Mathematic Algorithms for the Calculation of ATC
for Non-PTF Facilities of the Unitil Companies under
Schedule 21-UES

The following are ATC calculations performed by UES for its non-PTF internal interfaces. As consistent with the ISO calculation, the equations for Firm and Non-Firm Available Transfer Capability are:

Firm ATC = (TTC – CBM – TRM – Firm ETC)

Non-firm ATC = (TTC – CBM – TRM – Firm and Non-Firm ETC)

The TRM and CBM for UES's non-PTF paths are zero. The purpose of the ETC component of the ATC equation is for the Transmission Provider to define all elements that are reducing the amount of ATC available to the market participant, one such example is point-to-point service commitments. Point-to-point service commitments sharing common transmission paths would be combined through system modeling to calculate the net existing transmission capacity (ETC) impact. This ETC value is then used in the ATC calculation shown above.

The ATC Process Flow Diagram is shown on the next page.

ATC Process Flow Diagram for Non-PTF Interfaces

The process flow diagram illustrates the steps through which ATC is calculated both on an operating and planning horizon.

TTC = Total Transfer Capability of Non-PTF transmission facilities

Status

Firm

Non-

Left branch (Firm):

Capacity Benefit Margin (CBM) = 0
Transmission Reliability Margin (TRM) = 0

ATC = (TTC – CBM – TRM – ETC)

ETC = Firm Existing Reservations

ETC is always less than the rating of the non-PTF path (TTC), therefore ATC is always positive

ATC Planning = ATC Operation

Right branch (Non-):

Capacity Benefit Margin (CBM) = 0
Transmission Reliability Margin (TRM) = 0

ATC = (TTC – CBM – TRM – ETC)

ETC = Firm and Non-Firm Existing Transmission Reservations

ETC is always less than the rating of the non-PTF path (TTC), therefore ATC is always positive

ATC Planning = ATC Operation