

Transmission Related Settlements

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Remote Learning

- **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

- **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

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

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 (\$) =

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

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

$$\text{Hr NTAC NYPA (\$)} = \$6,355$$
$$\$5,580 + \$775$$

Where:

$$\text{Hr NTAC NYPA: LSE (\$)} = \$5,580$$
$$18,000 * \$0.31$$

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

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

- **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

- **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

- Settlement Determinants

- N/A

T0 Ramapo Par & Station 80 Cap New York ISO Independent System Operator

■ Settlement Intermediates

- MO Ramapo PAR Cost: T0 (\$)
- MO Station 80 Cost: T0 (\$)
- Total Hours in Given Month

■ Settlement Results

- Hr Ramapo PAR Stlmnt: T0 (\$)
- Hr Station 80 Stlmnt: T0 (\$)

T0 Ramapo Par & Station 80 Cap New York ISO Independent System Operator

■ Settlement Algorithm

Hr Ramapo PAR Stlmnt: T0 (\$) =

MO Ramapo PAR Costs: T0 (\$) / Total Hours in Given Month

Hr Station 80 Stlmnt: T0 (\$) =

MO Station 80 Costs: T0 (\$) / Total Hours in Given Month

T0 Ramapo Par & Station 80 Cap New York ISO Independent System Operator

■ 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

T0 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

- **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 Stlmnt: TO (\$)

Regulated Transmission Cost Recovery

■ Settlement Algorithm

Day Reg Trans Project Owner ‘Type’ Cost Recovery Payment (\$) =

\sum 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

- 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

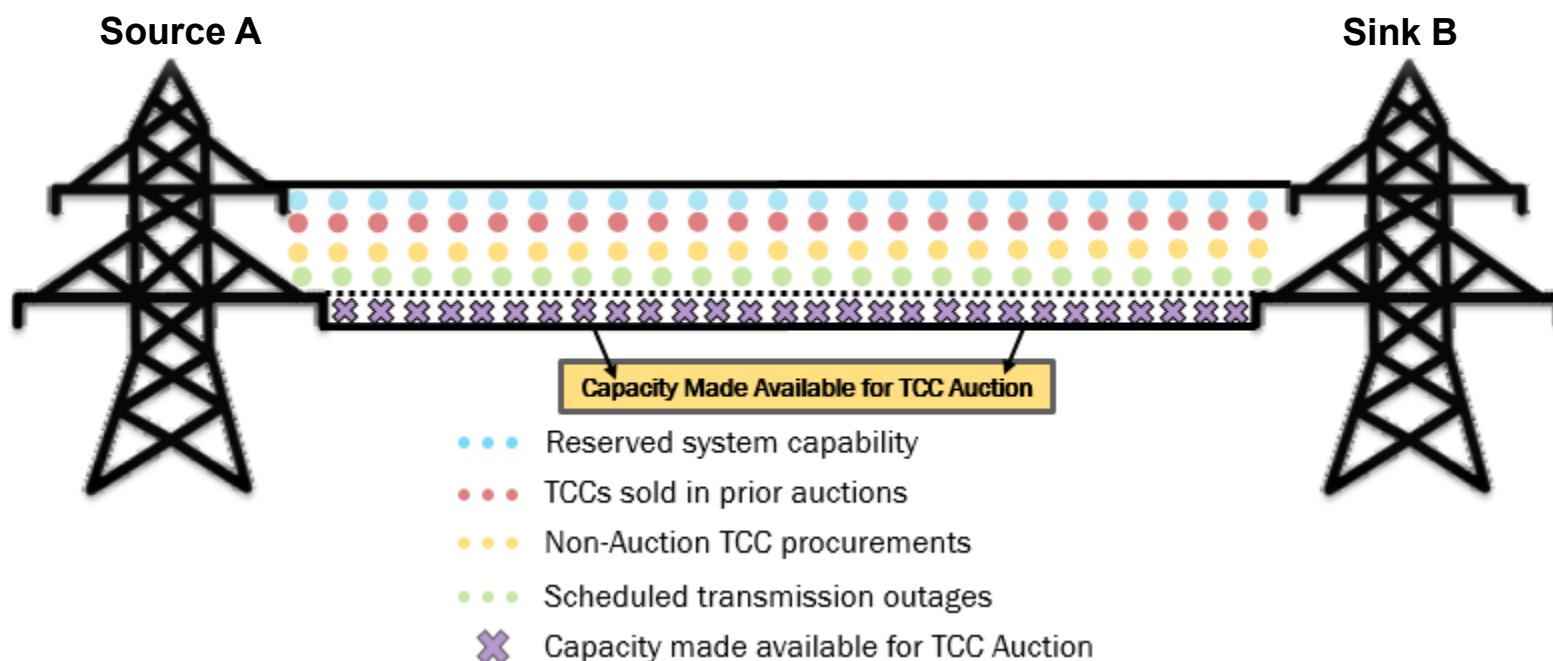
Transmission Congestion Contracts

- **TCC Rent Description**

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

Transmission Congestion Contracts

■ TCC Capacity Illustration



■ 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 Stlmnt (\$)

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

■ 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 $-\$7/\text{MWh}$
- ‘Gen 456’ Congestion Price is $-\$2/\text{MWh}$

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

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