



***Attachment AA***  
***Flowgate Upgrade Request Study***

***Requested By:***  
***Cargill***

***For Flowgate:***  
***BriKeyRivRed***

**SPP ENGINEERING DEPARTMENT,  
PLANNING SECTION**

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## **Introduction**

In accordance with the Southwest Power Pool (SPP) Open Access Transmission Tariff (OATT) Attachment AA (Transmission Service Prepayment), Cargill has requested a flowgate upgrade study for a set of 24 flowgates that directly affect north to south flows into the DC North Tie. These flowgates impact the paths WR-ERCOTN, KCPL-ERCOTN, and OPPD-ERCOTN. Upon review, it was determined that only BriKeyRivRed would be studied in-depth herein. The other flowgates upgrades were found to be either: outside of SPP, already slated to be done by the Transmission Owner (TO) or via the Attachment AA process, or cost well beyond the current amount of total funds available for upgrades.

It must be noted that removal of an existing limit does not guarantee an increase in Available Transfer Capability (ATC) for a particular commercial path (POR/POD) for a particular timeframe. The increase would depend on the next limiting facility, which may not be listed in this document. Removal of an existing limit does not guarantee approval of a transmission service request.

## **Study Methodology**

Analysis of the requested flowgate was conducted using the SPP monthly firm AFC calculation MS Access database engine as a starting point, and per SPP Criteria 4 REGIONAL CALCULATION OF AVAILABLE TRANSFER CAPABILITY. Flowgate upgrade data was solicited from the TOs.

## **Requested Flowgate Analysis**

### **1. BriKeyRivRed**

The Bristow-Keystone West 138 kV line for an outage of the Riverside Station-Redbud 345 kV line OTDF flowgate may be upgraded from an emergency summer rating of 191 MVA to 267 MVA for an estimated cost of \$350,000 with a lead-time requirement of 12 months. The current limit is based on a wavetrap and CT at Bristow, and line relays at Bristow, Rock Creek and Horseshoe Lake. The next limit would be the Bristow-Keystone West 138 kV line conductor. Neglecting other limiting flowgates and using a conservative monthly firm price of \$730, the upgraded flowgate could support increased revenues of about \$55,500 per month. For summer 2005 and winter 2005 the flowgate is currently found to be a negative limit to 137 and 136 commercial paths, respectively. Based on calculations using current data, the flowgate may have been a negative limit contributing to refusals of monthly firm service of about \$32,988,000 (\$1,907,000 if not including imports to ERCOTN) for the period November 2003-November 2004.

This facility will be recommended for upgrade. It is recognized as a limitation for transmission service. The flowgate is recommended for upgrade at a cost of \$350,000.

**Analysis Summary Table**

<b>Flowgate</b>	<b>Cost of 1st Upgrade</b>	<b>Monthly Revenue</b>	<b>Neg. Paths</b>		<b>Contributing Refusals</b>
			<b>2005S</b>	<b>2005W</b>	
<b>Requested:</b>					
BriKeyRivRed	\$ 350,000	\$ 55,500	137	136	\$ 32,988,000

**Recommended Projects Table**

<b>Flowgate</b>	<b>Facility to Upgrade</b>	<b>Owner</b>	<b>Est. Cost</b>	<b>Lead-time Months</b>
<b>Requested:</b>				
BriKeyRivRed	Bristow: wavetrap & CT Also, line relays at Bristow, Rock Creek and Horseshoe Lake	OGE	\$ 350,000	12