Transmission Related Settlements

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Transmission Related Settlements

New York ISO
Independent System Operator

- **Settlement Name:**
  - DAM Congestion Residual
  - Transmission Owner NTAC
  - Non-NYISO Facilities
    - Ramapo Par
    - Station 80 Cap Bank
  - Regulated Transmission Cost Recovery
    - Regulated Transmission Projects
  - Transmission Congestion Contract (TCC) Rent
  - TCC Ancillary Services Rate Schedule 1

Transmission Related Settlements

New York ISO
Independent System Operator

- **Objectives Per Settlement Name:**
  - Provide Settlement Description
  - Identify Settlement Eligibility
  - Name Settlement Determinants
  - Name Settlement Intermediates
  - Explain Settlement Algorithm
  - Step Through Settlement Scenario
  - Perform Settlement Example
  - Note Settlement Reference Material

Transmission Related Settlements

- **Settlement Name:**
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DAM Congestion Residual

- **DAM Congestion Residual Description**
  - Designed to allocate (charge or credit) any cash imbalance in NYISO's DAM Congestion settlements to the NYCA Transmission Owners.

DAM Congestion Residual

- **Settlement Eligibility**
  - Transmission Owners will receive a charge or credit for DAM Congestion Residual ($) if:
    - The Transmission Owner is responsible for transmission capacity of transmission line within NYCA
      - Interface MW/Mile Coefficient > 0
    - There is a NYISO DAM Congestion Residual ($) for the given day
      - Day Total NYISO DAM Resid Cong ($) <> 0

DAM Congestion Residual

- **Settlement Determinants**
  - Day Ttl NYISO DAM Cng Cr to PS ($)
  - Day Ttl NYISO DAM TCC Cong Cr ($)
  - Day Ttl NYISO DAM Cng Ch to LSE ($)
  - Day Ttl NYISO DAM LBMP CngCh: TC ($)
  - Day Ttl NYISO DAM TUC CngCh: TC ($)
  - Interface MW/Mile Coefficient

DAM Congestion Residual

- **Settlement Intermediates**
  - Day Total NYISO DAM Resid Cong ($)

- **Settlement Results**
  - Day DAM Resid Cong Stlmnt: TO ($)

DAM Congestion Residual

- Settlement Algorithm

Day DAM Resid Cong Stlmnt: TO ($) =

(-1) * (Interface MW/Mile Coefficient * Day Total NYISO DAM Resid Cong ($))

Where:

Day Total NYISO DAM Resid Cong ($) =
Day Ttl NYISO DAM Cng Cr to PS ($) + Day Ttl NYISO DAM TCC Cong Cr ($) + Day Ttl NYISO DAM Cng Ch to LSE ($) + Day Ttl NYISO DAM LBMP Cng Ch: TC ($) + Day Ttl NYISODAM TUC Cng Ch: TC ($)

DAM Congestion Residual

- **Settlement Scenario**
  - DAM 9/10/10
    - Congestion Payments to MPs
      - Net Power Suppliers = $565,000
      - Net TCC Holders = $425,000
    - Congestion Payments from MPs
      - LSE = -$350,000
      - LBMP Transactions = -$100,000
      - Bilateral Transactions = -$215,000
    - Point of Withdrawal = ‘Zone 123’
  - TO – Lines ‘R’ Us
    - MW/Mile Coefficient = 0.15

DAM Congestion Residual

- Settlement Example

Day DAM Resid Cong Stlmnt: TO ($) = -$48,750
(-1) * (0.15 * $325,000)

Where:
Day Total NYISO DAM Resid Cong ($) = $325,000
$565,000 + $425,000 + (-$350,000) + (-$100,000) + (-$215,000)

DAM Congestion Residual

- **Summary**
  - Designed to allocate (charge or credit) any cash imbalance in NYISO's DAM Congestion settlements to the NYCA Transmission Owners.

DAM Congestion Residual

- **Settlement Reference Material**
  - OATT Attachment N
    - Section 20.2.5
  - Accounting and Billing Manual Section 10
  - Advisory Billing File
    - Transmission Owner
      - Excess Cong Credit ($)
    - Daily Bill Code 1014
  - DSS Corporate Report
    - Transmission Owners – DAM Congestion Residual

Transmission Owner Settlements

- **Objectives Per Settlement Name:**
  - DAM Congestion Residual
  - **Transmission Owner NTAC**
  - Non-NYISO Facilities
    - Ramapo Par
    - Station 80 Cap Bank
  - Regulated Transmission Cost Recovery
    - Regulated Transmission Projects
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Transmission Owner NTAC

- **Transmission Owner NYPA Transmission Adjustment Charge (NTAC) Description**
  - Payment to NYPA intended to cover NYPA's transmission revenue requirements.
    - NTAC $ collected from
      - LSEs, ESR, Exports, & Wheels Throughs
    - Charge Based on
      - RT Actual Load Withdrawal

      or

      - RT Transaction Schedule

Transmission Owner NTAC

- **Settlement Eligibility**
  - New York Power Authority will receive payment for NYPA Transmission Adjustment Charge if:
    - NTAC Charges were Collected from LSEs during hour
      - Hr NTAC NYPA: LSE ($) > 0
    - NTAC Charges were Collected from Energy Storage Resources during hour
      - Hr RT NTAC Charge for Withdrawals Stlmnt: Gen ($) > 0
    - NTAC Charges were Collected from Transaction Customers during hour
      - Hr NTAC NYPA: TC ($) > 0

Transmission Owner NTAC

- **Settlement Determinants**
  - Hr Total NYISO RT LSE Load (MWh)
  - Hr RT Gen TSC-Eligible Withdrawal Energy (MWh)
  - Hr Total NYISO RT Export Transaction (MWh)
  - Hr Total NYISO RT Wheels Throughs Transaction (MWh)
  - Hr NTAC Rate ($/MWh)

Transmission Owner NTAC

- **Settlement Intermediates**
  - Hr NTAC NYPA: LSE ($)
  - Hr RT NTAC Charge for Withdrawals Stlmnt: Gen ($)
  - Hr NTAC NYPA: TC ($)

- **Settlement Results**
  - Hr NTAC NYPA ($)

Transmission Owner NTAC

- ## Settlement Algorithm

Hr NTAC NYPA ($) =
Hr NTAC NYPA: LSE ($) + Hr RT NTAC Charge for Withdrawals Stlmnt: Gen ($) + Hr NTAC NYPA: TC ($)

Where:
Hr NTAC NYPA: LSE ($) =
Hr Total NYISO RT LSE Load * NTAC Rate ($/MWh)

Hr RT NTAC Charge for Withdrawals Stlmnt: Gen ($) =
Hr RT Gen TSC-Eligible Withdrawal Energy (MWh) * NTAC Rate ($/MWh)

Hr NTAC NYPA: TC ($) =
{Hr Total NYISO RT Export Transaction (MWh) + Hr Total NYISO RT Wheel Through Transaction (MWh)} * NTAC Rate ($/MWh)

Transmission Owner NTAC

- **Settlement Scenario**
  - RT 9/10/10 - HB 3
    - Energy Withdrawals
      - LSE Load = 18,000 MWh
    - Energy Transaction Schedules
      - Exports = 2,000 MWh
      - Wheels Throughs = 500 MWh
    - NTAC Rate $0.31/MWh

Transmission Owner NTAC

- Settlement Example

Hr NTAC NYPA ($) = $6,355
$5,580 + $775

Where:
Hr NTAC NYPA: LSE ($) = $5,580
18,000 * $0.31

Hr NTAC NYPA: TC ($) = $775
(2,000 + 500) * $0.31

Transmission Owner NTAC

- **Summary**
  - Payment to NYPA intended to cover NYPA's transmission revenue requirements.
    - NTAC $ collected from
      - LSEs, ESR, Exports, & Wheel Throughs
    - Charge Based on
      - RT Actual Load Withdrawal

      or

      - RT Transaction Schedule

Transmission Owner NTAC

- **Settlement Reference Material**
  - OATT Attachment N
    - Section 20.2.5
  - Accounting and Billing Manual Section 10
  - Advisory Billing File
    - Transmission Providers
      - NTAC Credit ($)
    - Hourly Bill Code 1003
    - Daily Bill Code 1012

Transmission Related Settlements

New York ISO
Independent System Operator

- **Objectives Per Settlement Name:**
  - DAM Congestion Residual
  - Transmission Owner NTAC
  - Non-NYISO Facilities
    - Ramapo Par
    - Station 80 Cap Bank
  - Regulated Transmission Cost Recovery
    - Regulated Transmission Project
  - Transmission Congestion Contract (TCC) Rent
  - TCC Ancillary Services Rate Schedule 1

TO Ramapo Par & Station 80 Cap

- **Non-NYISO Facilities – Ramapo Par & Station 80 Cap Bank Description**
  - NYISO's monthly payments to the owners of facilities needed for economic and reliable operation of NYS Transmission System.
    - Payments Presently issued to…
      - Con Ed Co. of NY for Phase Angle Regulators @ Ramapo interconnection between NYISO & PJM
      - RG&E Corp. for Capacitor Bank @ Station 80

TO Ramapo Par & Station 80 Cap

- Settlement Determinants
  - N/A

TO Ramapo Par & Station 80 Cap

- **Settlement Intermediates**
  - MO Ramapo PAR Cost: TO ($)
  - MO Station 80 Cost: TO ($)
  - Total Hours in Given Month

- **Settlement Results**
  - Hr Ramapo PAR StImnt: TO ($)
  - Hr Station 80 StImnt: TO ($)

TO Ramapo Par & Station 80 Cap

- Settlement Algorithm

Hr Ramapo PAR Stlmnt: TO ($) =
MO Ramapo PAR Costs: TO ($) / Total Hours in Given Month

Hr Station 80 Stlmnt: TO ($) =
MO Station 80 Costs: TO ($) / Total Hours in Given Month

TO Ramapo Par & Station 80 Cap

- **Summary**
  - NYISO's monthly payments to the owners of facilities needed for economic and reliable operation of NYS Transmission System.
    - Payments Presently issued to…
      - Con Ed Co. of NY for Phase Angle Regulators @ Ramapo interconnection between NYISO & PJM
      - RG&E Corp. for Capacitor Bank @ Station 80

TO Ramapo Par & Station 80 Cap

- **Settlement Reference Material**
  - OATT
    - Section 6.1.2.2.3 & 6.1.6.1
  - Advisory Billing File
    - Transmission Providers
    - Ramapo Par
      - Hourly Bill Code 1005
      - Daily Bill Code 1015
    - Station 80 Cap Bank
      - Hourly Bill Code 1006
      - Daily Bill Code 1016

Transmission Related Settlements

- **Objectives Per Settlement Name:**
  - DAM Congestion Residual
  - Transmission Owner NTAC
  - Non-NYISO Facilities
    - Ramapo Par
    - Station 80 Cap Bank
  - **Regulated Transmission Cost Recovery**
    - **Regulated Transmission Projects**
  - Transmission Congestion Contract (TCC) Rent
  - TCC Ancillary Services Rate Schedule 1

Regulated Transmission Cost Recovery

- **Regulated Transmission Project Cost Recovery Payment Description**
  - The Regulated Transmission Project Owner Cost Recovery Payments are the amounts to be paid to Regulated Transmission Project Owners with approved Regulated Transmission Projects.
    - Overall revenue requirement will be lowered by any revenue from the incremental TCCs awarded to the project

Regulated Transmission Cost Recovery

- **Settlement Eligibility**
  - Transmission Project Owners will receive a credit for Regulated Transmission Cost Recovery($) if:
    - The Transmission Project Owner has approved regulated transmission project

Regulated Transmission Cost Recovery

- **Settlement Determinants**
  - Interval Start Day (Eastern)
  - Reg Trans Project Type
  - Reg Trans Project Owner ID
  - Reg Trans Project Owner Organization ID

Regulated Transmission Cost Recovery

- **Settlement Intermediates**
  - Day 'Type' Projects Cost Recovery: TO($)

- **Settlement Results**
  - Day Reg Trans Project StImnt: TO ($)

Regulated Transmission Cost Recovery

- Settlement Algorithm

Day Reg Trans Project Owner 'Type' Cost Recovery Payment ($) =
∑ Day Reg Trans Project Net Recovery ($) for all Regulated Transmission Projects associated with a given Regulated Transmission Project Owner

Where:
Reg Trans Project Type for the Regulated Transmission Project associated with a given Regulated Transmission Project Owner = 'Type'

Regulated Transmission Cost Recovery

- Summary
  - The Regulated Transmission Project Owner Cost Recovery Payments are the amounts to be paid to Regulated Transmission Project Owners with approved Regulated Transmission Projects.

Regulated Transmission Cost Recovery

- **Settlement Reference Material**
  - OATT Attachment Y
    - Sections 31.1.1.2 and 32.2.1
  - Accounting and Billing Manual Section 8
  - Advisory Billing File
    - Transmission Owner
      - Regulated Transmission Projects Credit ($)
    - Daily Bill Code 4006
  - DSS Corporate Report
    - Transmission Owners – Regulated Transmission Project

Transmission Related Settlements

- **Objectives Per Settlement Name:**
  - DAM Congestion Residual
  - Transmission Owner NTAC
  - Non-NYISO Facilities
    - Ramapo Par
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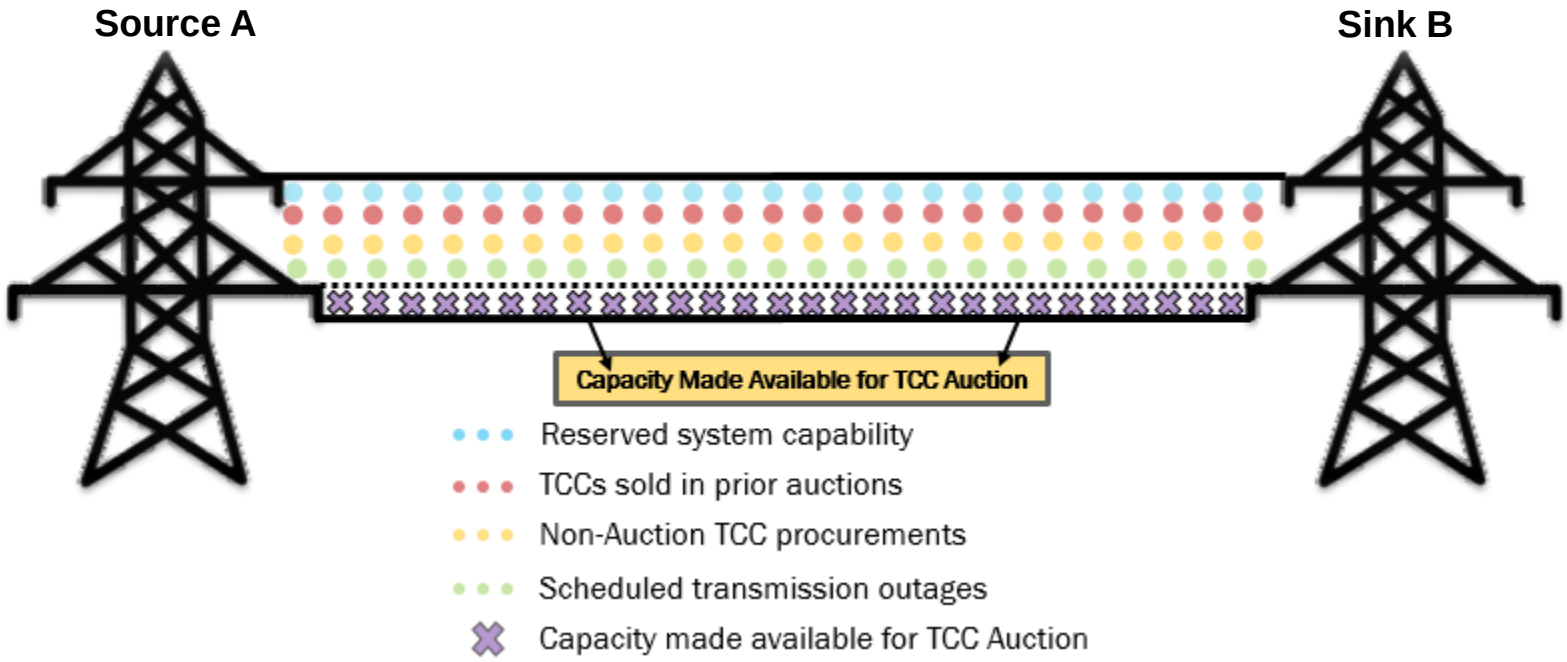
  - Regulated Transmission Cost Recovery
    - Regulated Transmission Project
  - **Transmission Congestion Contract (TCC) Rent**
  - TCC Ancillary Services Rate Schedule 1

Transmission Congestion Contracts

- **TCC Rent Description**
  - Intended to credit or charge TCC holders, in the NYISO Day Ahead Market

Transmission Congestion Contracts

- TCC Capacity Illustration



TCC Rent

- **Settlement Eligibility**
  - Transmission Congestion Contract Customers will be Credited or Charged for TCC Rent ($) if:
    - The Transmission Congestion Contract Customer is the Holder of Transmission Congestion Contract Capacity (MW) in the NYISO DAM

TCC Rent

- **Settlement Determinants**
  - Hr DAM Cong Price: Sink ($/MWh)
  - Hr DAM Cong Price: Source ($/MWh)
  - Capability Period
  - Hr TCC Capacity: Winter (MW)
  - Hr TCC Capacity: Summer (MW)
  - TCC Contract Type

TCC Rent

- **Settlement Intermediates**
  - Hr TCC Capacity (MW)

- **Settlement Results**
  - Hr TCC Rent StImnt ($)

TCC Rent

- ## Settlement Algorithm

Hr TCC Rent Stlmnt ($) =
Hr TCC Capacity (MW) * [{-1 * Hr DAM Cong Price: Sink ($/MWh)} – {-1 * Hr DAM Cong Price: Src ($/MWh)}]

Where:
Hr TCC Capacity (MW) =
Hr TCC Capacity: Summer (MW) ***if***
Capability Period = ‘SUMMER’

Else
Hr TCC Capacity (MW) =
Hr TCC Capacity: Winter (MW) ***if***
Capability Period = ‘WINTER’

TCC Rent

- **Settlement Scenario**
  - ‘Market Participant A’ has purchased a TCC w/the following parameters
    - Capability Period = Summer
    - MW Summer = 57 TCCs
    - MW Winter = 24 TCCs
    - Point of Injection = ‘Gen ABC’
    - Point of Withdrawal = ‘Zone 123’
  - ‘Gen ABC’ Congestion Price is -$10/MWh
  - ‘Zone 123’ Congestion Price is -$25/MWh

TCC Rent

- ## Settlement Example

Hr TCC Rent Stlmnt ($) = $855.00

57* [{-1 * -$25} – {-1 * -$10}]

Where:

Hr TCC Capacity (MW) = 57

Hr TCC Capacity: Summer (MW) ***if***

Capability Period = ‘SUMMER’

Else

Hr TCC Capacity (MW) = 24

Hr TCC Capacity: Winter ***if***

Capability Period = ‘WINTER’

TCC Rent

- **Settlement Scenario Exercise**
  - ‘Market Participant A’ has purchased a TCC w/the following parameters
    - Capability Period = Winter
    - MW Summer = 103 TCCs
    - MW Winter = 100 TCCs
    - Point of Injection = ‘Proxy Bus D’
    - Point of Withdrawal = ‘Gen 456’
  - ‘Proxy Bus D’ Congestion Price is -$7/MWh
  - ‘Gen 456’ Congestion Price is -$2/MWh

TCC Rent

- ## Settlement Exercise

Hr TCC Rent Stlmnt ($) = -$500.00

100* [{-1 * -$2} – {-1 * -$7}]

Where:

Hr TCC Capacity (MW) = 103

Hr TCC Capacity: Summer (MW) ***if***

Capability Period = ‘SUMMER’

Else

Hr TCC Capacity (MW) = 100

Hr TCC Capacity: Winter ***if***

Capability Period = ‘WINTER’

TCC Rent

- **Summary**
  - Intended to Credit or Charge TCC Holders
    - Settled in DAM Only
  - Primary Settlement Components:
    - Capability Period TCCs
    - Congestion Price
      - Contracted Sink & Source Locations

TCC Rent

- **Settlement Reference Material**
  - OATT Attachment M
  - Accounting and Billing Manual
    - Section 9
    - Appendix L
  - Advisory Billing File
    - TCC Credit
    - Hourly Bill Code 901
    - Daily Bill Code 903
  - DSS Corporate Report
    - Transmission Congestion Contract Customer – TCC Rent

Transmission Related Settlements

New York ISO
Independent System Operator

- **Objectives Per Settlement Name:**
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  - Non-NYISO Facilities
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  - Transmission Congestion Contract (TCC) Rent
  - **TCC Ancillary Services Rate Schedule 1**

Transmission Congestion Contracts

- **TCC Ancillary Service - Rate Schedule 1 Description**
  - Intended to recover a portion of NYISO's operating costs and FERC fees from TCC Holders

Scheduling, System Control, and Dispatch (S,SC & D)

+

FERC Fees

TCC Rate Schedule 1

- **Settlement Eligibility**
  - Transmission Congestion Contract Customers will be Assessed Rate Schedule 1 if:
    - The Transmission Congestion Contract Customer is the Holder of Transmission Congestion Contract Capacity (MW)

TCC
Rate Schedule 1 – S, SC, & D

- **Settlement Determinants**
  - Hr TCC Rate Sched 1 (MW)

TCC
Rate Schedule 1 – S, SC, & D

- **Settlement Intermediates**
  - Day OATT Sched 1 Annual Budget Rate: TCC ($/HR/MW Settled Capacity)

- **Settlement Results**
  - Day OATT Sched 1 Annual Budget TCC Stlmnt ($)

TCC Rate Schedule 1

- ## Settlement Algorithm – S,SC, &D

Day OATT Sched 1 Annual Budget TCC Stlmnt ($) =

Day OATT Sched 1 Annual Budget Rate: TCC ($/HR/MW Settled Capacity)* Hr TCC Rate Sched 1 (MW) * (-1)

Where:

Day OATT Sched 1 Annual Budget Rate: TCC ($/HR/MW Settled Capacity) = projected annual TCC revenue

- 2023 Rate: $ 0.0168 per settled MWh
- Based on $5,824,512.48 projected recoveries from Non-Physical Transactions for 2021

Hr TCC Rate Sched 1 (MW) = Total settled TCC MWh

TCC
Rate Schedule 1 – FERC Fees

- **Settlement Determinants**
  - Hr TCC Rate Sched 1 (MW)

TCC
Rate Schedule 1 – FERC Fees

- **Settlement Intermediates**
  - Day OATT Sched 1 FERC Fees Rate: TCC ($/MW Settled Capacity)

- **Settlement Results**
  - Day OATT Sched 1 FERC Fees TCC Stlmnt ($)

TCC Rate Schedule 1

- ## Settlement Algorithm - FERC Fees

Day OATT Sched 1 FERC Fees TCC Stlmnt ($) =

Day OATT Sched 1 FERC Fees Rate: TCC ($/MW Settled Capacity)* Hr TCC Rate Sched 1 (MW) * (-1)

Where:

Day OATT Sched 1 FERC Fees Rate: TCC ($/MW Settled Capacity) = actual billed fees – annual estimated fees + true up interest accrual

- Broken down to a monthly level and then a daily level rate
- TCCs assessed 65.3% of the 6% Non-Physical Allocation

Hr TCC Rate Sched 1 (MW) = Total settled TCC MWh

TCC Rate Schedule 1

- **Summary**
  - Intended to Recover a Portion of NYISO's Costs of Operations and FERC fees from TCC Holders
    - Based on Settled TCCs Only
  - Primary Settlement Components:
    - Hourly TCC Capacity (MW)
    - Day OATT Sched 1 Annual Budget Rate: TCC ($/HR/MW Settled Capacity)
    - Day OATT Sched 1 FERC Fees Rate: TCC ($/MW Settled Capacity)

TCC Rate Schedule 1

- **Settlement Reference Material**
  - OATT Rate Schedule 1
  - Advisory Billing File
    - Annual Budget OAT TCC Charge $
      - Daily Bill Code 904
    - FERC Fees OAT TCC Charge $
      - Daily Bill Code 905
  - DSS Corporate Report
    - Transmission Congestion Contract Customer – TCC OATT Schedule 1