ATC	Business Practice	Function:	External Affairs
		Document No:	BP-0302
Title: **Capacitor Bank Installations on Distribution Systems for Transmission Benefit**		Revision No:	04
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1 PURPOSE

The purpose of this business practice is to define how ATC treats the installation, utilization or purchase of transmission benefit capacitor banks on the distribution system and the allocation of costs associated with these installations.

2 SCOPE AND APPLICABILITY

As a result of annual Planning reviews, ATC may periodically identify a need to install, or utilize distribution capacitor banks at various locations to provide appropriate transmission system voltage support. Capacitor banks can typically be installed on the distribution system more economically than on the transmission system while providing greater overall voltage support. As a result, ATC may request a local distribution company (LDC) to install capacitor banks on interconnected distribution systems when cost savings may be achieved in order to minimize costs to its transmission customers. The need for voltage support may arise unexpectedly due to changes in system conditions or customer loads. The initiation of this type of installation is a direct result of Planning identifying the need and working together with the LDC via the Best Value Planning process to determine the proper solution to the voltage support issue.

The use of such capacitor bank installations are only done under the terms of an agreement with the affected LDC. Depending on the circumstances of each individual situation, ATC has a number of options to deploy distribution capacitor banks for transmission system support.

For the installation of new distribution capacitor banks ATC may:

- lease the capacitors from the affected LDC (Note this option is not a preferred option given the added administrative costs of managing a multi-year lease agreement), or
- Treat the capacitors and the initial installation costs as a Contribution In Aid of Construction (CIAC) payment by ATC to the affected LDC.
    - ATC capitalizes its investment as an intangible asset.
    - The asset is booked by the affected LDC at zero book value.

For existing LDC capacitor bank installations either at a LDC substation or on a distribution line, the LDC may have decided to no longer use their distribution connected capacitor banks. As part of the LDC review, it is requested that the LDC's contact ATC to determine if ATC would have a transmission system need for the distribution connected capacitor banks prior to their removal.

- If ATC determines there is a transmission system need for the distribution capacitor banks, then ATC will work with the LDC to develop a capacitor bank utilization agreement for those capacitor banks.
- If ATC determines there is not a transmission system need for the distribution capacitor banks, then it is up to the LDC to de-commission the distribution capacitor banks consistent with the LDC's work practices.

It is unlikely that ATC would outright purchase any LDC-owned distribution connected capacitor banks as the Affiliated Interest (if appropriate) or tax consequences associated with that action needs to be fully explored prior to that decision.

In the event that ATC and an LDC have established an existing arrangement to utilize distribution capacitor banks and the term of that agreement is about to expire, ATC will review the circumstances and notify the LDC if ATC is willing to extend the agreement term.

This business practice is not intended to alter the responsibility for serving reactive power load and providing for those losses. ATC maintains responsibility for transmission reactive power losses, while the local distribution company maintains responsibility for its distribution reactive power losses and its distribution customer reactive power load. This business practice is not intended to provide any reactive power cross-subsidization between distribution and transmission. ATC planning departments work with the local distribution companies on the technical evaluation of voltage support needs and preferred solutions.

Consistent with the Load Interconnection Guide[1], ATC together with its customers have determined that the LDCs will provide up to a 95% power factor at the distribution substation interconnection point. Should ATC determine that a higher power factor is required at the interconnection point, ATC has agreed to fund the additional reactive compensation equipment costs over the 95% power factor level.

3 ROLES AND RESPONSIBILITIES

Through its planning process, ATC may determine that the installation or utilization of capacitor banks on the distribution system represents the most effective and economical solution to transmission voltage support needs. Through its collaborative ongoing planning relationship with distribution companies in arriving at appropriate planning solutions, ATC transmission planning works with the LDC on the technical evaluation of these possible installations. If the appropriate installation point for reactive support equipment on the interconnected distribution-transmission system is identified as a location on the distribution system, ATC needs to have the flexibility to pursue that location for the benefit of all customers. This business practice provides the mechanisms to achieve that flexibility. ATC departments that may be involved with the decision to utilized distribution connected capacitor banks may include: Planning, Operations, Customer Relations and Interconnection Services, Accounting and Legal. The LDC may include their Planning, Operations and Substation Maintenance groups in these discussions.

4 ADDITIONAL INFORMATION

This business practice requires the development of additional documents to facilitate the referenced agreements with the LDC's. ATC provides the appropriate agreements for each instance. ATC Operations, Interconnection Services and Planning provide, where necessary, any appropriate operating/switching guides for each installation consistent with the needs and concerns of the LDC and ATC.

5 DOCUMENT REVIEW

This business practice will be reviewed and revised as necessary no less than every five years.

6 RECORDS RETENTION

ATC retains the study data and associated study results. Each company retains any agreement associated with this business practice and information regarding compensation to either company.

Documents are maintained per the Records Retention Schedule.

ATC's Archive Center SharePoint Site

Enterprise Information Management Policy

7 REVISION INFORMATION

[1] See ATC's website page "Connecting To the Grid" for the latest version of the Load Interconnection Guide - https://www.atcllc.com/customer-relations/connecting-to-the-grid/.

Revision	Role	Name and/or Title	Summary of Changes	Last Revised
00	Author(s)	Walter Woefle	New document	05-13-2003
01	Author	John Raisler	Removed reference to ATC ownership of distribution capacitors Added CIAC treatment of distribution capacitors	07-01-2008
02	Author	David Hollenberger	Added purchase of existing distribution capacitor banks Added that affiliated interest agreement may be required	11-26-2013
03	Author	John Raisler	Expanded the solution options to include utilizing existing LDC capacitor banks.	01-18-2022
04	Author	Trevor Stiles	New logo	11-28-2023

Revision Approval
