduled on a path in one or more hours in a day. TVA will confirm with the Delivering Party's system operator, hour-to-hour schedules equal to those furnished by the Receiving Party (unless reduced for losses) and shall deliver the capacity and energy provided by such schedules. Should the Transmission Customer, Delivering Party or Receiving Party revise or terminate any schedule, such party shall immediately notify TVA, and TVA shall have the right to adjust accordingly the schedule for capacity and energy to be received and to be delivered.

#### **14.7 Curtailment or Interruption of Non-Firm Transmission Service**

- (A) TVA reserves the right to curtail, in whole or in part, Non-Firm Point-To-Point Transmission Service provided under the Guidelines for reliability reasons when an emergency or other unforeseen condition threatens to impair or degrade the reliability of its Transmission System. TVA reserves the right to interrupt, in whole or in part, Non-Firm Point-To-Point Transmission Service provided under the Guidelines for economic reasons in order to accommodate (1) a request for Firm Point-To-Point Transmission Service, (2) a request for Non-Firm Point-To-Point Transmission Service of greater duration, (3) a request for Non-Firm Point-To-Point Transmission Service of equal duration with a higher price, (4) transmission service for Network Customers from non-designated resources, or (5) TVA's use of the transmission system to provide reliable and economical service to its Native Load Customers. TVA also will discontinue or reduce service to the Transmission Customer to the extent that deliveries for transmission are discontinued or reduced by others at the Point(s) of Receipt or Point(s) of Delivery. This shall not relieve the Transmission Customer of payment obligations to TVA. Where required, Curtailments (using the applicable NERC Policy) or Interruptions will be made on a non-discriminatory basis to the transaction(s) that effectively relieve the constraint, however, Non-Firm Point-To-Point Transmission Service shall be curtailed (or interrupted) before firm Transmission Service. If multiple transactions require Curtailment or Interruption, to the extent practicable and consistent with Good Utility Practice, Curtailments or Interruptions will be made to transactions of the shortest term (e.g., Hourly Service non-firm transactions will be curtailed or interrupted before Daily Service non-firm transactions and Daily Service non-firm transactions will be curtailed or interrupted before Weekly Service non-firm transactions). In case of Non-Firm Transmission Service of equal duration and price, within each type of service (Hourly Service, Daily Service, etc.), Interruption will be on a pro-rata basis. Transmission Service for Network Customers from resources

other than designated Network Resources will have a higher priority than any Non-Firm Point-To-Point Transmission Service under the Guidelines. Non-Firm Point-To-Point Transmission Service over Secondary Receipt and Delivery Points will have a lower Curtailment or Interruption priority than any Non-Firm Point-To-Point Transmission Service under the Guidelines. TVA will notify all affected Transmission Customers in a timely manner of any scheduled Curtailments to the extent practicable and consistent with Good Utility Practice. When advance notice cannot be provided by TVA consistent with Good Utility Practice, the Transmission Customer shall make the required reductions immediately upon request by TVA.

## **15 Service Availability for Firm and Non-Firm Transmission Service**

### **15.1 General Conditions**

TVA will provide from Available Transmission Capacity Firm and Non-Firm Point-To-Point Transmission Service over, on or across its Transmission System to any Transmission Customer that has met the requirements of Section 16 (Transmission Customer Responsibilities).

### **15.2 Determination of Available Transmission Capability**

A description of TVA's specific methodology for assessing Available Transmission Capability posted on TVA's OASIS (Section 4: Open Access Same-Time Information System (OASIS) and Standards of Conduct) is contained in Attachment C of the Guidelines. In the event sufficient transmission capability may not exist to accommodate a firm service request, TVA will, when requested, respond by performing a System Impact Study.

### **15.3 Obligation to Provide Transmission Service that Requires Expansion or Modification of the Transmission System**

If TVA determines that it cannot accommodate a Completed Application for Firm Point-To-Point Transmission Service because of insufficient capability on its Transmission System, TVA will use due diligence to expand or modify its Transmission System to provide the requested Firm Transmission Service, provided the Transmission Customer agrees to compensate TVA for such costs pursuant to the terms of Section 27 (Compensation for Modifications and Redispatch Costs). TVA will conform to Good Utility Practice in determining the need for new facilities and in the design and construction of such facilities. This obligation applies only to those facilities that TVA has the right to expand or modify.

TVA shall be required to construct or cause to be constructed only the necessary modifications (including Direct Assignment Facilities and Network Upgrades) after satisfaction of all of the following conditions:

- (A)** TVA has received the executed Service Agreement from the Eligible Customer under which the Eligible Customer has agreed to pay TVA for the cost of any modifications. (Due to limitations on its borrowing authority under the TVA Act, TVA reserves the right to require payment in advance sufficient to cover the costs of modifications.)

- (B) TVA has received payment in full or other reasonable security as provided in Section 19 (Additional Study Procedures for Firm Point-To-Point Transmission Service Requests) for any necessary studies.
- (C) TVA has obtained all necessary rights-of-way or other property rights and any necessary legal and regulatory approvals to construct, own, and operate the transmission facilities. (TVA will make all reasonable efforts to obtain all necessary rights-of-way or other property rights and any necessary legal and regulatory approvals to construct, own, and operate the required transmission facilities.)
- (D) The Transmission Customer shall cooperate with TVA in construction of the required facilities and shall take all reasonable steps to assist TVA in obtaining necessary permits, authorizations, and rights-of-way.

TVA will continue to own any and all modifications built by it (including Direct Assignment Facilities and Network Upgrades).

#### **15.4 Deferral of Service**

TVA may defer providing service until it completes construction of new transmission facilities or upgrades needed to provide Firm Point-To-Point Transmission Service whenever TVA determines that providing the requested service would, without such new facilities or upgrades, impair or degrade reliability to any existing firm services.

#### **15.5 Real Power Losses**

Real Power Losses are associated with all Transmission Service. TVA is not obligated to provide Real Power Losses. The Transmission Customer is responsible for replacing losses associated with all Transmission Service as calculated by TVA or for receiving a reduced amount of capacity and energy upon delivery to account for losses. TVA may agree to supply the amount of losses to be absorbed on the TVA Transmission System, provided the Transmission Customer compensates TVA for such provision of losses at TVA's indicated charges. If the Transmission Customer desires to provide the losses or have a third party provide them, the Transmission Customer shall notify TVA of the sources and Point(s) of Receipt. Otherwise, the amount of power and energy actually transmitted from the Point(s) of Receipt to the Point(s) of Delivery shall be the amount received by TVA for delivery less transmission losses on the TVA Transmission System. The percentage value of losses shall be three (3) percent based on average losses on the TVA Transmission System.

### **16 Transmission Customer Responsibilities**

#### **16.1 Conditions Required of Transmission Customers**

Point-To-Point Transmission Service shall be provided by TVA only if the following conditions are satisfied by the Transmission Customer:

- (A) The Transmission Customer has pending a Completed Application for service;

- (B) The Transmission Customer meets the creditworthiness criteria set forth in Section 10 (Creditworthiness);
- (C) The Transmission Customer will have arrangements in place for any other transmission service necessary to effect the delivery from the generating source to TVA (and for any other transmission service necessary after delivery from the TVA Transmission System) prior to the time service under Parts I and II of the Guidelines commences;
- (D) The Transmission Customer agrees to pay for any facilities constructed and chargeable to such Transmission Customer under Parts I and II of the Guidelines, as specified in Section 15 (Service Availability for Firm and Non-Firm Transmission Service), whether or not the Transmission Customer takes service for the full term of its reservation; and
- (E) The Transmission Customer has executed a Point-To-Point Service Agreement.

## **16.2 Transmission Customer Responsibility for Third-Party Arrangements**

Any scheduling arrangements that may be required by other electric systems shall be the responsibility of the Transmission Customer requesting service. The Transmission Customer shall provide, unless waived by TVA, notification to TVA identifying such systems and authorizing them to schedule the capacity and energy to be transmitted by TVA pursuant to Parts I and II of the Guidelines on behalf of the Receiving Party at the Point of Delivery or the Delivering Party at the Point of Receipt. However, TVA will undertake reasonable efforts to assist the Transmission Customer in making such arrangements, including without limitation, providing any information or data required by such other electric system consistent with Good Utility Practice.

## **17 Procedures for Arranging Firm Point-To-Point Transmission Service**

### **17.1 Application for Firm Service**

A request for Firm Point-To-Point Transmission Service for periods of one year or longer must contain a written Application at least sixty (60) days in advance of the calendar month in which service is to commence.

TVA will consider requests for such firm service on shorter notice when feasible. Requests for Firm Point-To-Point Transmission Service for periods of less than one year shall be subject to expedited procedures that shall be negotiated between the Parties within the time constraints provided in Section 17.5 (Response to a Completed Application).



All Firm Point-To-Point Transmission Service requests should be submitted by entering the required information on TVA's OASIS. The OASIS will provide a record for establishing the reservation priority of the Application. A written Completed Application for Firm Point-To-Point Transmission Service requests will also be submitted to:

Transmission Service Coordinator  
Tennessee Valley Authority  
1101 Market Street, PCC 2A  
Chattanooga, Tennessee 37402-2801  
Telephone: (423) 697-4052

## 17.2 Completed Application for Firm Service

A Completed Application shall provide all of the information included in 18 CFR § 2.20 including but not limited to the following:

- (A) The identity, address, telephone number and facsimile number of the entity requesting service and the contact person or persons;
- (B) The entity's NERC acronym, Data Universal Numbering System (DUNS) number, and desk name identifier(s),
- (C) A statement that the entity requesting service is, or will be upon commencement of service, an Eligible Customer under the Guidelines;
- (D) A showing of creditworthiness in accordance with Section 10 (Creditworthiness);
- (E) The Point(s) of Receipt and Point(s) of Delivery and the identities of the Delivering Parties and the Receiving Parties;
- (F) The location of the generating facility(ies) supplying the capacity and energy and the location of the load ultimately served by the capacity and energy transmitted. TVA will treat this information as confidential except to the extent that disclosure of this information is required by these Guidelines, by regulatory or judicial order, for reliability purposes consistent with Good Utility Practice or is otherwise legally required;
- (G) A description of the supply characteristics of the capacity and energy to be delivered. To the extent it is known or can reasonably be estimated, a description will be included of the expected transaction profile including load factor describing the hourly quantities of capacity and energy to be delivered to the TVA Transmission System at relevant Point(s) of Receipt;
- (H) An estimate of the capacity and energy expected to be delivered to the Receiving Party. The profile of deliveries to each Receiving Party will be included to the extent required by TVA to evaluate the transaction;
- (I) The Service Commencement Date and the term of the requested Transmission Service;

- (J) The transmission capability requested for each Point of Receipt and each Point of Delivery on TVA's Transmission System; customers may combine their requests for service in order to satisfy the minimum transmission capacity requirement; and
- (K) A statement as to whether the request is being made in response to a solicitation and a copy of the solicitation if publicly available.

If Transmission Service is provided under an umbrella Service Agreement for Short-Term Firm Point-To-Point Transmission Service, only the information listed in subsections (A) through (D) will be required in the Application. The remaining information listed in subsections (E) through (K) will be required when a capacity reservation is requested.

TVA shall have the right to require other information from the Eligible Customer for purposes of determining whether a request for Transmission Service is duplicative or mutually exclusive of other requests, whether there is Available Transmission Capability on the TVA Transmission System, whether there is a potential regional impact, or to remedy apparent deficiencies in the information initially received from the Eligible Customer.

If the Eligible Customer does not own, control or operate transmission facilities, it must include in its Application a sworn statement of one of its duly authorized officers or other representatives that the purpose of its Application is not to assist an Eligible Customer to avoid the reciprocity requirements of Section 5 (Reciprocity) of these Guidelines.

TVA shall treat this information consistent with its standards of conduct.

### **17.3 Deposit for Firm Service**

A Completed Application for Firm Point-To-Point Transmission Service also shall include a deposit of either one month's charge for Reserved Capacity or the full charge for Reserved Capacity for service requests of less than one month. If the Application is rejected by TVA because it does not meet the conditions for service as set forth herein, or in the case of requests for service arising in connection with losing bidders in a Request For Proposals (RFP), said deposit shall be returned with interest less any reasonable costs incurred by TVA in connection with the review of the losing bidder's Application. The deposit also will be returned with interest less any reasonable costs incurred by TVA if TVA is unable to complete new facilities needed to provide the service. If an Application is withdrawn or the Eligible Customer decides not to enter into a Service Agreement for Firm Point-To-Point Transmission Service, the deposit shall be refunded in full, with interest, less reasonable costs incurred by TVA to the extent such costs have not already been recovered by TVA from the Eligible Customer. TVA will provide to the Eligible Customer a complete accounting of all costs deducted from the refunded deposit, which the Eligible Customer may contest if there is a dispute concerning the deducted costs. Deposits associated with construction of new facilities are subject to the provisions of Section 19 (Additional Study Procedures for Firm Point-To-Point Transmission Service Requests). If a Service Agreement for Firm Point-To-Point Transmission Service is executed, the deposit, with interest (less any unpaid obligations of the Transmission Customer), will be returned to the Transmission

Customer upon expiration or termination of the Service Agreement for Firm Point-To-Point Transmission Service or sooner as TVA deems appropriate. Applicable interest shall be calculated in accordance with Section 10 (Creditworthiness).

#### **17.4 Notice of Deficient Application for Firm Service**

If an Application fails to meet the requirements of the Guidelines, TVA shall notify the entity requesting service within fifteen (15) days of receipt of the reasons for such failure. TVA will attempt to remedy minor deficiencies in the Application through informal communications with the Eligible Customer. If such efforts are unsuccessful, TVA shall return the Application, along with any deposit, with interest calculated in accordance with Section 10 (Creditworthiness). Upon receipt of a new or revised Application that fully complies with the requirements of Parts I and II of the Guidelines, the Eligible Customer shall be assigned a new reservation priority consistent with the date of the new or revised Application.

#### **17.5 Response to a Completed Application for Firm Service**

Following receipt of a Completed Application for Firm Point-To-Point Transmission Service, TVA shall make a determination of Available Transmission Capability as required in Section 15.2 (Determination of Available Transmission Capability). TVA shall notify the Eligible Customer as soon as practicable, but not later than thirty (30) days after the date of receipt of a Completed Application (or some other mutually agreed upon date) either (i) if it will be able to provide service without performing a System Impact Study or (ii) if such a study is needed to evaluate the impact of the Application pursuant to Section 19.1 (Notice of Need for System Impact Study). Responses by TVA will be made as soon as practicable to all Completed Applications (including applications by TVA for its own Third-Party Sales) and the timing of such responses must be made on a non-discriminatory basis.

#### **17.6 Execution of Service Agreement for Firm Service**

Whenever TVA determines that a System Impact Study is not required and that the service can be provided, it shall notify the Eligible Customer as soon as practicable but no later than thirty (30) days after receipt of the Completed Application. Where a System Impact Study is required, the provisions of Section 19 (Additional Study Procedures for Firm Point-To-Point Transmission Service) will govern the execution of a Service Agreement. Failure of an Eligible Customer to execute and return the Service Agreement within fifteen (15) days after it is tendered by TVA will be deemed a withdrawal (unless a mutually agreed upon alternate schedule is established) and termination of the Application and any deposit submitted shall be refunded with interest calculated in accordance with Section 10 (Creditworthiness). Nothing herein limits the right of an Eligible Customer to file another Application after such withdrawal and termination.

#### **17.7 Extensions for Commencement of Firm Service**

The Transmission Customer can obtain up to five (5) one-year extensions for the commencement of firm service. The Transmission Customer may postpone service by paying a non-refundable annual reservation fee equal to one month's charge for firm Transmission Service for each year of extension or fraction thereof. If during

any extension for the commencement of service another Eligible Customer submits a Completed Application for firm Transmission Service, and such request can be satisfied only by releasing all or part of the Transmission Customer's Reserved Capacity for which an annual reservation fee was paid, the original Reserved Capacity will be released unless the following condition is satisfied. Within thirty (30) days of written notice from TVA, the original Transmission Customer agrees to pay the firm Point-To-Point transmission rate for its Reserved Capacity concurrent with the new Service Commencement Date requested by the other Eligible Customer. In the event the Transmission Customer elects to release the Reserved Capacity, the reservation fees or portions thereof previously paid will be forfeited.

## **18 Procedures for Arranging Non-Firm Point-To-Point Transmission Service**

### **18.1 Application for Non-Firm Service**

Eligible Customers seeking Non-Firm Point-To-Point Transmission Service must submit a written Completed Application to:

Transmission Service Coordinator  
Tennessee Valley Authority  
1101 Market Street, PCC 2A  
Chattanooga, Tennessee 37402-2801  
Telephone: (423) 697-4124

Applications for Non-Firm Point-To-Point Transmission Service should also be submitted by entering the required information on TVA's OASIS. The OASIS will provide a record for establishing the service priority of the Application.

### **18.2 Completed Application for Non-Firm Service**

A Completed Application shall provide all of the information included in 18 CFR §2.20 including but not limited to the following:

- (A)** The identity, address, telephone number and facsimile number of the entity requesting service and the contact person or persons;
- (B)** The entity's NERC acronym, Data Universal Numbering System (DUNS) number, and desk name identifier(s),
- (C)** A statement that the entity requesting service is, or will be upon commencement of service, an Eligible Customer under the Guidelines;
- (D)** A showing of creditworthiness in accordance with Section 10 (Creditworthiness);
- (E)** The Point(s) of Receipt and the Point(s) of Delivery;
- (F)** The maximum amount of capacity requested at each Point of Receipt and Point of Delivery; and
- (G)** The proposed dates and hours for initiating and terminating Transmission Service hereunder.

In addition to the information specified above, when required to properly evaluate system conditions, TVA also may ask the Eligible Customer to provide the following:

- (H) The electrical location of the initial source of the power to be transmitted pursuant to the Eligible Customer's request for service and
- (I) The electrical location of the ultimate load.

If Transmission Service is provided under an umbrella Service Agreement for Non-Firm Point-To-Point Transmission Service (see Attachment B) only the information listed in subsections (A) through (D) will be required in the Application. The remaining information listed in subsections (E) through (I) will be required when a capacity reservation is requested.

TVA will treat the information in (H) and (I) as confidential at the request of the Eligible Customer except to the extent that disclosure of this information is required by these Guidelines, by regulatory or judicial order, for reliability purposes consistent with Good Utility Practice, or is otherwise legally required. TVA shall treat this information consistent with its standards of conduct.

If the Eligible Customer does not own, control or operate transmission facilities, it must include in its Application a sworn statement of one of its duly authorized officers or other representatives that the purpose of its Application is not to assist an Eligible Customer to avoid the reciprocity requirements of Section 5(Reciprocity) of these Guidelines.

### **18.3 Reservation of Non-Firm Point-To-Point Transmission Service**

Requests for Monthly Service shall be submitted no earlier than 12:00 noon Central Prevailing Time sixty (60) days before service is to commence; requests for Weekly Service shall be submitted no earlier than 12:00 noon Central Prevailing Time fourteen (14) days before service is to commence, requests for Daily Service shall be submitted no earlier than 12:00 noon Central Prevailing Time two (2) days before service is to commence, and requests for Hourly Service shall be submitted no earlier than 10:00 a.m. Central Prevailing Time the day before service is to commence. If the day indicated is not a TVA Business Day, the earliest time requests may be submitted shall occur on the previous TVA Business Day. For Monthly Service, requests for service received later than a deadline of 12:00 noon Central Prevailing Time two days prior to the day service is to commence will be accommodated if practicable. For Weekly Service, Daily Service and Hourly Service, requests for service received later than a deadline of 12:00 noon Central Prevailing Time the day prior to the day service is to commence will be accommodated if practicable.

### **18.4 Determination of Available Transmission Capability for Non-Firm Service**

Following receipt of a request for reservation of Non-Firm Point-To-Point Transmission Service, TVA will make a determination on a non-discriminatory basis of Available Transmission Capability pursuant to Section 15.2 (Determination of Available Transmission Capability). Such determination shall be made as soon as

reasonably practicable after receipt, but not later than the following time periods for the following terms of service (i) thirty (30) minutes for Hourly Service, (ii) thirty (30) minutes for Daily Service, (iii) four (4) hours for Weekly Service, and (iv) two (2) days for Monthly Service. During periods of heavy demand for next day Hourly Service or Daily Service, the response period for requests for such service may be extended beyond 30 minutes when necessary.

## **19 Additional Study Procedures for Firm Point-To-Point Transmission Service Requests**

### **19.1 Notice of Need for System Impact Study**

After receiving a request for firm service, TVA shall determine on a non-discriminatory basis whether a System Impact Study is needed. A description of TVA's methodology for completing a System Impact Study is provided in Attachment D. If TVA determines that a System Impact Study is necessary to accommodate the requested service, it shall so inform the Eligible Customer, as soon as practicable. In such cases, TVA shall within thirty (30) days of receipt of a Completed Application, tender a System Impact Study Agreement pursuant to which the Eligible Customer shall agree to reimburse TVA for performing the required System Impact Study. For a service request to remain a Completed Application, the Eligible Customer shall execute the System Impact Study Agreement and return it to TVA within fifteen (15) days (unless a mutually agreed upon alternate schedule is established). If the Eligible Customer elects not to execute the System Impact Study Agreement, its Application shall be deemed withdrawn and its deposit, pursuant to Section 17.3 (Deposit for Firm Service), shall be returned with interest calculated in accordance with Section 10 (Creditworthiness).

### **19.2 System Impact Study Agreement and Cost Reimbursement**

- (A)** The System Impact Study Agreement will clearly specify TVA's estimate of the actual cost, and time for completion of the System Impact Study. The charge shall not exceed the actual cost of the study. In performing the System Impact Study, TVA shall rely, to the extent reasonably practicable, on existing transmission planning studies. The Eligible Customer will not be assessed a charge for such existing studies; however, the Eligible Customer will be responsible for charges associated with any modifications to existing planning studies that are reasonably necessary to evaluate the impact of the Eligible Customer's request for service on the Transmission System.
- (B)** If in response to multiple Eligible Customers requesting service in relation to the same competitive solicitation, a single System Impact Study is sufficient for TVA to accommodate the requests for service, the costs of that study shall be pro-rated among the Eligible Customers.
- (C)** For System Impact Studies that TVA conducts on its own behalf, TVA shall record the cost of the System Impact Studies pursuant to Section 7 (Accounting for TVA's Use of the Guidelines).

### **19.3 System Impact Study Procedures**

Upon receipt of an executed System Impact Study Agreement, TVA will use due diligence to complete the required System Impact Study within a sixty (60) day period. The System Impact Study shall identify any system constraints, redispatch options, and the need for any modifications to TVA's Transmission System (including Direct Assignment Facilities and Network Upgrades) that are required to provide the requested service. In the event that TVA is unable to complete the required System Impact Study within such time period, it shall so notify the Eligible Customer and provide an estimated completion date along with an explanation of the reasons why additional time is required to complete the required studies. A copy of the completed System Impact Study and related work papers shall be made available to the Eligible Customer. TVA will use the same due diligence in completing the System Impact Study for an Eligible Customer as it uses when completing studies for itself. TVA shall notify the Eligible Customer immediately upon completion of the System Impact Study if the Transmission System will be adequate to accommodate all or part of a request for service or that no costs are likely to be incurred for new transmission facilities or upgrades. In order for a request to remain a Completed Application, within fifteen (15) days of completion of the System Impact Study the Eligible Customer must execute a Service Agreement (unless a mutually agreed upon alternate schedule is established), or the Application shall be deemed terminated and withdrawn.

### **19.4 Facilities Study Procedures**

If a System Impact Study indicates that additions or upgrades to the Transmission System are needed to supply the Eligible Customer's service request, TVA, within thirty (30) days of the completion of the System Impact Study, shall tender to the Eligible Customer a Facilities Study Agreement pursuant to which the Eligible Customer shall agree to reimburse TVA for performing the required Facilities Study. For a service request to remain a Completed Application, the Eligible Customer shall execute the Facilities Study Agreement and return it to TVA within fifteen (15) days of the date of the transmittal letter (or otherwise agreed upon date). If the Eligible Customer elects not to execute the Facilities Study Agreement, its Application shall be deemed withdrawn and its deposit, pursuant to Section 17.3 (Deposit for Firm Service), shall be returned with interest calculated in accordance with Section 10 (Creditworthiness). Upon receipt of an executed Facilities Study Agreement, TVA will use due diligence to complete the required Facilities Study within a sixty (60) day period. If TVA is unable to complete the Facilities Study in the allotted time period, TVA shall notify the Eligible Customer and provide an estimate of the time needed to reach a final determination along with an explanation of the reasons that additional time is required to complete the study. When completed, the Facilities Study will include a good faith estimate of (i) the cost of Direct Assignment Facilities to be charged to the Eligible Customer, (ii) the Eligible Customer's appropriate share of the cost of any required Network Upgrades as determined pursuant to the provisions of Parts I and II of the Guidelines, and (iii) the time required to complete such construction and initiate the requested service.

TVA will present the results of the study to the Eligible Customer, provide an invoice for the actual cost of the Facilities Study (adjusted to credit the amount of any initial payment and refund any overpayment if applicable), and tender a Service Agreement under which the Eligible Customer would agree to receive Transmission

Service upon completion of the modifications and agree to compensate TVA for all costs of Direct Assignment Facilities and other modifications that are necessary to satisfy the Eligible Customer's request for Transmission Service pursuant to these Guidelines.

The Eligible Customer shall provide TVA with a letter of credit or other reasonable form of security acceptable to TVA equivalent to the costs of new facilities or upgrades consistent with commercial practices as established by the Uniform Commercial Code consistent with Section 10 (Creditworthiness). The Eligible Customer shall have thirty (30) days to execute a Service Agreement and provide the required letter of credit or other form of security or the request will no longer be a Completed Application and shall be deemed terminated and withdrawn.

### **19.5 Facilities Study Modifications**

Any change in design arising from the inability to site or construct facilities as proposed will require development of a revised good faith estimate. New good faith estimates also will be required in the event of new statutory or regulatory requirements that are effective before the completion of construction or other circumstances beyond the control of TVA that significantly affect the final cost of new facilities or upgrades to be charged to the Transmission Customer pursuant to the provisions of Parts I and II of the Guidelines.

### **19.6 Due Diligence in Completing New Facilities**

TVA shall use due diligence to add necessary facilities or upgrade its Transmission System within a reasonable time. TVA will not upgrade its existing or planned Transmission System in order to provide the requested Firm Point-To-Point Transmission Service if doing so would impair system reliability or otherwise impair or degrade existing firm service.

### **19.7 Partial Interim Service**

If TVA determines that it will not have adequate transmission capability to satisfy the full amount of a Completed Application for Firm Point-To-Point Transmission Service, TVA nonetheless shall be obligated to offer and provide the portion of the requested Firm Point-To-Point Transmission Service that can be accommodated without addition of any facilities or upgrades and through redispatch. However, TVA shall not be obligated to provide the incremental amount of requested Firm Point-To-Point Transmission Service that requires the addition of facilities or upgrades to the Transmission System until such facilities or upgrades have been placed in service.

### **19.8 Expedited Procedures for New Facilities**

In lieu of the procedures set forth above, the Eligible Customer shall have the option to expedite the process by requesting TVA to tender at one time, together with the results of required studies, an "Expedited Service Agreement" pursuant to which the Eligible Customer would agree to compensate TVA for all costs incurred pursuant to the terms of the Guidelines. In order to exercise this option, the Eligible Customer shall request in writing an Expedited Service Agreement covering all of the above-specified items within thirty (30) days of receiving the results of the



System Impact Study identifying needed facility additions or upgrades or costs incurred in providing the requested service. While TVA agrees to provide the Eligible Customer with its best estimate of the new facility costs and other charges that may be incurred, such estimate shall not be binding and the Eligible Customer must agree in writing to compensate TVA for all costs incurred pursuant to the provisions of the Guidelines. The Eligible Customer shall execute and return such an Expedited Service Agreement within fifteen (15) days of its receipt or the Eligible Customer's request for service will cease to be a Completed Application and will be deemed terminated and withdrawn.

## **20 Procedures if TVA is Unable to Complete New Transmission Facilities for Firm Point-To-Point Transmission Service**

### **20.1 Delays in Construction of New Facilities**

If any event occurs that will materially affect the time for completion of new facilities, or the ability to complete them, TVA shall promptly notify the Transmission Customer. In such circumstances, TVA shall within thirty (30) days of notifying the Transmission Customer of such delays, convene a technical meeting with the Transmission Customer to evaluate the alternatives available to the Transmission Customer. TVA also shall make available to the Transmission Customer studies and work papers related to the delay, including all information that is in the possession of TVA that is reasonably needed by the Transmission Customer to evaluate any alternatives.

### **20.2 Alternatives to the Original Facility Additions**

When TVA determines after the review process of Section 20.1 (Delays in Construction of New Facilities) that one or more alternatives exist to the originally planned construction project, TVA shall present such alternatives for consideration by the Transmission Customer. If, upon review of any alternatives, the Transmission Customer desires to maintain its Completed Application subject to construction of the alternative facilities, it may request TVA to submit a revised Service Agreement for Firm Point-To-Point Transmission Service. If the alternative approach solely involves Non-Firm Point-To-Point Transmission Service, TVA shall promptly tender a Service Agreement for Non-Firm Point-To-Point Transmission Service providing for the service. In the event TVA concludes that no reasonable alternative exists and the Transmission Customer disagrees, the Transmission Customer may seek relief under the dispute resolution procedures pursuant to Section 11 (Dispute Resolution Procedures).

### **20.3 Refund Obligation for Unfinished Facility Additions**

If TVA and the Transmission Customer mutually agree that no other reasonable alternatives exist and the requested service cannot be provided out of existing capability under the conditions of Parts I and II of the Guidelines, the obligation to provide the requested Firm Point-To-Point Transmission Service shall terminate and any deposit made by the Transmission Customer shall be returned with interest calculated in accordance with Section 10 (Creditworthiness). However, the Transmission Customer shall be responsible for all prudently incurred costs by TVA through the time construction was suspended.

**21 Provisions Relating to Transmission Construction and Services on the Systems of Other Utilities****21.1 Responsibility for Third-Party System Additions**

TVA shall not be responsible for making arrangements for any necessary engineering, permitting, and construction of transmission or distribution facilities on the system(s) of any other entity or for obtaining any regulatory approval for such facilities. TVA will undertake reasonable efforts to assist the Transmission Customer in obtaining such arrangements, including without limitation, providing any information or data required by such other electric system consistent with Good Utility Practice.

**21.2 Coordination of Third-Party System Additions**

In circumstances where the need for transmission facilities or upgrades is identified pursuant to the provisions of Parts I and II of the Guidelines, and if such upgrades further require the addition of transmission facilities on other systems, TVA shall have the right to coordinate construction on its own system with the construction required by others. TVA, after consultation with the Transmission Customer and representatives of such other systems, may defer construction of its new transmission facilities, if the new transmission facilities on another system cannot be completed in a timely manner. TVA shall notify the Transmission Customer in writing of the basis for any decision to defer construction and the specific problems which must be resolved before it will initiate or resume construction of new facilities. Within sixty (60) days of receiving written notification by TVA of its intent to defer construction pursuant to this section, the Transmission Customer may challenge the decision in accordance with the dispute resolution procedures pursuant to Section 11 (Dispute Resolution Procedures).

**22 Changes in Service Specifications****22.1 Modifications on a Non-Firm Basis**

The Transmission Customer taking Firm Point-To-Point Transmission Service may request TVA to provide Transmission Service on a non-firm basis over Points of Receipt and Points of Delivery other than those specified in the Service Agreement ("Secondary Receipt and Delivery Points"), in amounts not to exceed its firm Reserved Capacity, without incurring an additional Non-Firm Point-To-Point Transmission Service charge or executing a new Service Agreement, subject to the following conditions.

- (A)** Service provided over Secondary Receipt and Delivery Points will be non-firm only, on an as-available basis and will not displace any firm or non-firm service reserved or scheduled by third-parties under the Guidelines, any Network Integration Transmission Service, or any use of the Transmission System by TVA on behalf of its Native Load Customers or for Third-Party Sales.
- (B)** The sum of all Firm and Non-Firm Point-To-Point Transmission Service provided to the Transmission Customer at any time pursuant to this section shall not exceed the Reserved Capacity in the relevant Service Agreement under which such services are provided.

- (C) The Transmission Customer shall retain its right to schedule Firm Point-To-Point Transmission Service at the Points of Receipt and Points of Delivery specified in the relevant Service Agreement in the amount of its original Reserved Capacity.
- (D) Service over Secondary Receipt and Delivery Points on a non-firm basis shall not require the filing of an Application for Non-Firm Point-To-Point Transmission Service under the Guidelines. However, all other requirements of Parts I and II of the Guidelines (except as to transmission rates) shall apply to Transmission Service on a non-firm basis over Secondary Receipt and Delivery Points.

## **22.2 Modifications on a Firm Basis**

Any request by a Transmission Customer to modify Points of Receipt and Points of Delivery on a firm basis shall be treated as a new request for service in accordance with Section 17 (Procedures for Arranging Firm Point-To-Point Transmission Service) hereof, except that such Transmission Customer shall not be obligated to pay any additional deposit if the Reserved Capacity, including the proposed change, does not exceed the amount reserved in the existing Service Agreement. While such new request is pending, the Transmission Customer shall retain its priority for service at the existing firm Points of Receipt and Points of Delivery specified in its Service Agreement.

## **23 Sale or Assignment of Transmission Service**

### **23.1 Procedures for Assignment or Transfer of Service**

Subject to TVA approval, which shall not be unreasonably withheld, a Transmission Customer may sell, assign, or transfer all or a portion of its rights under its Service Agreement, but only to another Eligible Customer (the Assignee). The Transmission Customer that sells, assigns or transfers its rights under its Service Agreement is hereafter referred to as the Reseller. Compensation to the Reseller shall not exceed the higher of (i) the original rate paid by the Reseller, (ii) TVA's maximum rate in effect at the time of the assignment, or (iii) the Reseller's opportunity cost capped at TVA's cost of expansion, if applicable. If the Assignee does not request any change in the Point(s) of Receipt or the Point(s) of Delivery, or a change in any other term or condition set forth in the original Service Agreement, the Assignee will receive the same services as did the Reseller and the priority of service for the Assignee will be the same as that of the Reseller. A Reseller shall notify TVA as soon as possible after any assignment or transfer of service occurs but in any event, notification must be provided consistent with Good Utility Practice within a reasonable period of time prior to any provision of service to the Assignee. The Assignee will be subject to all terms and conditions of these Guidelines. If the Assignee requests a change in service, the reservation priority of service will be determined by TVA pursuant to Sections 13.2 and 14.2 (Reservation Priority).

### **23.2 Limitations on Assignment or Transfer of Service**

If the Assignee requests a change in the Point(s) of Receipt or Point(s) of Delivery, or a change in any other specifications set forth in the original Service Agreement, TVA will consent to such change subject to the provisions of the Guidelines,

provided that the change will not impair the operation and reliability of TVA's generation, transmission, or distribution systems. The Assignee shall compensate TVA for performing any System Impact Study needed to evaluate the capability of the Transmission System to accommodate the proposed change and any additional costs resulting from such change. The Reseller shall remain liable for the performance of all obligations under the Service Agreement, except as specifically agreed to by the Parties through an amendment to the Service Agreement.

### **23.3 Information on Assignment or Transfer of Service**

In accordance with Section 4 (Open Access Same-Time Information System (OASIS) and Standards of Conduct), Resellers may use TVA's OASIS to post transmission capacity available for resale.

## **24 Metering and Power Factor Correction at Point(s) of Receipt and Point(s) of Delivery**

### **24.1 Transmission Customer Obligations**

Unless otherwise agreed, the Transmission Customer shall be responsible for installing and maintaining compatible metering and communications equipment to accurately account for the capacity and energy being transmitted under Parts I and II of the Guidelines and to communicate the information to TVA. Such equipment shall remain the property of the Transmission Customer.

### **24.2 TVA Access to Metering Data**

TVA shall have access to metering data, which may reasonably be required to facilitate measurements and billing under the Service Agreement.

### **24.3 Power Factor**

Unless otherwise agreed, the Transmission Customer is required to maintain a power factor within the same range as TVA consistent with Good Utility Practices. The power factor requirements are specified in the Service Agreement where applicable.

## **25 Compensation for Transmission Service**

The Transmission Customer shall pay TVA the rates for Firm and Non-Firm Point-To-Point Transmission Service provided in the Schedules appended to the Guidelines: Firm Point-To-Point Transmission Service (Schedule 7); Non-Firm Point-To-Point Transmission Service (Schedule 8); and the rates for Ancillary Services provided in Schedule 1 through Schedule 6. The Transmission Customer also shall pay TVA for any applicable study costs, or other costs incurred by TVA pursuant to these Guidelines. TVA shall use Parts I and II of the Guidelines to make its Third-Party Sales. TVA shall account for such use at the applicable Guidelines rates, pursuant to Section 7 (Accounting for TVA's Use of the Guidelines).

## **26 Stranded Cost Recovery**

TVA may recover stranded costs from the Transmission Customer pursuant to these Guidelines consistent with the terms and conditions set forth in FERC Order No. 888 and other applicable law.

**27 Compensation for Modifications and Redispatch Costs**

Whenever a System Impact Study performed by TVA in connection with the provision of Firm Point-To-Point Transmission Service identifies the need for modifications to TVA's system (including Direct Assignment Facilities and Network Upgrades), the Transmission Customer shall be responsible for such costs to the extent consistent with applicable law and Commission policy compatible therewith. Whenever a System Impact Study performed by TVA, in response to a request for firm service, identifies capacity constraints that may be relieved more economically by redispatching TVA's resources than by building modifications or upgrading existing facilities to eliminate such constraints, the Transmission Customer shall be responsible for the Redispatch Costs to the extent consistent with applicable law and Commission policy compatible therewith.

**III. NETWORK INTEGRATION TRANSMISSION SERVICE****Preamble**

TVA will provide Network Integration Transmission Service pursuant to the applicable terms and conditions contained in the Guidelines and Service Agreement. Network Integration Transmission Service allows the Network Customer to integrate, economically dispatch and regulate its current and planned Network Resources to serve its Network Load in a manner comparable to that in which TVA utilizes its Transmission System to serve its Native Load Customers. Network Integration Transmission Service also may be used by the Network Customer to deliver economy energy purchases to its Network Load from non-designated resources on an as-available basis without incurring an additional charge. Transmission Service for sales to non-designated loads will be provided pursuant to the applicable terms and conditions of Parts I and II of the Guidelines.

**28 Nature of Network Integration Transmission Service****28.1 Scope of Service**

Network Integration Transmission Service is a transmission service that allows Network Customers to efficiently and economically utilize their Network Resources (as well as other non-designated generation resources) to serve their Network Load located in TVA's Control Area and any additional load that may be designated pursuant to Section 31.3 (Network Load Not Physically Interconnected with TVA) of the Guidelines. The Network Customer taking Network Integration Transmission Service must obtain or provide Ancillary Services pursuant to Section 3 (Ancillary Services).

**28.2 TVA Responsibilities**

TVA will plan, construct, operate and maintain its Transmission System in accordance with Good Utility Practice in order to provide the Network Customer with Network Integration Transmission Service over TVA's Transmission System. TVA, on behalf of its Native Load Customers, shall be required to designate resources and loads in the same manner as any Network Customer under Parts I and III of these Guidelines. This information must be consistent with the information used by TVA to calculate Available Transmission Capability. TVA shall include the Network Customer's Network Load in its Transmission System planning and shall, consistent with Good Utility Practice, endeavor to construct and place into service sufficient transmission capacity to deliver the Network Customer's

Network Resources to serve its Network Load on a basis comparable to TVA's delivery of its own generating and purchased resources to its Native Load Customers.

### **28.3 Network Integration Transmission Service**

TVA will provide firm Transmission Service over its Transmission System to the Network Customer for the delivery of capacity and energy from its designated Network Resources to service its Network Loads on a basis that is comparable to TVA's use of the Transmission System to reliably serve its Native Load Customers.

### **28.4 Secondary Service**

The Network Customer may use TVA's Transmission System to deliver energy to its Network Loads from resources that have not been designated as Network Resources. Such energy shall be transmitted, on an as-available basis, at no additional charge. Deliveries from resources other than Network Resources will have a higher priority than any Non-Firm Point-To-Point Transmission Service under Parts I and II of the Guidelines.

### **28.5 Real Power Losses**

Real Power Losses are associated with all Network Integration Transmission Service. TVA is not obligated to provide Real Power Losses. The Network Customer is responsible for replacing losses associated with all Network Integration Transmission Service as calculated by TVA. TVA may agree to supply the amount of losses to be absorbed on the TVA Transmission System, provided the Network Customer compensates TVA for such provision of losses at TVA's indicated charges. If the Network Customer desires to provide the losses or have a third party provide them, the Network Customer shall notify TVA of the sources and Point(s) of Receipt. Otherwise, the amount of power and energy actually transmitted from the Point(s) of Receipt to the Point(s) of Delivery shall be the amount received by TVA for delivery less transmission losses on the TVA Transmission System. The percentage value of capacity and energy losses shall be three (3) percent based on average losses on the TVA Transmission System.

### **28.6 Restrictions on Use of Network Integration Transmission Service**

The Network Customer shall not use Network Integration Transmission Service for (i) sales of capacity and energy to non-designated loads, or (ii) direct or indirect provision of transmission service by the Network Customer to third parties. All Network Customers taking Network Integration Transmission Service shall use Point-To-Point Transmission Service under Parts I and II of the Guidelines for any Third-Party Sale which requires use of TVA's Transmission System.

### **28.7 Scheduling of Network Integration Transmission Service**

Scheduling for Network Integration Transmission Service will be addressed in the Service Agreement.

**29 Initiating Network Integration Transmission Service****29.1 Condition Precedent for Receiving Service**

Subject to the terms and conditions of Parts I and III of the Guidelines, TVA will provide Network Integration Transmission Service to any Eligible Customer, provided that (i) the Eligible Customer completes an Application for service as provided under Parts I and III of the Guidelines, (ii) the Eligible Customer and TVA complete the technical arrangements set forth in Sections 29.3 (Technical Arrangements to be Completed Prior to Commencement of Service) and 29.4 (Network Customer Facilities), (iii) the Eligible Customer executes a Service Agreement pursuant to Attachment F for service under Parts I and III of the Guidelines, and (iv) the Eligible Customer executes a Network Operating Agreement with TVA pursuant to Attachment G. A condition of Network Customer's acceptance of the Service Agreement is that, along with scheduling information, the customer will provide tagging information that meets the specifications of the applicable NERC Policy.

**29.2 Application Procedures for Network Integration Transmission Service**

An Eligible Customer requesting service under Parts I and III of the Guidelines must enter the required information on TVA's OASIS. The Eligible Customer must also submit a written Application, with a deposit approximating the charge for one month of service, to TVA as far as possible in advance of the month in which service is to commence. Requests for reservations of Available Transmission Capability for Network Integration Transmission Service will be submitted to:

Transmission Service Coordinator  
Tennessee Valley Authority  
1101 Market Street, PCC 2A  
Chattanooga, Tennessee 37402-2801  
Telephone: (423) 697-4052

Unless subject to the procedures in Section 2 (Initial Allocation and Renewal Procedures), Completed Applications for Network Integration Transmission Service will be assigned a priority according to the date and time the Application is received on the OASIS, with the earliest Application receiving the highest reservation priority. Applications should be submitted by entering the information listed below on TVA's OASIS. Information that cannot readily be entered on the OASIS will be submitted to TVA by mail at the address indicated above. The OASIS will provide a record for establishing the reservation priority of the Application.

A Completed Application shall provide all of the information included in 18 CFR § 2.20 including but not limited to the following:

- (A)** The identity, address, telephone number and facsimile number of the Party requesting service;
- (B)** A statement that the Party requesting service is, or will be upon commencement of service, an Eligible Customer under the Guidelines;
- (C)** A description of the Network Load at each Point of Delivery. This description should separately identify and provide the Eligible Customer's

best estimate of the total loads to be served at each transmission voltage level, and the loads to be served from each TVA substation at the same transmission voltage level. The description should include a ten (10) year forecast of summer and winter load and resource requirements beginning with the first year after the service is scheduled to commence;

- (D)** The amount and location of any interruptible loads included in the Network Load. This shall include the summer and winter capacity requirements for each interruptible load (had such load not been interruptible), that portion of the load subject to interruption, the conditions under which an interruption can be implemented and any limitations on the amount and frequency of interruptions. An Eligible Customer should identify the amount of interruptible customer load (if any) included in the 10 year load forecast provided in response to (C) above;
- (E)** A description of Network Resources (current and 10-year projection), which shall include, for each Network Resource:

  - (I)** Unit size and amount of capacity from that unit to be designated as Network Resource
  - (II)** VAR capability (both leading and lagging) of all generators
  - (III)** Operating restrictions

    - Any periods of restricted operations throughout the year
    - Maintenance schedules
    - Minimum loading level of unit
    - Normal operating level of unit
    - Any must-run unit designations required for system reliability or contract reasons
  - (IV)** Approximate variable generating cost (\$/MWh) for redispatch computations
  - (V)** Arrangements governing sale and delivery of power to third parties from generating facilities located in TVA's Control Area, where only a portion of unit output is designated as a Network Resource
  - (VI)** Description of purchased power designated as a Network Resource including source of supply, Control Area location, transmission arrangements and Point(s) of Receipt to TVA's Transmission System;
- (F)** Description of Eligible Customer's transmission system:

  - (I)** Load flow and stability data, such as real and reactive parts of the load, lines, transformers, reactive devices and load type, including normal and emergency ratings of all transmission equipment in a load flow format compatible with that used by TVA
  - (II)** Operating restrictions needed for reliability
  - (III)** Operating guides employed by system operators
  - (IV)** Contractual restrictions or committed uses of the Eligible Customer's transmission system, other than the Eligible Customer's Network Loads and Resources
  - (V)** Location of Network Resources described in subsection (E) above
  - (VI)** 10 year projection of system expansions or upgrades
  - (VII)** Transmission system maps that include any proposed expansions or upgrades
  - (VIII)** Thermal ratings of Eligible Customer's Control Area ties with other Control Areas;



- (G) Service Commencement Date and the term of the requested Network Integration Transmission Service. The minimum term for Network Integration Transmission Service is one year;
- (H) A showing of creditworthiness in accordance with Section 10 (Creditworthiness); and
- (I) Any other reasonable information determined by TVA to be necessary to facilitate the expeditious processing of the Application.

Unless the Parties agree to a different time frame, TVA must acknowledge the request within ten (10) days of receipt. The acknowledgment must include a date by which a response, including a Service Agreement, will be sent to the Eligible Customer. If an Application fails to meet the requirements of this section, TVA shall notify the Eligible Customer requesting service within fifteen (15) days of receipt and specify the reasons for such failure. Wherever possible, TVA will attempt to remedy deficiencies in the Application through informal communications with the Eligible Customer. If such efforts are unsuccessful, TVA shall return the Application without prejudice to the Eligible Customer filing a new or revised Application that fully complies with the requirements of this section. The Eligible Customer will be assigned a new reservation priority consistent with the date of the new or revised Application. TVA shall treat this information consistent with the standards of conduct contained in Part 37 of the Commission's regulations as implemented by TVA.

### **29.3 Technical Arrangements to be Completed Prior to Commencement of Network Integration Transmission Service**

Network Integration Transmission Service shall not commence until TVA and the Network Customer, or a third party, have completed installation of all equipment specified under the Network Operating Agreement consistent with Good Utility Practice and any additional requirements reasonably and consistently imposed to ensure the reliable operation of the Transmission System. TVA shall exercise reasonable efforts, in coordination with the Network Customer, to complete such arrangements as soon as practicable taking into consideration the Service Commencement Date.

### **29.4 Network Customer Facilities**

The provision of Network Integration Transmission Service shall be conditioned upon the Network Customer's constructing, maintaining and operating the facilities on its side of each Point of Delivery or interconnection necessary to reliably deliver capacity and energy from TVA's Transmission System to the Network Customer. The Network Customer shall be solely responsible for constructing or installing all facilities on the Network Customer's side of each such Point of Delivery or interconnection.

**30 Network Resources****30.1 Designation of Network Resources**

Network Resources shall include all generation owned, purchased or leased by the Network Customer designated to serve Network Load under the Guidelines. Network Resources may not include resources, or any portion thereof, that are committed for sale to non-designated third party load or otherwise cannot be called upon to meet the Network Customer's Network Load on a non-interruptible basis. Any owned, purchased or leased resources that were serving the Network Customer's loads under firm agreements entered into on or before the Service Commencement Date shall initially be designated as Network Resources until the Network Customer terminates the designation of such resources. The location of all Network Resources will be specified sufficiently to allow for required System Impact Studies, Facilities Studies and network planning.

The designated Network Resources to serve TVA's Network Load for native load customers include: 1)TVA's system generation, 2) an allocation of power from the Southeastern Power Administration hydroelectric projects located within TVA's Control Area, and 3) firm power purchased from others, including cogeneration and power purchased under option purchase agreements for which TVA has paid a capacity charge regardless of whether TVA exercises the option for the energy.

**30.2 Designation of New Network Resources**

The Network Customer may designate a new Network Resource by providing TVA with as much advance notice as reasonably practicable. A designation of a new Network Resource must be made by a request for modification of service pursuant to an Application under Section 29 (Initiating Service). TVA will use due diligence to install any transmission facilities required to interconnect a new Network Resource designated by the Network Customer. The costs of new facilities required to interconnect a new Network Resource shall be determined in accordance with the procedures provided in Section 32.4 (Facilities Study Procedures) and will be charged to the Network Customer consistent with applicable law and Commission policy compatible therewith.

**30.3 Termination of Network Resources**

The Network Customer may terminate the designation of all or part of a generating resource as a Network Resource at any time but should provide notification to TVA as soon as reasonably practicable.

**30.4 Operation of Network Resources**

The Network Customer shall not operate its designated Network Resources located in the Network Customer's or TVA's Control Area such that the output of those facilities exceeds its designated Network Load, plus non-firm sales delivered pursuant to Parts I and II of the Guidelines, plus losses. This limitation shall not apply to changes in the operation of a Transmission Customer's Network Resources at the request of TVA to respond to an emergency or other unforeseen condition which may impair or degrade the reliability of the Transmission System.

**30.5 Network Customer Redispatch Obligation**

As a condition to receiving Network Integration Transmission Service, the Network Customer agrees to redispatch its Network Resources as requested by TVA pursuant to Section 33.2 (Transmission Constraints). To the extent practical, the redispatch of resources pursuant to this section shall be on a least cost, non-discriminatory basis between all Network Customers and TVA.

**30.6 Transmission Arrangements for Network Resources Not Physically Interconnected with TVA**

The Network Customer shall be responsible for any arrangements necessary to deliver capacity and energy from a Network Resource not physically interconnected with TVA's Transmission System. TVA will undertake reasonable efforts to assist the Network Customer in obtaining such arrangements, including without limitation, providing any information or data required by such other entity consistent with Good Utility Practice.

**30.7 Limitation on Designation of Network Resources**

The Network Customer must demonstrate that it owns or has committed to purchase generation pursuant to an executed contract in order to designate a generating resource as a Network Resource. Alternatively, the Network Customer may establish that execution of a contract is contingent upon the availability of Network Integration Transmission Service under Parts I and III of the Guidelines.

**30.8 Use of Interface Capacity by the Network Customer**

There is no limitation upon a Network Customer's use of TVA's Transmission System at any particular interface to integrate the Network Customer's Network Resources (or substitute economy purchases) with its Network Loads. However, a Network Customer's use of TVA's total interface capacity with other transmission systems may not exceed the Network Customer's Load.

**30.9 Network Customer Owned Transmission Facilities**

The Network Customer that owns existing transmission facilities that are integrated with TVA's Transmission System may be eligible to receive consideration either through a billing credit or some other mechanism. In order to receive such consideration the Network Customer must demonstrate that its transmission facilities are integrated in a manner consistent with Good Utility Practice into the plans or operations of TVA to serve its power and transmission customers. For such facilities constructed by the Network Customer subsequent to the Service Commencement Date under Parts I and III of the Guidelines, the Network Customer shall receive credit where such facilities are jointly planned and installed in coordination with TVA. Calculation of the credit shall be addressed in either the Network Customer's Service Agreement or any other agreement between the Parties.

**31 Designation of Network Load****31.1 Network Load**

The Network Customer must designate the individual Network Loads on whose behalf TVA will provide Network Integration Transmission Service. The Network Loads shall be specified in the Service Agreement.

**31.2 New Network Loads Connected with TVA**

The Network Customer shall provide TVA with as much advance notice as reasonably practicable of the designation of new Network Load that will be added to its Transmission System. A designation of new Network Load must be made through a modification of service pursuant to a new Application. TVA will use due diligence to install any transmission facilities required to interconnect a new Network Load designated by the Network Customer. The costs of new facilities required to interconnect a new Network Load shall be determined in accordance with the procedures provided in Section 32.4 (Facilities Study Procedures) and shall be charged to the Network Customer consistent with applicable law and Commission policy compatible therewith.

**31.3 Network Load Not Physically Interconnected with TVA**

This section applies to both initial designation pursuant to Section 31.1 (Network Load) and the subsequent addition of new Network Load not physically interconnected with TVA. To the extent that the Network Customer desires to obtain Transmission Service for a load outside TVA's Transmission System, the Network Customer shall have the option of (1) electing to include the entire load as Network Load for all purposes under Parts I and III of the Guidelines and designating Network Resources in connection with such additional Network Load, or (2) excluding that entire load from its Network Load and purchasing Point-To-Point Transmission Service under Parts I and II of the Guidelines. To the extent that the Network Customer gives notice of its intent to add a new Network Load as part of its Network Load pursuant to this section the request must be made through a modification of service pursuant to a new Application.

**31.4 New Interconnection Points**

To the extent the Network Customer desires to add a new Point of Delivery or interconnection point between TVA's Transmission System and a Network Load, the Network Customer shall provide TVA with as much advance notice as reasonably practicable. The costs of new facilities required to interconnect a new Point of Delivery or interconnection point will be determined in accordance with the procedures provided in Section 32.4 (Facilities Study Procedures) and will be charged to the Network Customer consistent with applicable law and Commission policy compatible therewith.

**31.5 Changes in Service Requests**

Under no circumstances shall the Network Customer's decision to cancel or delay a requested change in Network Integration Transmission Service (e.g., the addition of a new Network Resource or designation of a new Network Load) in any way relieve the Network Customer of its obligation to pay the costs of transmission facilities

constructed by TVA and charged to the Network Customer as reflected in the Service Agreement. However, TVA shall treat any requested change in Network Integration Transmission Service in a non-discriminatory manner.

### **31.6 Annual Load and Resource Information Updates**

The Network Customer shall provide TVA with annual updates of Network Load and Network Resource forecasts consistent with those included in its Application for Network Integration Transmission Service under Parts I and III of the Guidelines. The Network Customer also shall provide TVA with timely written notice of material changes in any other information provided in its Application relating to the Network Customer's Network Load, Network Resources, its transmission system or other aspects of its facilities or operations affecting TVA's ability to provide reliable service.

## **32 Additional Study Procedures for Network Integration Transmission Service Requests**

### **32.1 Notice of Need for System Impact Study**

After receiving a request for service, TVA shall determine on a non-discriminatory basis whether a System Impact Study is needed. A description of TVA's methodology for completing a System Impact Study is provided in Attachment D. If TVA determines that a System Impact Study is necessary to accommodate the requested service, it shall so inform the Eligible Customer, as soon as practicable. In such cases, TVA shall within thirty (30) days of receipt of a Completed Application, tender a System Impact Study Agreement pursuant to which the Eligible Customer shall agree to reimburse TVA for performing the required System Impact Study. For a service request to remain a Completed Application, the Eligible Customer shall execute the System Impact Study Agreement and return it to TVA within fifteen (15) days (unless a mutually agreed upon alternate schedule is established). If the Eligible Customer elects not to execute the System Impact Study Agreement, its Application shall be deemed withdrawn and its deposit shall be returned with interest calculated in accordance with Section 10 (Creditworthiness).

### **32.2 System Impact Study Agreement and Cost Reimbursement**

- (A)** The System Impact Study Agreement will clearly specify TVA's estimate of the actual cost, and time for completion of the System Impact Study. The charge shall not exceed the actual cost of the study. In performing the System Impact Study, TVA shall rely, to the extent reasonably practicable, on existing transmission planning studies. The Eligible Customer will not be assessed a charge for such existing studies; however, the Eligible Customer will be fully responsible for charges associated with any modifications to existing planning studies that are reasonably necessary to evaluate the impact of the Eligible Customer's request for service on the Transmission System.
- (B)** If in response to multiple Eligible Customers requesting service in relation to the same competitive solicitation, a single System Impact Study is sufficient for TVA to accommodate the service requests, the costs of that study shall be pro-rated among the Eligible Customers.

- (C) For System Impact Studies that TVA conducts on its own behalf, TVA shall record the cost of the System Impact Studies pursuant to Section 7 (Accounting for TVA's Use of the Guidelines).

### **32.3 System Impact Study Procedures**

Upon receipt of an executed System Impact Study Agreement, TVA will use due diligence to complete the required System Impact Study within a sixty (60) day period. The System Impact Study shall identify any system constraints, redispatch options, and the need for any modifications to TVA's Transmission System including Direct Assignment Facilities and Network Upgrades. In the event that TVA is unable to complete the required System Impact Study within such time period, it shall so notify the Eligible Customer and provide an estimated completion date along with an explanation of the reasons why additional time is required to complete the required studies. A copy of the completed System Impact Study and related work papers shall be made available to the Eligible Customer. TVA will use the same due diligence in completing the System Impact Study for an Eligible Customer as it uses when completing studies for itself. TVA shall notify the Eligible Customer immediately upon completion of the System Impact Study if the Transmission System will be adequate to accommodate all or part of a request for service or that no costs are likely to be incurred for new transmission facilities or upgrades. In order for a request to remain a Completed Application, within fifteen (15) days of completion of the System Impact Study the Eligible Customer must execute a Service Agreement (unless a mutually agreed upon alternate schedule is established), or the Application shall be deemed terminated and withdrawn.

### **32.4 Facilities Study Procedures**

If a System Impact Study indicates that additions or upgrades to the Transmission System are needed to supply the Eligible Customer's service request, TVA, within thirty (30) days of the completion of the System Impact Study, shall tender to the Eligible Customer a Facilities Study Agreement pursuant to which the Eligible Customer shall agree to reimburse TVA for performing the required Facilities Study. For a service request to remain a Completed Application, the Eligible Customer shall execute the Facilities Study Agreement and return it to TVA within fifteen (15) days of receipt (or otherwise agreed upon date). If the Eligible Customer elects not to execute the Facilities Study Agreement, its Application shall be deemed withdrawn and its deposit shall be returned with interest calculated in accordance with Section 10 (Creditworthiness). Upon receipt of an executed Facilities Study Agreement, TVA will use due diligence to complete the required Facilities Study within a sixty (60) day period. If TVA is unable to complete the Facilities Study in the allotted time period, TVA shall notify the Eligible Customer and provide an estimate of the time needed to reach a final determination along with an explanation of the reasons that additional time is required to complete the study. When completed, the Facilities Study will include a good faith estimate of (i) the cost of Direct Assignment Facilities to be charged to the Eligible Customer, (ii) the Eligible Customer's appropriate share of the cost of any required Network Upgrades, and (iii) the time required to complete such construction and initiate the requested service.

TVA will present the results of the study to the Eligible Customer, provide an invoice for the actual cost of the Facilities Study (adjusted to credit the amount of any initial payment and refund any overpayment if applicable), and tender a Service Agreement under which the Eligible Customer would agree to receive Transmission Service upon completion of the modifications and agree to compensate TVA for all costs of Direct Assignment Facilities and other modifications that are necessary to satisfy the Eligible Customer's request for Transmission Service pursuant to these Guidelines.

The Eligible Customer shall provide TVA with a letter of credit or other reasonable form of security acceptable to TVA equivalent to the costs of new facilities or upgrades consistent with commercial practices as established by the Uniform Commercial Code consistent with Section 10 (Creditworthiness). The Eligible Customer shall have thirty (30) days to execute a Service Agreement and provide the required letter of credit or other form of security or the request no longer will be a Completed Application and shall be deemed terminated and withdrawn.

### **33 Load Shedding and Curtailments**

#### **33.1 Procedures**

Prior to the Service Commencement Date, TVA and the Network Customer shall establish Load Shedding and Curtailment procedures pursuant to the Network Operating Agreement and consistent with the applicable NERC Policy with the objective of responding to contingencies on the Transmission System. The Parties will implement such programs during any period when TVA determines that a system contingency exists and such procedures are necessary to alleviate such contingency. TVA will notify all affected Network Customers in a timely manner of any scheduled Curtailments to the extent practicable and consistent with Good Utility Practice. When advanced notice cannot be provided by TVA consistent with Good Utility Practice, the Network Customer shall make the required reductions immediately upon request by TVA.

#### **33.2 Transmission Constraints**

During any period when TVA determines that a transmission constraint exists on the Transmission System, and such constraint may impair the reliability of TVA's system, TVA will take whatever actions, consistent with Good Utility Practice and the applicable NERC Policy, that are reasonably necessary to maintain the reliability of TVA's system. To the extent TVA determines that the reliability of the Transmission System can be maintained by redispatching resources, TVA will initiate procedures pursuant to the Network Operating Agreement to redispatch all Network Resources and TVA's own resources on a least-cost basis without regard to the ownership of such resources. Any redispatch under this section may not unduly discriminate between TVA's use of the Transmission System on behalf of its Native Load Customers and any Network Customer's use of the Transmission System to serve its designated Network Load.

#### **33.3 Cost Responsibility for Relieving Transmission Constraints**

Whenever TVA implements least-cost redispatch procedures in response to a transmission constraint, TVA and Network Customers will each bear a

proportionate share of the total Redispatch Cost based on their respective Load Ratio Shares.

### **33.4 Curtailments of Scheduled Deliveries**

If a transmission constraint on TVA's Transmission System is not relieved through the implementation of least-cost redispatch procedures and TVA determines that it is necessary to curtail scheduled deliveries, the Parties shall curtail such schedules in accordance with the Network Operating Agreement.

### **33.5 Allocation of Curtailments**

TVA shall, on a non-discriminatory basis, curtail the transaction(s) that effectively relieve the constraint. If multiple transactions require Curtailment, to the extent practicable and consistent with Good Utility Practice, any Curtailment will be shared by TVA and the Network Customer in proportion to their respective Load Ratio Shares. TVA shall not direct the Network Customer to curtail schedules to an extent greater than TVA would curtail TVA's schedules under similar circumstances.

### **33.6 Load Shedding**

To the extent that a system contingency exists on TVA's Transmission System and TVA determines that it is necessary for TVA and the Network Customer to shed load, the Parties shall shed load in accordance with previously established procedures under the Network Operating Agreement.

### **33.7 System Reliability**

Notwithstanding any other provisions of these Guidelines, TVA reserves the right, consistent with Good Utility Practice and on a not unduly discriminatory basis, to curtail Network Integration Transmission Service without liability on TVA's part for the purpose of making necessary adjustments to, changes in, or repairs on its lines, substations and facilities, and in cases where the continuance of Network Integration Transmission Service would endanger persons or property. In the event of any adverse condition(s) or disturbance(s) on TVA's Transmission System or on any other system(s) directly or indirectly interconnected with TVA's Transmission System, TVA, consistent with Good Utility Practice, also may curtail Network Integration Transmission Service in order to (i) limit the extent or damage of the adverse condition(s) or disturbance(s), (ii) prevent damage to generating or transmission facilities, or (iii) expedite restoration of service. TVA will give the Network Customer as much advance notice as is practicable in the event of such Curtailment. Any Curtailment of Network Integration Transmission Service will be not unduly discriminatory relative to TVA's use of the Transmission System on behalf of its Native Load Customers. The rate treatment and all related terms and conditions applicable in the event that the Network Customer fails to respond to established Load Shedding and Curtailment procedures will be specified in the Service Agreement and the Network Operating Agreement.



**34 Rates and Charges**

The Network Customer shall pay TVA for any Direct Assignment Facilities, Network Upgrades, other system modifications, Ancillary Services, and applicable study costs, consistent with applicable law and Commission policy compatible therewith, along with the following:

**34.1 Monthly Demand Charge**

The Network Customer shall pay a monthly Demand Charge, which shall be determined by multiplying its Load Ratio Share times one twelfth (1/12) of TVA's Annual Transmission Revenue Requirement specified in Attachment H.

**34.2 Determination of Network Customer's Monthly Network Load**

The Network Customer's monthly Network Load is its hourly load (including its designated Network Load not physically interconnected with TVA under Section 31.3 (Network Load Not Physically Interconnected with TVA)), coincident with TVA's Monthly Transmission System Peak.

**34.3 Determination of TVA's Monthly Transmission System Load**

TVA's monthly Transmission System load is TVA's Monthly Transmission System Peak minus the coincident peak usage of all Firm Point-To-Point Transmission Service customers pursuant to Parts I and II of these Guidelines plus the Reserved Capacity of all Firm Point-To-Point Transmission Service customers.

**34.4 Determination of TVA's Monthly Optional Ancillary Services Load**

TVA's monthly optional ancillary services load is TVA's Monthly Transmission System Peak minus the coincident peak usage of all Firm Point-To-Point Transmission Service customers pursuant to Parts I and II of these Guidelines minus the coincident peak usage of all Network Customers pursuant to Parts I and III of these Guidelines plus the coincident peak usage of all Network Customers which purchase one or more of the following Ancillary Services from TVA under Section 3 (Ancillary Services): (i) Regulation and Frequency Response, (ii) Operating Reserve - Spinning, or (iii) Operating Reserve - Supplemental.

**34.5 Redispatch Charge**

The Network Customer shall pay any Redispatch Costs allocated between the Network Customer and TVA pursuant to Section 33 (Load Shedding and Curtailments). To the extent that TVA incurs an obligation to the Network Customer for Redispatch Costs in accordance with Section 33.2 (Transmission Constraints), such amounts shall be credited against the Network Customer's bill for the applicable month.

**34.6 Stranded Cost Recovery**

TVA may recover stranded costs from the Network Customer pursuant to these Guidelines consistent with the terms, conditions and procedures set forth in FERC Order No. 888 and other applicable law.

**35 Operating Arrangements****35.1 Operation under the Network Operating Agreement**

The Network Customer shall plan, construct, operate and maintain its facilities in accordance with Good Utility Practice and in conformance with the Network Operating Agreement.

**35.2 Network Operating Agreement**

The terms and conditions under which the Network Customer shall operate its facilities and the technical and operational matters associated with the implementation of Parts I and III of the Guidelines shall be specified in the Network Operating Agreement. The Network Operating Agreement shall provide for the Parties to (i) operate and maintain equipment necessary for integrating the Network Customer within TVA's Transmission System (including, but not limited to, remote terminal units, metering, communications equipment and relaying equipment), (ii) transfer data between TVA and the Network Customer (including, but not limited to, heat rates and operational characteristics of Network Resources, generation schedules for units outside TVA's Transmission System, interchange schedules, unit outputs for redispatch required under Section 33 (Load Shedding and Curtailments), voltage schedules, loss factors and other real time data), (iii) use software programs required for data links and constraint dispatching, (iv) exchange data on forecasted loads and resources necessary for long-term planning, and (v) address any other technical and operational considerations required for implementation of Parts I and III of the Guidelines, including scheduling protocols. The Network Operating Agreement will recognize that the Network Customer shall either (i) operate as a Control Area under applicable guidelines of NERC and SERC, (ii) satisfy its Control Area requirements, including all necessary Ancillary Services, by contracting with TVA, or (iii) satisfy its Control Area requirements, including all necessary Ancillary Services, by contracting with another entity, consistent with Good Utility Practice, which satisfies NERC and SERC requirements. TVA shall not unreasonably refuse to accept contractual arrangements with another entity for Ancillary Services. The Network Operating Agreement is described in Attachment G.

**35.3 Network Operating Committee**

A Network Operating Committee (Committee) shall be established to coordinate operating criteria for the Parties' respective responsibilities under the Network Operating Agreement. Each Network Customer shall be entitled to have at least one representative on the Committee. The Committee shall meet from time to time as need requires, but no less than once each calendar year.

**SCHEDULE 1****Scheduling, System Control and Dispatch Service**

I. This service is required to schedule the movement of power through, out of, within, or into a Control Area. This service can be provided only by the Transmission Service Provider for the area in which the transmission facilities used for Transmission Service are located. Scheduling, System Control and Dispatch Service is to be provided directly by TVA. The Transmission Customer purchasing Transmission Service from TVA must purchase Scheduling, System Control and Dispatch Service from TVA. The charges for Scheduling, System Control and Dispatch Service are based on the rates set forth below.

A. **Rates for Point-To-Point Transmission Service:** The Transmission Customer shall compensate TVA each month for Reserved Capacity at the sum of the applicable charges set forth below:

**Yearly Service Charge** = one-twelfth of the demand charge of \$1.980/kW of Reserved Capacity per year

**Monthly Service Charge** = \$0.165/kW of Reserved Capacity per month

**Weekly Service Charge** = \$0.0381/kW of Reserved Capacity per week

**Daily Service Charge** = \$0.00762/kW of Reserved Capacity per day

**Hourly Service Charge** = \$0.000476/kW of Reserved Capacity per hour

The total charge in any day, pursuant to a reservation for Hourly Service, shall not exceed the rate specified for the Daily Service Charge above times the highest amount in kilowatts of Reserved Capacity in any hour during such day. In addition, the total demand charge in any week, pursuant to a reservation for Hourly Service or Daily Service, shall not exceed the rate specified for the Weekly Service Charge above times the highest amount in kilowatts of Reserved Capacity in any hour during such week.

TVA may agree to provide additional scheduling services to allow for coordination of special schedules between Control Areas. The charge for such services will be negotiated between the Parties.

B. **Rates for Network Integration Transmission Service:** The annual revenue requirement for Scheduling, System Control and Dispatch Service is \$51,071,001. Each Network Customer will pay for this service monthly, and the charge will be determined by multiplying its Load Ratio Share times one twelfth (1/12) of the revenue requirement specified above.

Equipment necessary for dynamic scheduling and additional costs related to scheduling will be addressed in the Service Agreement for Network Integration Transmission Service.

II. **Discounts:** If TVA attributes a discounted Scheduling, System Control and Dispatch Service rate to its own Third-Party Sale transactions, TVA will offer for the same period the same discounted Scheduling, System Control and Dispatch Service rate to all Eligible Customers. Information regarding any discounted Scheduling, System Control and Dispatch Service rates will be posted on the OASIS. In addition, discounts to Eligible Customers will be offered in a manner that is not unduly discriminatory.

**SCHEDULE 2****Reactive Supply and Voltage Control from Generation Sources Service**

- I. In order for the Transmission Operator to maintain transmission voltages on TVA's transmission facilities within acceptable limits, generation facilities under the control of the Balancing Authority are operated to produce (or absorb) reactive power. Thus, Reactive Supply and Voltage Control from Generation Sources Service must be provided for each transaction on TVA's transmission facilities. The amount of Reactive Supply and Voltage Control from Generation Sources Service that must be supplied with respect to the Transmission Customer's transaction will be determined based on the reactive power support necessary to maintain transmission voltages within limits that are generally accepted in the region and consistently adhered to by TVA.

Reactive Supply and Voltage Control from Generation Sources Service is to be provided directly by TVA. The Transmission Customer purchasing Transmission Service from TVA must purchase Reactive Supply and Voltage Control from Generation Sources Service from TVA. The charges for such service will be based on the rates set forth below.

- A. **Rates for Point-To-Point Transmission Service:** The Transmission Customer shall compensate TVA each month for Reserved Capacity at the sum of the applicable charges set forth below:  
**Yearly Service Charge** = one-twelfth of the demand charge of \$2.712/kW of Reserved Capacity per year  
**Monthly Service Charge** = \$0.226/kW of Reserved Capacity per month  
**Weekly Service Charge** = \$0.0523/kW of Reserved Capacity per week  
**Daily Service Charge** = \$0.01046/kW of Reserved Capacity per day  
**Hourly Service Charge** = \$0.000654/kW of Reserved Capacity per hour

The total charge in any day, pursuant to a reservation for Hourly Service, shall not exceed the rate specified for the Daily Service Charge above times the highest amount in kilowatts of Reserved Capacity in any hour during such day. In addition, the total demand charge in any week, pursuant to a reservation for Hourly Service or Daily Service, shall not exceed the rate specified for the Weekly Service Charge above times the highest amount in kilowatts of Reserved Capacity in any hour during such week.

- B. **Rates for Network Integration Transmission Service:** The annual revenue requirement for Reactive Supply and Voltage Control from Generation Sources Service is \$70,077,987. Each Network Customer will pay for this service monthly, and the charge will be determined by multiplying its Load Ratio Share times one twelfth (1/12) of the revenue requirement specified above.

The Network Customer will within the shortest time practicable, but before one (1) year after service begins under these Guidelines, have sufficient reactive compensation and control to meet the power factor requirements specified below (such range will be adhered to except for momentary deviations or at TVA's written consent) at each Point of Delivery or interconnection with the Network Customer. The power factor requirements specified below apply to loads connected to the TVA Transmission System.

## POWER FACTOR REQUIREMENTS

**On-Peak****Hours 0.97 (lagging) to 0.98 (leading)****Off-Peak****Hours 0.95 (lagging) to 1.00 (unity)**

- II. **Additional Charges:** If TVA determines that (a) such Network Customer's power factor exceeds the ranges in Section I above or (b) any other Transmission Customer imposes an undue reactive burden (as determined based on Good Utility Practice) on the TVA Transmission System, in addition to the appropriate charge above, TVA reserves the right to install equipment needed to maintain proper voltage control. In this case, all costs of installing such equipment shall be paid by the Transmission Customer. TVA also reserves the right to charge the Transmission Customer for Redispatch Costs when necessary to correct for the Transmission Customer's undue reactive burden or the Network Customer's power factor exceeding the ranges in Section I-B above or to charge for hydroelectric units operating in a condensing mode (motoring charge) when necessary to correct such a situation.
  
- III. **Discounts:** If TVA attributes a discounted Reactive Supply and Voltage Control from Generation Sources Service rate to its own Third-Party Sale transactions, TVA will offer for the same period the same discounted Reactive Supply and Voltage Control from Generation Sources Service rate to all Eligible Customers. Information regarding any discounted Reactive Supply and Voltage Control from Generation Sources Service rates will be posted on the OASIS. In addition, discounts to Eligible Customers will be offered in a manner that is not unduly discriminatory.

**SCHEDULE 3\*****Regulation and Frequency Response Service**

- I. **Description:** Regulation and Frequency Response Service is necessary to provide for the continuous balancing of resources (generation and interchange) with load and for maintaining scheduled interconnection frequency at sixty cycles per second (60 Hz). Regulation and Frequency Response Service is accomplished by committing on-line generation whose output is raised or lowered (predominantly through the use of automatic generating control equipment) as necessary to follow the moment-by-moment changes in load. The obligation to maintain this balance between resources and load lies with TVA. This service applies to a Transmission Customer when Transmission Service provided by TVA is used to serve load within TVA's Control Area.

The Transmission Customer must either purchase this service from TVA or make alternative comparable arrangements that TVA agrees will satisfy the Transmission Customer's Regulation and Frequency Response Service obligation. The amount of and charges for Regulation and Frequency Response Service are set forth below.

- II. **Rates for Point to Point Transmission Service\*\*:** The Transmission Customer taking Point-to-Point Transmission Service shall compensate TVA each month for an availability charge for Regulation and Frequency Response Service provided by TVA at the sum of the applicable charges set forth below:

**Monthly Service Charge: \$0.155/kW of Reserved Capacity per month**

Where:

kW is the Transmission Customer's Reserved Capacity for which Regulation and Frequency Response Service is provided by TVA, which is the sum of the capacity reservations at the Point(s) of Delivery.

The Transmission Customer's payment obligation for Regulation and Frequency Response Service is incurred upon reservation of such service. Non-use of the reserved Transmission Service or Regulation and Frequency Response Service by the Transmission Customer for any reason or cause will not relieve the Transmission Customer of payment.

- III. **Rates for Network Integration Transmission Service\*\*:** The Network Customer shall compensate TVA each month for an availability charge for Regulation and Frequency Response Service provided by TVA at the sum of such customer's monthly Optional Ancillary Services Load Ratio Share calculated on a rolling twelve month basis multiplied by one-twelfth (1/12) of the annual revenue requirements of \$44,964,251 for Regulation and Frequency Response Service.

\* All charges will be adjusted to account for applicable transmission losses.

\*\* The Transmission Customer will also compensate TVA for any applicable Energy Imbalance Service charge (see Schedule 4 - Energy Imbalance Service) resulting from TVA's provision of Regulation and Frequency Response Service to the Transmission Customer.

**SCHEDULE 4\*****Energy Imbalance Service**

- I. **Description:** Energy Imbalance Service is provided when a difference occurs between the scheduled and the actual delivery of energy to a load located within a Control Area over a single hour. This service applies to a Transmission Customer when Transmission Service provided by TVA is used to serve load within TVA's Control Area. The Transmission Customer must either purchase this service from TVA or make alternative comparable arrangements that TVA agrees will satisfy the Transmission Customer's Energy Imbalance Service obligation.
- II. **Treatment of Energy Imbalance Within an Established Deviation Band:** TVA has established a deviation band of plus or minus one and five-tenths (1.5) percent (with a minimum of 2 MWh) of the scheduled transaction to be applied hourly to any energy imbalance that occurs as a result of the Network Customer's scheduled transaction(s).
  - A. If the scheduled amount is in excess of load integrated over a clock hour but within the allowed deviation of one and five-tenths (1.5) percent (with a minimum of 2 MWh), the energy imbalance will be returned in kind\*\* as soon as practicable on a mutually agreeable schedule but within thirty (30) days of the invoice date to compensate for energy imbalance within the deviation band. If any energy imbalance is not corrected within thirty (30) days of the invoice date, TVA will compensate the Transmission Customer as described in III.A. below for the amount not corrected as if that amount was outside the deviation band.
  - B. If the load integrated over a clock hour is in excess of the scheduled amount but within the allowed deviation of one and five-tenths (1.5) percent (with a minimum of 2 MWh), the energy imbalance will be returned in kind\*\* as soon as practicable on a mutually agreeable schedule but within thirty (30) days of the invoice date to compensate for the energy imbalance within the deviation band. If any energy imbalance is not corrected within thirty (30) days of the invoice date, the Transmission Customer will compensate TVA as described in III.B below for the amount not corrected as if that amount was outside the deviation band.
- III. **Treatment of Energy Imbalance Outside the Established Deviation Band:** Energy imbalances outside the deviation band will be subject to the charges for Energy Imbalance Service set forth below:
  - A. If the scheduled amount is in excess of load integrated over a clock hour but outside the allowed deviation of one and five-tenths (1.5) percent (with a minimum of 2 MWh), TVA will credit the Network Customer's account for TVA's decremental system cost for the clock hour x 0.9 for the MWh that are provided in excess of the load integrated over the clock hour. The Network Customer is also responsible for any additional costs directly attributable to a schedule that exceeds the load by an excess of one and five-tenths (1.5) percent (e.g., if this occurs during a load turndown period where units are at minimum generation, units may have to be taken off line, there may be forced pumping out of economic order at TVA's pumped storage facility to increase the load, interchange power may be sold at less than marginal cost, etc.).
  - B. If the load integrated over a clock hour is in excess of the scheduled amount but outside the allowed deviation of one and five-tenths (1.5) percent (with a minimum of 2 MWh), the Network Customer will pay TVA the higher of 100 mills/kWh or 110

percent of TVA's highest incremental cost in the hour for the MWh that TVA provided in excess of the scheduled amount.

\* All charges will be adjusted to account for applicable transmission losses.

\*\*In-kind repayment will be made during like time periods (Central Prevailing Time) which are Peak Block 1 (6:00 a.m. to 10:00 a.m.), Peak Block 2 (10:00 a.m. to 2:00 p.m.), Peak Block 3 (2:00 p.m. to 6:00 p.m.), Peak Block 4 (6:00 p.m. to 10:00 p.m.), Off-Peak Block (10:00 p.m. to 6:00 a.m.). The peak blocks do not apply to Sundays and NERC Holidays. For purposes of in-kind repayment, Sundays and NERC Holidays are considered the same as the Off-Peak Block (10:00 p.m. to 6:00 a.m.).



**SCHEDULE 5\*****Operating Reserve - Spinning Reserve Service**

- I. **Description:** Spinning Reserve Service is needed to serve load immediately in the event of a system contingency. Spinning Reserve Service may be provided for 15 minutes by generating units that are on-line and loaded at less than maximum output and under automatic generation control. This service applies to a Transmission Customer when Transmission Service provided by TVA is used to serve load within TVA's Control Area.

The Transmission Customer must either purchase this service from TVA or make alternative comparable arrangements that TVA agrees will satisfy the Transmission Customer's Spinning Reserve Service obligation. The amount of and charges for Spinning Reserve Service are set forth below.

- II. **Rates for Point to Point Transmission Service\*\*:** The Transmission Customer taking Point-to-Point Transmission Service shall compensate TVA each month for an availability charge for Operating Reserve - Spinning Reserve Service provided by TVA at the sum of the applicable charges set forth below:

**Monthly Service Charge: \$0.237/kW of Reserved Capacity per month**

Where:

kW is the Transmission Customer's Reserved Capacity for which Operating Reserve - Spinning Reserve Service is provided by TVA, which is the sum of the capacity reservations at the Point(s) of Delivery.

The Transmission Customer's payment obligation for Operating Reserve - Spinning Reserve Service is incurred upon reservation of such service. Non-use of the reserved Transmission Service or Operating Reserve - Spinning Reserve Service by the Transmission Customer for any reason or cause will not relieve the Transmission Customer of payment.

- III. **Rates for Network Integration Transmission Service\*\*:** The Network Customer shall compensate TVA each month for an availability charge for Operating Reserve - Spinning Reserve Service provided by TVA at the sum of such customer's monthly Optional Ancillary Services Load Ratio Share calculated on a rolling twelve month basis multiplied by one-twelfth (1/12) of the annual revenue requirements of \$68,812,960 for Operating Reserve - Spinning Reserve Service.

\* All charges will be adjusted to account for applicable transmission losses.

\*\* The Transmission Customer will also compensate TVA for any applicable Energy Imbalance Service charge (see Schedule 4 - Energy Imbalance Service) resulting from TVA's provision of Operating Reserve - Spinning Reserve Service to the Transmission Customer.

**SCHEDULE 6\*****Operating Reserve - Supplemental Reserve Service**

- I. **Description:** Supplemental Reserve Service is needed to serve load in the event of a system contingency; however, it is not available immediately to serve load but rather within a short period of time. Supplemental Reserve Service may be provided for 30 minutes\*\* by generating units that are on-line but unloaded or by quick-start generation. This service applies to a Transmission Customer when Transmission Service provided by TVA is used to serve load within TVA's Control Area.

The Transmission Customer must either purchase this service from TVA or make alternative comparable arrangements that TVA agrees will satisfy the Transmission Customer's Supplemental Reserve Service obligation. The amount of and charges for Supplemental Reserve Service are set forth below.

- II. **Rates for Point to Point Transmission Service\*\*\*:** The Transmission Customer taking Point-to-Point Transmission Service shall compensate TVA each month for an availability charge for Operating Reserve - Supplemental Reserve Service provided by TVA at the sum of the applicable charges set forth below:

**Monthly Service Charge: \$0.120/kW of Reserved Capacity per month**

Where:

kW is the Transmission Customer's Reserved Capacity for which Operating Reserve - Supplemental Reserve Service is provided by TVA, which is the sum of the capacity reservations at the Point(s) of Delivery.

The Transmission Customer's payment obligation for Operating Reserve - Supplemental Reserve Service is incurred upon reservation of such service. Non-use of the reserved Transmission Service or Operating Reserve - Supplemental Reserve Service by the Transmission Customer for any reason or cause will not relieve the Transmission Customer of payment.

- III. **Rates for Network Integration Transmission Service\*\*\*:** The Network Customer shall compensate TVA each month for an availability charge for Operating Reserve - Supplemental Reserve Service provided by TVA at the sum of such customer's monthly Optional Ancillary Services Load Ratio Share calculated on a rolling twelve month basis multiplied by one-twelfth (1/12) of the annual revenue requirements of \$34,929,412 for Operating Reserve - Supplemental Reserve Service.

\* All charges will be adjusted to account for applicable transmission losses.

\*\* Under certain emergency conditions, TVA may agree to provide Supplemental Reserve Service for more than 30 minutes if TVA has power available.

\*\*\* The Transmission Customer will also compensate TVA for any applicable Energy Imbalance Service charge (see Schedule 4 - Energy Imbalance Service) resulting from TVA's provision of Operating Reserve - Supplemental Reserve Service to the Transmission Customer.

**SCHEDULE 7****Long-Term Firm and Short-Term Firm Point-To-Point Transmission Service**

- I. The Transmission Customer shall compensate TVA each month for Reserved Capacity at the sum of the applicable charges set forth below:
- A. **Yearly Service Charge:** one-twelfth of the demand charge of \$20.088/kW of Reserved Capacity per year
  - B. **Monthly Service Charge:** \$1.674/kW of Reserved Capacity per month
  - C. **Weekly Service Charge:** \$0.386/kW of Reserved Capacity per week
  - D. **Daily Service Charge:** \$0.0772/kW of Reserved Capacity per day

Where:

kW is the Transmission Customer's Reserved Capacity, which is the sum of the capacity reservations at the Point(s) of Delivery.

The total demand charge in any week, pursuant to a reservation for Daily Service, shall not exceed the rate specified in Section (C) above times the highest amount in kilowatts of Reserved Capacity in any day during such week (plus an adjustment for any Redispatch Cost which exceeds the Weekly Service Charges).

The Transmission Customer's payment obligation for Firm Point-To-Point Transmission Service is incurred upon reservation of the Transmission Service. Non-use of the reserved Transmission Service by the Transmission Customer for any reason or cause will not relieve the Transmission Customer of payment.

- II. **Discounts:** Three principal requirements apply to discounts for transmission service as follows: (1) any offer of a discount made by TVA will be announced to all Eligible Customers solely by posting on the OASIS, (2) any customer-initiated requests for discounts (including requests by TVA for its own Third-Party Sales transactions) must occur solely by posting on the OASIS, and (3) once a discount is negotiated, details must be immediately posted on the OASIS. For any discount agreed upon for service on a path, from Point(s) of Receipt to Point(s) of Delivery, TVA will offer for the same time period the same discounted Firm Point-To-Point Transmission Service rate to all Eligible Customers on all unconstrained transmission paths that go to the same points of delivery on TVA's transmission system. Information regarding any firm transmission discounts will be posted on the OASIS consistent with Part 37 of the Commission's regulations as implemented by TVA. In addition, discounts to others will be offered in a manner that is not unduly discriminatory.
- III. **Unauthorized Use:** The charge for the unauthorized use of the TVA Transmission System is one hundred fifty (150) percent of the applicable rate specified in (A), (B), (C), or (D) in Section I above (for the type of Transmission Service transaction which exceeded the Reserved Capacity) multiplied by the amount of kW which exceeded the Transmission Customer's Reserved Capacity.
- IV. **Other Charges :** The Transmission Customer shall also pay other applicable charges in accordance with other provisions of these Guidelines or the Service Agreement.

**SCHEDULE 8****Non-Firm Point-To-Point Transmission Service**

- I. The Transmission Customer shall compensate TVA each month for Non-Firm Point-To-Point Transmission Service at the rate in effect at the time Transmission Service is reserved. The rate will be greater than zero (0) but less than or equal to the sum of the applicable charges set forth below:

- A. **Monthly Service Charge:** \$1.674/kW of Reserved Capacity per month
- B. **Weekly Service Charge:** \$0.386/kW of Reserved Capacity per week
- C. **Daily Service Charge:** \$0.0772/kW of Reserved Capacity per day

Where:

kW is the Transmission Customer's Reserved Capacity, which is the sum of the capacity reservations at the Point(s) of Delivery.

The total demand charge in any week, pursuant to a reservation for Daily Service, shall not exceed the rate specified in Section (B) above times the highest amount of Reserved Capacity in any day during such week.

- D. **Hourly Service Charge:** The basic charge shall be that agreed upon by the Parties at the time this service is reserved and in no event shall exceed \$0.00483/kWh. The basic charge shall be applied to the Transmission Customer's Reserved Capacity, which is the sum of the capacity reservations at the Point(s) of Delivery. The total demand charge in any day, pursuant to a reservation for Hourly Service, shall not exceed the rate specified for the Daily Service Charge above times the highest amount in kilowatts of Reserved Capacity in any hour during such day. In addition, the total demand charge in any week, pursuant to a reservation for Hourly Service or Daily Service, shall not exceed the rate specified for the Weekly Service Charge above times the highest amount in kilowatts of Reserved Capacity in any hour during such week.

The Transmission Customer's payment obligation for Non-Firm Point-To-Point Transmission Service is incurred upon reservation of the Transmission Service. Non-use of the reserved Transmission Service by the Transmission Customer for any reason or cause will not relieve the Transmission Customer of payment, except if the non-use is a result of a Curtailment or Interruption due to a constraint on the TVA Transmission System.

- II. **Discounts:** Three principal requirements apply to discounts for transmission service as follows: (1) any offer of a discount made by TVA will be announced to all Eligible Customers solely by posting on the OASIS, (2) any customer-initiated requests for discounts (including requests by TVA for its own Third-Party Sales transactions) must occur solely by posting on the OASIS, and (3) once a discount is negotiated, details must be immediately posted on the OASIS. For any discount agreed upon for service on a path, from Point(s) of Receipt to Point(s) of Delivery, TVA will offer for the same time period the same discounted Non-Firm Point-To-Point Transmission Service rate to all Eligible Customers on all unconstrained transmission paths that go to the same points of delivery on TVA's transmission system. Information regarding any non-firm transmission discounts will be posted on the OASIS consistent with Part 37 of the Commission's regulations as implemented by TVA. In addition, discounts to others will be offered in a manner that is not unduly discriminatory.

- III. **Unauthorized Use:** The charge for the unauthorized use of the TVA Transmission System is one hundred fifty (150) percent of the applicable rate specified in (A), (B), (C), or (D) in Section I above (for the type of Transmission Service transaction which exceeded the Reserved Capacity) multiplied by the amount of kW which exceeded the Transmission Customer's Reserved Capacity.
- IV. **Other Charges :** The Transmission Customer shall also pay other applicable charges in accordance with other provisions of these Guidelines or the Service Agreement.

**ATTACHMENT A****Service Agreements for Firm Point-To-Point Transmission Service****I. Service Agreement for Long-Term Firm Point-To-Point Transmission Service**

- 1.0 This Service Agreement, dated and effective as of \_\_\_\_\_, is entered into, by and between the Tennessee Valley Authority ("TVA") and \_\_\_\_\_ ("Transmission Customer").
- 2.0 The Transmission Customer has been determined by TVA to have a Completed Application for Long-Term Firm Point-To-Point Transmission Service under TVA's Transmission Service Guidelines ("Guidelines").
- 3.0 The Transmission Customer has provided to TVA an Application deposit in the amount of \$\_\_\_\_\_, in accordance with the provisions of the Guidelines.
- 4.0 Service under this Service Agreement shall commence on the later of \_\_\_\_\_ or the date on which construction of any Direct Assignment Facilities, Network Upgrades, and/or other modifications necessary to satisfy the request for Transmission Service are completed. Service under this Service Agreement shall terminate on \_\_\_\_\_.
- 5.0 TVA agrees to provide and the Transmission Customer agrees to take and pay for Long-Term Firm Point-To-Point Transmission Service in accordance with the provisions of Parts I and II of the Guidelines and this Service Agreement, including the Specifications for Long-Term Firm Point-To-Point Transmission Service.
- 6.0 Schedules for Long-Term Firm Point-To-Point Transmission Service shall be furnished by the Transmission Customer to TVA in advance in accordance with the Guidelines.
- 7.0 TVA shall not be required to provide Transmission Service hereunder for the Transmission Customer for power and energy it does not own or otherwise have title to. Pursuant to the Energy Policy Act of 1992, TVA shall also not be required to provide Transmission Service hereunder to transmit electric energy for consumption within the area for which TVA may be a source of power supply in accordance with the Tennessee Valley Authority Act of 1933, as amended ("TVA Act"). In this regard, the Transmission Customer shall provide, at TVA's request (a) satisfactory evidence that the Transmission Customer owns or otherwise has title to the power and energy for which it requests Transmission Service and (b) adequate certification in writing that the power and energy for which it requests Transmission Service is for consumption outside the area for which TVA may be a source of power supply in accordance with the TVA Act. Proper completion of the specifications for Long-Term Firm Point-To-Point Transmission Service and NERC Tags shall constitute satisfaction of the certification requirement.

TVA shall not be obligated to supply power and energy from its own sources or from its purchases from other neighboring systems during interruptions or curtailments in the delivery to TVA of power and energy for Transmission Service hereunder, and nothing in this Service Agreement or in the Transmission Customer's agreements with others shall have the effect of making, nor shall anything in the Service Agreement or said agreements with others be construed to require TVA to take any action which would make TVA, directly

or indirectly, a source of power supply to the Transmission Customer, to any Delivering Party or Receiving Party, or to any ultimate recipient.

- 8.0 Any notice or request made to or by either Party regarding this Service Agreement shall be made to the representative of the other Party as indicated below. The designation of the person to be so notified or the address of such person may be changed at any time and from time to time by either Party by similar notice.

TVA:  
Transmission Service Coordinator  
Tennessee Valley Authority  
1101 Market Street, PCC 2A  
Chattanooga, Tennessee 37402-2801

Transmission Customer:

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- 9.0 Invoices for Transmission Service will be mailed to the Transmission Customer at the address indicated below. The Transmission Customer may modify the information specified below by written notice to TVA in accordance with Section 8.

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- 10.0 The Guidelines, as such Guidelines now exist or may hereafter be modified, are incorporated herein and made a part hereof. In the event of any conflict between this Service Agreement and the Guidelines, the Guidelines shall control.
- 11.0 Any waiver at any time by either Party of its rights with respect to any default of the other Party or with respect to any other matter arising in connection with this Service Agreement shall not be considered a waiver with respect to any other default or matter.
- 12.0 The validity, interpretation, and performance of this Service Agreement shall be governed by applicable Federal law.
- 13.0 This Service Agreement shall not be construed to create rights in, or to grant remedies to, or delegate any duty, obligation, or undertaking established herein to any third party as a beneficiary to this Service Agreement.
- 14.0 This Service Agreement, including the Guidelines, together with the Specifications for Long-Term Firm Point-To-Point Transmission Service and any NERC Tags shall constitute the entire understanding between TVA and the Transmission Customer with respect to Transmission Service hereunder.
- 15.0 The applicable provisions of this Service Agreement will continue in effect after termination of the Service Agreement to the extent necessary to provide for final billing, billing

adjustments and payments, and with respect to liability and indemnification from acts or events that occurred while this Service Agreement was in effect.

IN WITNESS WHEREOF, the Parties have caused this Service Agreement to be executed by their respective authorized officials.

TVA:

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

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

Transmission Customer:

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

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



**Specifications for Long-Term Firm Point-To-Point Transmission Service**

- 1.0 Term of Transaction: \_\_\_\_\_  
Start Date: \_\_\_\_\_  
Termination Date: \_\_\_\_\_
  
- 2.0 Description of the supply characteristics of the capacity and energy to be transmitted by TVA including the electric Control Area in which the transaction originates:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
  
- 3.0 Point(s) of Receipt: \_\_\_\_\_  
Delivering Party: \_\_\_\_\_  
Capacity Reservation: \_\_\_\_\_
  
- 4.0 Point(s) of Delivery: \_\_\_\_\_  
Receiving Party: \_\_\_\_\_  
Capacity Reservation: \_\_\_\_\_
  
- 5.0 Maximum amount of capacity and energy to be transmitted (Reserved Capacity):  
\_\_\_\_\_
  
- 6.0 Designation of Party(ies) subject to reciprocal service obligation:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
  
- 7.0 Name(s) of any Intervening Systems providing Transmission Service:  
\_\_\_\_\_  
\_\_\_\_\_
  
- 8.0 Party responsible for providing Real Power Losses:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
  
- 9.0 (Confidential) Location of generating facilities:  
\_\_\_\_\_  
\_\_\_\_\_
  
- 10.0 (Confidential) Location of the ultimate load:  
\_\_\_\_\_  
\_\_\_\_\_
  
- 11.0 Service under this agreement may be subject to some combination of the charges detailed below. (The appropriate charges for individual transactions will be determined in accordance with the terms and conditions of the Guidelines.)
  - 11.1 Transmission Charge: \_\_\_\_\_  
\_\_\_\_\_

11.2 Redispatch Charges: \_\_\_\_\_

\_\_\_\_\_

11.3 Network Upgrade Charges: \_\_\_\_\_

\_\_\_\_\_

11.4 Direct Assignment Facilities Charge: \_\_\_\_\_

\_\_\_\_\_

11.5 Charges for Other Transmission System Modifications: \_\_\_\_\_

\_\_\_\_\_

11.6 Ancillary Services Charges: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**II. Service Agreement for Short-Term Firm Point-To-Point Transmission Service**

- 1.0 This Service Agreement, dated and effective as of \_\_\_\_\_, is entered into, by and between the Tennessee Valley Authority ("TVA") and \_\_\_\_\_ ("Transmission Customer").
- 2.0 The Transmission Customer has been determined by TVA to have a Completed Application for Short-Term Firm Point-To-Point Transmission Service under TVA's Transmission Service Guidelines ("Guidelines").
- 3.0 Service under this Service Agreement shall be provided by TVA upon request by an authorized representative of the Transmission Customer. A Transmission Service reservation request will be submitted for each request for Short-Term Firm Point-To-Point Transmission Service.
- 4.0 The Transmission Customer agrees to supply such information TVA deems reasonably necessary in accordance with Good Utility Practice in order for it to provide the requested service.
- 5.0 TVA agrees to provide and the Transmission Customer agrees to take and pay for Short-Term Firm Point-To-Point Transmission Service in accordance with the provisions of Parts I and II of the Guidelines and this Service Agreement.
- 6.0 Schedules (using NERC Tags) for Short-Term Firm Point-To Point Transmission Service shall be furnished by the Transmission Customer to TVA in advance in accordance with the Guidelines.
- 7.0 TVA shall not be required to provide Transmission Service hereunder for the Transmission Customer for power and energy it does not own or otherwise have title to. Pursuant to the Energy Policy Act of 1992, TVA shall also not be required to provide Transmission Service hereunder to transmit electric energy for consumption within the area for which TVA may be a source of power supply in accordance with the Tennessee Valley Authority Act of 1933, as amended ("TVA Act"). In this regard, the Transmission Customer shall provide, at TVA's request (a) satisfactory evidence that the Transmission Customer owns or otherwise has title to the power and energy for which it requests Transmission Service and (b) adequate certification in writing that the power and energy for which it requests Transmission Service is for consumption outside the area for which TVA may be a source of power supply in accordance with the TVA Act. Proper completion of Transmission Service reservation and scheduling requests shall constitute satisfaction of the certification requirement.  
  
TVA shall not be obligated to supply power and energy from its own sources or from its purchases from other neighboring systems during interruptions or curtailments in the delivery to TVA of power and energy for Transmission Service hereunder, and nothing in this Service Agreement or in the Transmission Customer's agreements with others shall have the effect of making, nor shall anything in the Service Agreement or said agreements with others be construed to require TVA to take any action which would make TVA, directly or indirectly, a source of power supply to the Transmission Customer, to any Delivering Party or Receiving Party, or to any ultimate recipient.
- 8.0 Any notice or request made to or by either Party regarding this Service Agreement shall be made to the representative of the other Party as indicated below. The designation of the

person to be so notified or the address of such person may be changed at any time and from time to time by either Party by similar notice.

TVA:  
Transmission Service Coordinator  
Tennessee Valley Authority  
1101 Market Street, PCC 2A  
Chattanooga, Tennessee 37402-2801

Transmission Customer:

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- 9.0 Invoices for Transmission Service will be mailed to the Transmission Customer at the address indicated below. The Transmission Customer may modify the information specified below by written notice to TVA in accordance with Section 8.

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- 10.0 The Guidelines, as such Guidelines now exist or may hereafter be modified, are incorporated herein and made a part hereof. In the event of any conflict between this Service Agreement and the Guidelines, the Guidelines shall control.
- 11.0 Any waiver at any time by either Party of its rights with respect to any default of the other Party or with respect to any other matter arising in connection with this Service Agreement shall not be considered a waiver with respect to any other default or matter.
- 12.0 The validity, interpretation, and performance of this Service Agreement shall be governed by applicable Federal law.
- 13.0 This Service Agreement shall not be construed to create rights in, or to grant remedies to, or delegate any duty, obligation, or undertaking established herein to any third party as a beneficiary to this Service Agreement.
- 14.0 This Service Agreement, including the Guidelines, together with any completed Transmission Service reservation and scheduling requests shall constitute the entire understanding between TVA and the Transmission Customer with respect to Transmission Service hereunder.
- 15.0 This Service Agreement shall become effective as of the date first above written and shall continue in effect until terminated by either Party upon at least 90 days' prior written notice to the other, provided, however, the Service Agreement should not terminate before completion of reserved and/or scheduled Transmission Service under this Service Agreement.

16.0 The applicable provisions of this Service Agreement will continue in effect after termination of the Service Agreement to the extent necessary to provide for final billing, billing adjustments and payments, and with respect to liability and indemnification from acts or events that occurred while this Service Agreement was in effect.

IN WITNESS WHEREOF, the Parties have caused this Service Agreement to be executed by their respective authorized officials.

TVA:

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

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

Transmission Customer:

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

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

**ATTACHMENT B****Service Agreement for Non-Firm Point-To-Point Transmission Service**

- 1.0 This Service Agreement, dated and effective as of \_\_\_\_\_, is entered into, by and between the Tennessee Valley Authority ("TVA") and \_\_\_\_\_ ("Transmission Customer").
- 2.0 The Transmission Customer has been determined by TVA to have a Completed Application for Non-Firm Point-To-Point Transmission Service under TVA's Transmission Service Guidelines ("Guidelines").
- 3.0 Service under this Service Agreement shall be provided by TVA upon request by an authorized representative of the Transmission Customer. A Transmission Service reservation request will be submitted for each request for Non-Firm Point-To-Point Transmission Service.
- 4.0 The Transmission Customer agrees to supply such information TVA deems reasonably necessary in accordance with Good Utility Practice in order for it to provide the requested service.
- 5.0 TVA agrees to provide and the Transmission Customer agrees to take and pay for Non-Firm Point-To-Point Transmission Service in accordance with the provisions of Parts I and II of the Guidelines and this Service Agreement, including any reservations and NERC Tags.
- 6.0 Schedules (using NERC Tags) for Non-Firm Point-To Point Transmission Service shall be furnished by the Transmission Customer to TVA in advance in accordance with the Guidelines.
- 7.0 TVA shall not be required to provide Transmission Service hereunder for the Transmission Customer for power and energy it does not own or otherwise have title to. Pursuant to the Energy Policy Act of 1992, TVA shall also not be required to provide Transmission Service hereunder to transmit electric energy for consumption within the area for which TVA may be a source of power supply in accordance with the Tennessee Valley Authority Act of 1933, as amended ("TVA Act"). In this regard, the Transmission Customer shall provide, at TVA's request (a) satisfactory evidence that the Transmission Customer owns or otherwise has title to the power and energy for which it requests Transmission Service and (b) adequate certification in writing that the power and energy for which it requests Transmission Service is for consumption outside the area for which TVA may be a source of power supply in accordance with the TVA Act. Proper completion of Transmission Service reservation and scheduling requests shall constitute satisfaction of the certification requirement.

TVA shall not be obligated to supply power and energy from its own sources or from its purchases from other neighboring systems during interruptions or curtailments in the delivery to TVA of power and energy for Transmission Service hereunder, and nothing in this Service Agreement or in the Transmission Customer's agreements with others shall have the effect of making, nor shall anything in the Service Agreement or said agreements with others be construed to require TVA to take any action which would make TVA, directly or indirectly, a source of power supply to the Transmission Customer, to any Delivering Party or Receiving Party, or to any ultimate recipient.

8.0 Any notice or request made to or by either Party regarding this Service Agreement shall be made to the representative of the other Party as indicated below. The designation of the person to be so notified or the address of such person may be changed at any time and from time to time by either Party by similar notice.

TVA:  
Transmission Service Coordinator  
Tennessee Valley Authority  
1101 Market Street, PCC 2A  
Chattanooga, Tennessee 37402-2801

Transmission Customer:

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9.0 Invoices for Transmission Service will be mailed to the Transmission Customer at the address indicated below. The Transmission Customer may modify the information specified below by written notice to TVA in accordance with Section 8.

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10.0 The Guidelines, as such Guidelines now exist or may hereafter be modified, are incorporated herein and made a part hereof. In the event of any conflict between this Service Agreement and the Guidelines, the Guidelines shall control.

11.0 Any waiver at any time by either Party of its rights with respect to any default of the other Party or with respect to any other matter arising in connection with this Service Agreement shall not be considered a waiver with respect to any other default or matter.

12.0 The validity, interpretation, and performance of this Service Agreement shall be governed by applicable Federal law.

13.0 This Service Agreement shall not be construed to create rights in, or to grant remedies to, or delegate any duty, obligation, or undertaking established herein to any third party as a beneficiary to this Service Agreement.

14.0 This Service Agreement, including the Guidelines, together with any completed Transmission Service reservation and scheduling requests shall constitute the entire understanding between TVA and the Transmission Customer with respect to Transmission Service hereunder.

15.0 This Service Agreement shall become effective as of the date first above written and shall continue in effect until terminated by either Party upon at least 90 days' prior written notice to the other, provided, however, the Service Agreement should not terminate before

completion of reserved and/or scheduled Transmission Service under this Service Agreement.

- 16.0 The applicable provisions of this Service Agreement will continue in effect after termination of the Service Agreement to the extent necessary to provide for final billing, billing adjustments and payments, and with respect to liability and indemnification from acts or events that occurred while this Service Agreement was in effect.

IN WITNESS WHEREOF, the Parties have caused this Service Agreement to be executed by their respective authorized officials.

TVA:

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

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

Transmission Customer:

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

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



**ATTACHMENT C****Methodology to Assess Available Transmission Capability**

TVA will use computer models of the TVA Power System and Eastern Interconnection to perform transfer capability analysis. TVA will apply reliability margins as appropriate to calculated transfer capability values to obtain commercially viable results.

**I. Power System Models**

TVA annually creates power flow models of the TVA system by utilizing TVA developed programs and commercially available software. Electrical characteristics, facility ratings, and the timing of new facilities are maintained in a chronological database. This data is merged with load forecasts to develop an annual set of base cases that project TVA subregion seasonal peak conditions for the next 10 years. TVA participates in the annual VACAR-Southern-TVA-Entergy (VST) power flow model update to merge TVA model data with that of other SERC subregions. The TVA area internal model is slightly reduced to obtain fewer buses for the VST models; however, an adequate representation of the bulk transmission system is maintained. The VST models are then merged with the NERC Multiregional Modeling Working Group (MMWG) models that are developed annually.

TVA also participates in the VACAR-AEP-Southern-TVA-Entergy (VAST) quarterly OASIS Support Group Study process, which updates the VST seasonal base cases for the upcoming year (five seasons). These seasonal base cases are used as reference cases for TVA's daily and monthly available transfer capability (ATC) calculations. These reference cases are modified for daily and monthly projected system conditions and are saved accordingly.

TVA Operating Horizon = Hours 1 through 168 and Week 1 through Week 4

TVA Operational Planning Horizon = Month 1 through Month 13

TVA Planning Horizon = Year 2 through Year 10

Off-line power flow models represent a "snapshot" of the power system based on a mixture of network topology data and assumptions relating to system variables. Based on a knowledge of the characteristics of the system, reasonable approximations may be made about the system over a wide range of operating conditions. Uncertainties in system modeling will increase as conditions are projected farther into the future. Some of the more important variables to be considered in developing a bulk power flow model include:

- A. **System Load** -- The TVA system load in the power flow model will be indicative of the conditions under study. System load will range from minimum load to expected summer and winter peak load conditions, as well as monthly and daily peak load conditions. Load distribution on the TVA system will be considered based on historical and forecast load data. To the extent possible, load in external areas will be consistent with the conditions under study.
- B. **Generation Dispatch** -- TVA generation in the power flow model will be indicative of the conditions under study. In general, the base case generation will be based on economic dispatch with base load units, hydro conditions, pumped hydro, and peaking units given proper consideration for modeled conditions. For some conditions the economic dispatch is modified to reflect more probable outages or to

stress the transmission system. Unit maintenance schedules will also be considered in the power flow model.

- C. **Interchange** -- TVA interchange in the power flow model will be indicative of the conditions under study. In general firm transactions will be modeled in planning horizon studies, while operating horizon studies will attempt to model all scheduled and reserved transactions.
- D. **Facility Ratings** -- Facility ratings in the power flow model will be based on summer or winter peak ambient conditions. Adjustments may be made to critical facility thermal ratings to account for expected weather during conditions under study.
- E. **Status of System Elements** -- Timing of new facilities and outage schedules for existing facilities will be taken into consideration when creating/selecting a power flow model to use for transfer capability analysis.

TVA utilizes the following power flow models to evaluate transfer capability:

- NERC MMWG series of base cases
- VST series of base cases
- SPP series of base cases
- VAST Study Group base cases
- VAST OASIS Support Group Study base cases
- MAIN Transmission Assessment Study Group cases

TVA may replace the TVA area representation in any of the above models with a more detailed model of TVA current system conditions.

## II. Power Flow Analysis

TVA utilizes a flow-based analysis to determine ATC on flowgates. In a flow-based analysis using flowgates, only the flowgates are taken into consideration. A flowgate represents a critical transmission facility and the associated contingency, if any, that may limit transfer capability. Flowgates that have a transfer distribution factor of 3% or greater are considered valid limits. TVA recognizes flowgate limits on TVA and non-TVA system flowgates in the determination of path TTC/ATC values.

The following data sets are required to perform linearized power transfer analysis.

- A. **Subsystem Description Data File:** A file containing an assignment of generation that will participate in the power transfer (source and sink points). The location of generation participating in the modeled transfer can have a significant impact on the transmission transfer capability. The Transmission Customer shall provide specific generator source and sinks to facilitate transfer capability evaluations.
- B. **Monitored Element Data File:** A file listing facilities to be monitored during program operation. In general all bulk power facilities in TVA, including interconnections, and neighboring transmission provider facilities will be monitored. For joint studies, neighboring transmission providers will select which of their facilities to monitor.

### III. ATC Evaluation

The NERC Planning Standards (I.E Transfer Capability) provide the following definitions for TTC, TRM, CBM, and ATC.

The Total Transfer Capability (TTC) is the amount of electric power that can be moved or transferred reliably from one area to another area of the interconnected transmission systems by way of all transmission lines (or paths) between those areas under specified system conditions.

Note: The TTC at any given time is dependent on system conditions at that time. With the uncertainties inherent in power system modeling, calculations of transfer capability are approximations of system capability.

Transmission Reliability Margin (TRM) is the amount of transmission transfer capability necessary to provide reasonable assurance that the interconnected transmission network will be secure. TRM accounts for the inherent uncertainty in system conditions and the need for operating flexibility to ensure reliable system operation as system conditions change.

Capacity Benefit Margin (CBM) is the amount of firm transmission transfer capability preserved by the transmission provider for load-serving entities (LSEs), whose loads are located on that transmission provider's system, to enable access by the LSEs to generation from interconnected systems to meet generation reliability requirements. Preservation of CBM for an LSE allows that entity to reduce its installed generating capacity below that which may otherwise have been necessary without interconnections to meet its generation reliability requirements. The transmission transfer capability preserved as CBM is intended to be used by the LSE only in times of emergency generation deficiencies.

Available Transfer Capability (ATC) is a measure of the firm transfer capability remaining in the physical transmission network for further commercial activity over and above already committed uses. It is defined as TTC less existing transmission commitments (including retail customer service), less a capacity benefit margin (CBM), less a transmission reliability margin (TRM). (The transfer capability margins - CBM and TRM - are defined under section I.E.2 of the Planning Standards document.)

TVA's ATC and TTC evaluation process is a reliability-based assessment of the incremental and total power transfer capability between areas based on the multi-area coordinated process. ATC is evaluated using flowgates to allow realistic representation of transmission limitations. Flowgates are defined based on historical experience and off-line studies for all companies involved in coordinated ATC calculations.

Initially TVA's ATC calculator estimates flowgate Available Flowgate Capacity (AFC) values based on the projected network conditions, load forecast, scheduled outages and reserved transactions. TVA flowgates' AFC values are then adjusted for CBM and TRM, while non-TVA flowgates' AFC values are adjusted based on coordination agreements.

Once commercial AFC values have been determined, the software estimates non-simultaneous ATC and then TTC by simulating transfers between Control Areas using flowgate Power Transfer Distribution Factors (PTDF) and Outage Transfer Distribution Factors (OTDF).

**IV. ATC Coordination**

TVA will coordinate, to the extent feasible, TTC and ATC values with neighboring transmission providers and regional transmission organizations.

## ATTACHMENT D

### Methodology for Completing a System Impact Study

#### Foreword

A System Impact Study will be consistent with Parts I and II of these Guidelines or Parts I and III of these Guidelines. The study will use Good Utility Practice, engineering and operating principals, and standards, guidelines, and criteria of TVA, SERC, NERC, or any similar organization that may exist in the future of which TVA is then a member. The System Impact Study will identify TVA facilities that limit ATC and determine possible upgrades, expansions, other modifications, or redispatch to relieve the constraint. If a limit occurs in neighboring systems, TVA will cooperate with other entities to develop solutions jointly.

TVA will use its sole discretion as to the scope, details and methods used to perform the study. If necessary, a meeting between TVA and the Eligible Customer will be held as soon as practicable to: (1) review the application and any known issue that could affect the scope of the study; and (2) develop a scope of study. The location of the meeting shall be at TVA's offices unless another location is mutually acceptable.

Studies performed by TVA include both near-term (operating and operational planning) studies and also longer-term (planning) studies. Operating and operational planning studies are normally performed for conditions within a one-year period. These studies identify contingency-related transmission deficiencies that may be encountered, and formulate corrective measures to mitigate the deficiency. Planning studies generally involve studies beyond one year. Planning studies have a larger degree of uncertainty than operating studies. These studies identify deficient areas in the transmission and generation system and solutions are proposed which may include facility additions, upgrades, other modifications, or redispatch.

Due to the geographic location of the TVA system, studies are performed for all projected seasonal periods. Generation output in the study work is based on the principles of economic dispatch. The combination of load and capacity studied is a snapshot of TVA system conditions. Additional studies may need to be performed to evaluate off-peak periods and study specific outages of transmission and generation facilities.

An overall review of the TVA bulk Transmission System (500 kV, 230 kV, 161 kV, and 115 kV) is performed periodically. Additionally, specific areas of the TVA system may be studied for new customer, significant load, and generation changes. These reviews may also indicate the need for additional transmission facilities.

TVA will protect proprietary and confidential information concerning requests for Transmission Service and other transmission providers' systems.

#### System Impact Studies

Impacts to the Transmission System will be identified using load-flow analysis, fault analysis, transient stability analysis, and transfer analysis, as applicable, depending on the proximity of the source or sink listed in the transmission service request. Seasonal base cases will be used in the analyses, depicting the expected transmission configuration for the time frame requested in the transmission service request. Consistent with Section 2.2 of these Guidelines, existing firm reservations for the same time frame will be modeled as part of the base case.

The System Impact Study will be performed using the Power Technologies, Inc. or other suitable software. The base cases used in the System Impact Study are derived from the reference cases listed in Attachment C of these Guidelines. The reference cases will be updated with the latest available transmission configuration and load projections. Planned maintenance outages of generation and transmission facilities matching the time frame of the transmission service request will also be modeled in the base case(s).

If insufficient ATC is calculated based on limits on neighboring transmission providers' systems, then TVA will contact the neighboring transmission provider to verify that limit. If the neighboring transmission provider verifies the limit, TVA will honor the external limit and will notify the Eligible Customer. If insufficient ATC is calculated based on TVA transmission facility limits, TVA will issue a System Impact Study report to the Eligible Customer, detailing the limitations and providing a rough estimate of upgrade costs.

### **System Impact Studies for Long-Term Firm Transmission Service Extending Beyond a Ten-Year Planning Horizon**

Due to inherent limitations in the accuracy of modeling electrical loads, generation, and the Transmission System over more extensive time periods, TVA currently uses a ten-year planning horizon. Accordingly, System Impact Studies for transmission service requests extending beyond this planning horizon will be conducted in phases. Initially, TVA will conduct a System Impact Study covering a ten-year time frame. That portion of the transmission service request that falls within the ten-year planning horizon will be studied at the Eligible Customer's expense and the results of those years within the planning horizon will be made available to the Eligible Customer at the completion of the study. Every subsequent year, each subsequent year of the transmission service request will roll into TVA's ten-year planning model and undergo study. At the completion of each year's study, TVA will make a System Impact Study report available for the Transmission Customer's consideration. The Transmission Customer can renew its request for service each year for the life of its original request, contingent upon the Transmission Customer's agreement to pay the costs of Transmission System upgrades (including the cost of Facilities Studies), if any, identified in the new study each year, as required for TVA to be able to provide the requested service for the rolling ten-year period.

If the Transmission Customer decides not to pay for any necessary upgrades identified in an annual study, then the Transmission Customer forgoes all rights to Long-Term Firm Transmission Service beyond those years in the ten-year planning horizon that TVA previously studied and for which the Transmission Customer has previously committed. If the Transmission Customer chooses to continue Transmission Service and pay for all necessary Transmission System upgrades as identified in each year's study, then at the end of the period for which the Transmission Customer had requested Transmission Service, the Transmission Customer will have such rights of first refusal for Transmission Service beyond that date as available under these Guidelines or any replacement terms and conditions for transmission service.

**ATTACHMENT E****Index of Point-To-Point Transmission Service Customers**

<b>Customer</b>	<b>Date of Service Agreement</b>
AES Power, Inc.	1/16/97
Allegheny Energy Supply Company, LLC	5/31/00
Amerada Hess Corporation	4/10/00
Ameren Energy, Inc.	5/8/01
Ameren Services Company	11/1/99
American Electric Power Service Corporation	9/8/97
Arkansas Electric Cooperative Corporation	1/1/97
Associated Electric Cooperative, Inc.	1/1/97
Avista Energy, Inc.	1/16/98
Big Rivers Electric Corporation	1/1/97
BP Energy Company	7/18/01
Brascan Energy Marketing, Inc.	3/24/03
Calpine Energy Services, L.P.	4/16/02
Cargill Power Markets, LLC	1/10/98
Cinergy Services, Inc.	1/1/97
CNG Power Services Corporation	1/1/97
Cobb Electric Membership Corporation	7/3/03
Conectiv Energy Supply, Inc.	6/7/01
Conoco Phillips Company	9/20/02
Constellation Energy Commodities Group, Inc.	12/9/97
Coral Power, L.L.C.	1/1/97
Dayton Power & Light Company (The)	8/6/97
Delmarva Power & Light Company	2/1/99
Detroit Edison Company (The)	2/6/99
Dominion Energy Marketing, Inc.	9/20/02
DTE Energy Trading, Inc.	5/26/00
Duke Energy Marketing America, LLC	5/12/04
Duke Energy Trading and Marketing, L.L.C.	7/30/97
Duke Power, a division of Duke Energy Corporation	8/1/98
Dynegy Power Marketing, Inc.	1/1/97
Eagle Energy Partners I, L.P.	5/17/04
East Kentucky Power Cooperative, Inc.	1/1/97
Edison Mission Marketing & Trading, Inc.	7/2/97
El Paso Merchant Energy, L.P.	3/1/00
Energy Authority, Inc. (The)	8/15/97
Entergy Power Marketing Corp.	1/1/97
Entergy Services, Inc.	1/1/97
Exelon Generation Company, LLC	9/1/01
Florida Power & Light Company	1/1/97
Florida Power Corporation	7/28/97
Illinois Power Company	3/17/97
J. Aron and Company	5/24/02
Jacksonville Electric Authority	1/1/97
Kansas City Power & Light Company	5/19/97
LG&E Energy Marketing Inc.	1/1/97

Louisville Gas and Electric Company/Kentucky Utilities Company	9/29/99
Merrill Lynch Commodities, Inc.	11/1/04
MidAmerican Energy Company	11/1/97
MidCon Power Services Corp.	1/1/97
Minnesota Power & Light Company	6/16/97
Mirant Americas Energy Marketing L.P.	1/1/98
Morgan Stanley Capital Group Inc.	2/12/97
North Carolina Municipal Power Agency, Number 1	9/13/04
Northern States Power Company	4/1/98
NRG Power Marketing Inc.	1/5/01
Occidental Power Services, Inc.	6/02/03
OGE Energy Resources, Inc.	6/8/98
Oglethorpe Power Corporation	1/1/97
PanCanadian Energy Services, Inc.	3/30/99
Power Company of America, L.P. (The)	1/29/97
Powerex Corp.	3/27/00
Progress Energy Carolinas, Inc.	1/1/97
Progress Energy Ventures, Inc.	1/24/03
Public Service Company of Colorado	5/11/99
PP&L EnergyPlus Co.	5/28/99
PP&L, Inc.	12/31/97
PSEG Energy Resources and Trade LLC	8/9/02
Rainbow Energy Marketing Corporation	1/1/97
Reliant Energy Services, Inc.	2/2/99
Select Energy, Inc.	7/15/02
Sempra Energy Trading Corp.	3/4/97
South Carolina Electric and Gas Company	6/3/04
Southern Company Services, Inc.	1/1/97
Southern Illinois Power Cooperative	10/9/97
Southwestern Public Service Company	5/11/99
Split Rock Energy, LLC	10/21/02
Statoil Energy Trading, Inc.	4/2/99
Tenaska Power Services Co.	12/23/97
Tractebel Energy Marketing, Inc.	5/10/98
TransAlta Energy Marketing (U.S.) Inc.	7/24/99
TransCanada Power	6/1/97
UBS AG, London Branch	5/2/02
Union Power Partners, LP	2/12/03
UtiliCorp United Inc.	1/1/97
Virginia Electric and Power Company	3/31/97
Vitol Gas & Electric LLC	1/1/97
Westar Energy, Inc	10/8/97
Williams Energy Marketing & Trading Company	10/6/97
WPS Energy Services, Inc.	5/19/97



**ATTACHMENT F****Service Agreement for Network Integration Transmission Service**

- 1.0 This Service Agreement, dated and effective as of \_\_\_\_\_, is entered into, by and between the Tennessee Valley Authority ("TVA") and \_\_\_\_\_ ("Transmission Customer").
- 2.0 The Transmission Customer has been determined by TVA to have a Completed Application for Network Integration Transmission Service under TVA's Transmission Service Guidelines ("Guidelines").
- 3.0 The Transmission Customer has provided to TVA an Application deposit in the amount of \$\_\_\_\_\_, in accordance with the provisions of the Guidelines.
- 4.0 Service under this Service Agreement shall commence on the later of \_\_\_\_\_ or the date on which construction of any Direct Assignment Facilities, Network Upgrades, and/or other modifications necessary to satisfy the request for Transmission Service are completed. Service under this Service Agreement shall terminate on \_\_\_\_\_.
- 5.0 TVA agrees to provide and the Transmission Customer agrees to take and pay for Network Integration Transmission Service in accordance with the provisions of Parts I and III of the Guidelines and this Service Agreement, including the Specifications for Network Integration Transmission Service, and the Network Operating Agreement ("NOA").
- 6.0 Scheduling for Network Integration Transmission Service will be addressed in the NOA. Equipment necessary for dynamic scheduling, if applicable, and additional costs related to scheduling will be addressed in the NOA.
- 7.0 The rate treatment and all related terms and conditions applicable in the event that the Transmission Customer fails to respond to established Load Shedding and Curtailment Procedures will be specified in the NOA.
- 8.0 TVA shall not be obligated to supply power and energy from its own sources or from its purchases from other neighboring systems during interruptions or curtailments in the delivery to TVA of power and energy for Transmission Service hereunder, and nothing in this Service Agreement or in the Transmission Customer's agreements with others shall have the effect of making, nor shall anything in the Service Agreement or said agreements with others be construed to require TVA to take any action which would make TVA, directly or indirectly, a source of power supply to the Transmission Customer, to any Delivering Party or Receiving Party, or to any ultimate recipient in violation of the TVA Act of 1933, as amended.
- 9.0 Any notice or request made to or by either Party regarding this Service Agreement shall be made to the representative of the other Party as indicated below. The designation of the person to be so notified or the address of such person may be changed at any time and from time to time by either Party by similar notice.

TVA:

Transmission Service Coordinator  
Tennessee Valley Authority  
1101 Market Street, PCC 2A  
Chattanooga, Tennessee 37402-2801

Transmission Customer:

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- 10.0 Invoices for Transmission Service will be mailed to the Transmission Customer at the address indicated below. The Transmission Customer may modify the information specified below by written notice to TVA in accordance with Section 9.

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- 11.0 The Guidelines, the Specifications for Network Integration Transmission Service, and the NOA, all as may be modified or amended from time to time, are incorporated herein and made a part hereof. In the event of any conflict between the Guidelines and this Service Agreement, including the Specifications for Network Integration Transmission Service, or the NOA, the Guidelines shall control. In the event of any conflict between this Service Agreement, including the Specifications for Network Integration Transmission Service, or the NOA, the NOA shall control.
- 12.0 Any waiver at any time by either Party of its rights with respect to any default of the other Party or with respect to any other matter arising in connection with this Service Agreement shall not be considered a waiver with respect to any other default or matter.
- 13.0 The validity, interpretation, and performance of this Service Agreement shall be governed by applicable Federal law.
- 14.0 This Service Agreement shall not be construed to create rights in, or to grant remedies to, or delegate any duty, obligation, or undertaking established herein to any third party as a beneficiary to this Service Agreement.
- 15.0 Nothing contained in this Service Agreement shall restrict or limit either Party from establishing, altering or terminating interconnection points with any entity not a party to this Service Agreement or amending or entering into such agreements.
- 16.0 This Service Agreement shall inure to the benefit of and be binding upon the successors and assigns of the Parties. This Service Agreement shall not be assigned by either Party without the written consent of the other Party.
- 17.0 The applicable provisions of this Service Agreement will continue in effect after termination of the Service Agreement to the extent necessary to provide for final billing, billing

adjustments and payments, and with respect to liability and indemnification from acts or events that occurred while this Service Agreement was in effect.

- 18.0 By signing below, the Transmission Customer verifies that all information submitted to TVA to provide Network Integration Transmission Service under the Guidelines is complete, valid and accurate, and TVA may rely upon such information to fulfill its responsibilities under the Guidelines.

IN WITNESS WHEREOF, the Parties have caused this Service Agreement to be executed by their respective authorized officials.

TVA:

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

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

Transmission Customer:

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

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

**Specifications For Network Integration Transmission Service**

1.0 Name, Address, Telephone and Fax Number of Transmission Customer:

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2.0 Description of Network Load:

- (1) Substation Locations: \_\_\_\_\_  
Load: \_\_\_\_\_  
Voltage Level: \_\_\_\_\_
- (2) Substation Locations: \_\_\_\_\_  
Load: \_\_\_\_\_  
Voltage Level: \_\_\_\_\_  
(a ten year forecast and additional locations shall be attached)

3.0 Interruptible Loads: \_\_\_\_\_  
Summer & Winter Demand: \_\_\_\_\_  
Load Subject to Interruption: \_\_\_\_\_  
Conditions & Limitations: \_\_\_\_\_

4.0 Network Resources (attach a current & 10 year projection):

Unit size and amount of capacity from that unit to be designated as Network Resource:

VAR capability (both leading and lagging) of all generators:

Operating restrictions:

- Any periods of restricted operations throughout the year
- Maintenance schedules
- Minimum loading level of unit
- Normal operating level of unit
- Any must-run unit designations required for system reliability or contract reasons

Approximate variable generating cost (\$/MWh) for redispatch computations:

Arrangements governing sale and delivery of power to third parties from generating facilities located in TVA's Control Area, where only a portion of unit output is designated as a Network Resource:

Description of purchased power designated as a Network Resource including source of supply, Control Area location, transmission arrangements and delivery point(s) to TVA's Transmission System:

- 5.0 Description of Transmission Customer's Transmission System (attach the following):
- Load flow and stability data, such as real and reactive parts of the load, lines, transformers, reactive devices and load type, including normal and emergency ratings of all transmission equipment in a load flow format compatible with that used by the TVA
  - Operating restrictions needed for reliability
  - Operating guides employed by system operators
  - Contractual restrictions or committed uses of the Transmission Customer's transmission system, other than the Transmission Customer's Network Loads and Resources
  - Location of Network Resources described above
  - 10 year projection of system expansions or upgrades
  - Transmission System maps that include any proposed expansions or upgrades
  - Thermal ratings of Transmission Customer's Control Area ties with other Control Areas

6.0 Name(s) of any Intervening Systems Providing Transmission Service: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

7.0 Service under this Agreement may be subject to or conditioned upon some combination of the charges detailed below. (The appropriate charges for individual transactions will be determined in accordance with the terms and conditions of the Guidelines.)

7.1 Transmission Charge: \_\_\_\_\_  
\_\_\_\_\_

7.2 System Impact and/or Facilities Study Charges: \_\_\_\_\_  
\_\_\_\_\_

7.3 Ancillary Services Charges: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

7.4 Direct Assignment Facilities Charge: \_\_\_\_\_  
\_\_\_\_\_

7.5 Network Upgrade Charges: \_\_\_\_\_  
\_\_\_\_\_

7.6 Redispatch Charges: \_\_\_\_\_  
\_\_\_\_\_

7.7 Letter of Credit Required of Customer: \_\_\_\_\_  
\_\_\_\_\_

- 7.8 Stranded Investment Charge: \_\_\_\_\_  
\_\_\_\_\_
  
- 8.0 Power Factor To Be Maintained by Transmission Customer: The Network Customer shall maintain the power factor of the delivered energy in the following range:  
\_\_\_\_\_
  
- 9.0 Party Responsible for Providing Real Power Losses:  
\_\_\_\_\_
  
- 10.0 Equipment To Be Installed by Transmission Customer Prior to Service:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
  
- 11.0 Designation of any Party Subject to Reciprocal Service Obligation:  
\_\_\_\_\_

## **ATTACHMENT G**

### **Network Operating Agreement**

The subjects to be addressed at a minimum in the Network Operating Agreement between TVA and the Network Customer are:

Term of Agreement

Control Area Requirements

Redispatch Procedures

Metering, Control Area and Data Equipment

Operating Requirements

- Standards

- Avoidance of Disturbances

- Load Shedding

- Underfrequency Load Shedding

Dynamic Scheduling (if applicable)

Operational Data to be Provided

Network Planning

Characteristics of Power Delivered

Transfer of Power and Energy Through Other Systems (if applicable)

Network Operating Committee

Confidentiality

Additional topics will be addressed in the Network Operating Agreement when needed to provide for specific situations in addition to those listed above.

**ATTACHMENT H**

**Annual Transmission Revenue Requirement for Network Integration Transmission Service**

1. The Annual Transmission Revenue Requirement for purposes of the Network Integration Transmission Service shall be \$517,841,379.
2. The amount in (1) shall be effective until amended by TVA.



**ATTACHMENT I**

**Index of Network Integration Transmission Service Customers**

<b>Customer</b>	<b>Date of Service Agreement</b>
Alabama Power Company	9/1/97
Georgia Power Company	6/1/00

**ATTACHMENT J****Source and Sink Requirements for Point-to-Point Transmission Service**

1. **Generally:** All Transmission Customers taking service under the point-to-point transmission service provisions of TVA's Transmission Service Guidelines ("Guidelines") must submit to TVA OASIS reservations and associated transmission schedules that designate sources and sinks which are specific and valid.
2. **Definitions**
  - 2.01 **Source:** A "source" is the location of the generating facility(ies) supplying the capacity and energy to be transmitted.
  - 2.02 **Sink:** A "sink" is the location of the load ultimately served by the capacity and energy transmitted.
3. **Valid Sources and Sinks**
  - 3.01 **Source:** The source must be a specific and valid generator. The source shall be identified by the Control Area where the source generating unit is actually located. A load or a load-only Control Area is not a valid source.
  - 3.02 **Sink:** The sink must be a specific and valid load. The sink shall be identified by the Control Area where the load is actually located. A generator or a generator-only Control Area is not a valid sink.
  - 3.03 **Additional Information:** For transmission evaluation purposes, TVA reserves the right to require in the future additional information concerning sources and sinks on the TVA Transmission System, including, for example, specific bus bar location on the TVA Transmission System.
4. **Scheduled Amount:** The scheduled amount for any point-to-point transmission schedule cannot exceed the amount of the TVA-approved OASIS reservation and for sources and sinks on the TVA Transmission System either of the following: (a) for sources, the rated capability of the generating facility(ies) at the generator bus on the TVA Transmission System; or (b) for sinks, the maximum allowable load at the load bus on the TVA Transmission System. Paths posted on the TVA OASIS shall indicate any applicable limitations.
5. **Transmission Service Schedules:** Transmission Customers shall submit transmission schedules consistent with the approved TVA OASIS reservations. If the Transmission Customer needs to change the specific source and/or sink, it will do so by requesting a new reservation or a modification in the TVA OASIS reservation as provided in TVA's Guidelines.
6. **Modifications in Firm Service Specifications**
  - 6.01 **Generally:** Source and/or sink information provided in an OASIS reservation can be modified consistent with Section 22 of TVA's Guidelines.

- 6.02 Service under Section 22 of TVA's Guidelines:** A request from a Transmission Customer to modify source and/or sink information provided in the original OASIS reservation shall constitute a request to modify Transmission Service and the following procedures shall be followed:
- 6.02.01** Pursuant to Section 22 of TVA's Guidelines and Section 6.03 of this attachment, TVA shall determine whether the change in source or sink information requires it to provide service over Receipt or Delivery Points other than those specified in the original OASIS reservation and whether TVA has the capability in the TVA Transmission System to provide the modified Transmission Service.
  - 6.02.02** If the change in source or sink information does not require TVA to provide service over Receipt or Delivery Points other than those originally specified in the OASIS reservation and if TVA determines that it has the capability in the TVA Transmission System to provide the modified Transmission Service, then TVA shall accept the modification in the transmission reservation.
  - 6.02.03** If the change in source or sink information does require TVA to provide service over Receipt or Delivery Points other than those originally specified in the OASIS reservation or if TVA determines that it does not have the capability in the TVA Transmission System to provide the modified Transmission Service, then TVA shall refuse the modification in the transmission reservation, and the Transmission Customer shall have the option of: (a) retaining the original OASIS reservation; (b) submitting a new OASIS reservation for firm service over the new Receipt or Delivery Points consistent with Section 22.2 of TVA's Guidelines; or (c) submitting a new OASIS reservation for non-firm service over Secondary Receipt or Delivery Points consistent with Section 22.1 of TVA's Guidelines.
- 6.03 Changes in Receipt or Delivery Points.** Modifications to source and sink information may require TVA to provide service over Receipt or Delivery Points (other posted paths on the TVA Transmission System) other than those originally specified in the original OASIS reservation, if either of the following applies:
- 6.03.01** For original sources or sinks on the TVA Transmission System, the new source or sink is located in a different Control Area than the original source or sink OR is connected to the TVA Transmission System at a different transmission substation than the original source or sink.
  - 6.03.02** For original sources or sinks off the TVA Transmission System, the new source or sink is located in a different Control Area than the original source or sink AND TVA would have evaluated different Receipt or Delivery Points in deciding whether to grant the original service request.
- 7. NERC Tags as Schedules.** In order to minimize scheduling work for all entities, TVA will accept NERC Tags as transmission schedules, provided that the information described above is supplied on the NERC Tags.