Overview of Z2 Crediting Process

This content is true and correct as of 5/18/2015.

Questions? Submit an RMS Ticket under the “General Inquiry” Quick Pick and enter “Z2” in the Subject line.

Helping our members work together to keep the lights on... today and in the future
Introduction
Session Objectives

This session will enable learners to identify:

• The objectives of the Z2 Crediting Process.
• Which types of upgrades may be eligible for revenue credits under Attachment Z2 of the Tariff.
• The steps in the Z2 Crediting Process.
• The factors for each type of Creditable Upgrade calculation.
• The settlements reporting associated with the Z2 Crediting Process.
What is the Z2 Crediting Process?
Poll Question #1

TEST YOUR KNOWLEDGE:
Which type of entity may be eligible for revenue credits under Attachment Z2 of the Tariff as Upgrade Sponsors?
Select all that apply.
A. Generator Interconnection (GI) Customer
B. Project Sponsor
C. Transmission Customers (TCs)
Z2 Crediting Process Objectives

Fulfill the requirements of Tariff Attachment Z2

Deliver process for identifying and distributing revenue credits related to an upgrade
Attachment Z2 of the Tariff

May be eligible to receive revenue credits:

• Transmission Customer (TC)
• Generator Interconnection (GI) Customers
• Project Sponsors
Attachment Z2 of the Tariff

Revenue credits stem from transmission service that could not have been provided “but for” the upgrade
Z2 Crediting Process

1. Determine Creditable Upgrades
2. Determine Subsequent TSR Impact
3. Calculate the Credit Payment Obligation (CPO)
4. Determine How CPO is Paid: Rates and/or DAUC*
5. Distribute Payments to Sponsors

*Directly Assigned Upgrade Costs
Key Terms – Summary

1. Creditable Amount
   A. Amount associated with a Creditable Upgrade, including interest accrued

2. Creditable Event
   B. A Network Upgrade which was paid for (in whole or part) through revenues collected from a TC, GI Customer, or Project Sponsor through Directly Assigned Upgrade Costs

3. Creditable Upgrade
   C. TC, Network Customer, GI Customer, or Project Sponsor paying Directly Assigned Upgrade Costs for a Creditable Upgrade

4. Upgrade Sponsor
   D. Granting of new transmission service which could not be provided “but for” the presence of a Creditable Upgrade
## Sponsors

<table>
<thead>
<tr>
<th><strong>Upgrade Sponsor</strong></th>
<th><strong>Initial Sponsor</strong></th>
<th><strong>Project Sponsor</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>TC, Network Customer, GI Customer, or Project Sponsor paying Directly Assigned Upgrade Costs (DAUC) for a Creditable Upgrade</td>
<td>First Upgrade Sponsor to fund an upgrade</td>
<td>One or more entities that voluntarily agree to bear a portion or all of the costs of a Sponsored Upgrade</td>
</tr>
</tbody>
</table>

*Not a Tariff Term*
Types of Eligible Upgrades
Types of Eligible Upgrades

1. GI Network Upgrade
2. Service Upgrade
3. Sponsored Upgrade
GI Network Upgrade

Additions, modifications, and upgrades to the Transmission System required at or beyond the point at which the Interconnection Facilities connect to the Transmission System to accommodate the interconnection of the Generating Facility to the Transmission System.
Service Upgrade

- Network Upgrades required to provide transmission service requested by an Eligible Customer in accordance with Attachment Z1 of Tariff
- Stems from need for either Network Integrated Transmission Service (NITS) or Point-to-Point (PTP) Service
- SPP completes study to determine if system can support new service requests without upgrading facilities
Sponsored Upgrade

- Upgrade in which entity voluntarily decides/agrees to fund the construction
- Entity recognizes that Base Plan Funding (BPF) would not pay for upgrade, but the entity would

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Plan Funding (BPF)*</td>
<td>Funds applied to those upgrades SPP as an RTO directs to be constructed/upgraded; funded by Schedule 11 Regional and Zonal charges</td>
</tr>
</tbody>
</table>

*Not a Tariff Term
Z2 Crediting Process
Z2 Crediting Process

1. Determine Creditable Upgrades
2. Determine Subsequent TSR Impact
3. Calculate the Credit Payment Obligation (CPO)
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Step 1

Determine Creditable Upgrades

1. Determine Creditable Upgrades
2. Determine Subsequent TSR Impact
3. Calculate the Credit Payment Obligation (CPO)
4. Determine How CPO is Paid: Rates and/or DAUC
5. Distribute Payments to Sponsors
Types of Eligible Upgrades

Types of Eligible Upgrades
- GI Network Upgrade
- Service Upgrade
- Sponsored Upgrade
Service Upgrade

Service Requests

- Long Term Request(s) in ATSS requires an upgrade
- Are any of the costs Direct Assigned to at least one Customer?
  - Yes
  - Costs not qualifying for BPF or covered by PIP rates are directly assigned
    - All or part of the upgrade is a Creditable Upgrade-Credits due
  - No
    - Not a Creditable Upgrade-No Credits due

Term | Definition
--- | ---
Aggregate Transmission Service Study (ATSS) | Evaluates long-term Transmission Service Requests (TSRs) aggregately to develop a more efficient expansion of the transmission system that provides the necessary Additional Transmission Capacity (ATC) to accommodate all such requests at the minimum total cost
Sponsored Upgrade

- **Sponsored Upgrade Approved**
- **Not a Creditable Upgrade-No Credits due**
- **Is the Sponsored Upgrade Required to grant any new Service**
- **Yes**
- **Network upgrade is a Creditable Upgrade-Credits due**
- **No**
Creditable Upgrades – Summary

• **GI Network Upgrade:**
  Automatically Creditable Upgrade by definition

• **Service Upgrade:**
  If required upgrade costs do **not** fully qualify for BPF or if **not** fully covered by PTP rates, Creditable Upgrade

• **Sponsored Upgrade:**
  If SPP determines the Sponsored Upgrade is required as part of the Transmission System, Creditable Upgrade
Creditable Upgrade – Summary

Was the cost of the upgrade (in whole or part) directly assigned (DAUC) to an Initial Sponsor?

- If yes, then upgrade is deemed Creditable Upgrade
- If no, then upgrade is not deemed Creditable Upgrade

**Exception:**
A Sponsored Upgrade only becomes a Creditable Upgrade if SPP deems the upgrade necessary for transmission service or part of Integrated Transmission Planning (ITP). In other words, the Project Sponsor may have upgrade costs directly assigned to it. But that does not make the Sponsored Upgrade automatically a Creditable Upgrade.
Creditable Upgrade – Summary

Does the upgrade have qualified subsequent use transmission impacts?

- If yes, then credits will be paid for subsequent use
- If no, then credits will not be paid for subsequent use
Poll Question #2

Is the below deemed a Creditable Upgrade?
SPP studies a new long-term TSR and determines a new upgrade is necessary. There will be allocated upgrade costs to one TSR to build this upgrade. These costs will be completely funded by PTP rates.

A. Yes
B. No
What questions do you have?
Step 2

Determine Subsequent TSR Impact

1. Determine Creditable Upgrades
2. Determine Subsequent TSR Impact
3. Calculate the Credit Payment Obligation (CPO)
4. Determine How CPO is Paid: Rates and/or DAUC
5. Distribute Payments to Sponsors
Transmission Service Request (TSR) Impact Process

1. Run ATSS
   - Determines Transfer Distribution Factor (TDF)
   - Determines Flow
   - Feeds data to Z2 Tool for Reservation Stack Analysis (RSA)

2. Apply “But For” Test
   - Rule 1
   - Rule 2
   - Rule 3
1. Run Aggregate Transmission Service Study (ATSS)

ATSS:

• Uses Summer Peak Model

• Assesses the TDF impact of each TSR on each upgrade (all previous and current Creditable Upgrades)
  – Threshold ≥ \( \text{three (3)} \) %

• Determines direction of flow

TDF and direction of flow feeds to the Z2 Tool, where RSA completed
2. Apply Subsequent Use Rules

“But For” Test

Rule 1:
New reservations with response factors in **same direction of flow** which caused Creditable Upgrade to be needed satisfies “but for” test and deemed Creditable Event

[Diagram showing Gen, Load, Upgrade Flow, and New Reservation Flow]
2. Apply Subsequent Use Rules
“But For” Test

Rule 2:
New reservations with response factors in opposite direction of flow which caused Creditable Upgrade to be needed satisfies “but for” test if reaches the applicable threshold and deemed Creditable Event.
2. Apply Subsequent Use Rules

“But For” Test

Rule 3:

Long-Term – Sum of long-term impacts
Short-Term – Sum of both long and short-term impacts
Long-Term RSA

- Long Term Request Granted in ATSS
  - Does the Request have TDF of 3% or more on any Creditable Upgrade?
    - Yes
      - Does the Request increase the flow in the forward direction?
        - Yes
          - Credits due
        - No
    - No
      - No Credits due
  - No
    - No Credits due

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**ATSS 1**
Determine Forward Direction Flow

TSR1: 5 MW
TSR2: 5 MW(R)
TSR3: 10 MW

95 MW + 5 MW + 10 MW = 110 MW

Gen 300 MW Load

Forward Flow = 95 MW
Determine Base Reverse Capacity

- Used to establish level at which credits will be required to be paid for service causing reverse flows on Creditable Upgrade

- If Reverse Flow < Base Reverse Capacity, not Creditable Event

\[
\text{Initial Capacity} + \text{Initial Fwd. Flow} = \text{Base Reverse Capacity} = \text{Threshold for Credits}
\]

- Forward Flow = 95MW

- Reverse Flow = 300 MW
ATSS 1
Determine Base Reverse Capacity

TSR1: 5 MW
TSR2: 5 MW(R)
TSR3: 10 MW

Initial Capacity
100 MW + Initial Fwd. Flow 95 MW = 195 MW

Threshold for Credits

Gen 300 MW
100 MW

Load Forward Flow = 95MW
Reverse Flow
ATSS 2
Determine Subsequent Creditable Events

TSR4: 10 MW
TSR5: 20 MW

300 MW

Forward Flow = 110 MW

Fwd. Flow after AG1 + New Fwd. Flow = Fwd. Flow after AG2

110 MW + 10 MW + 20 MW = 140 MW
ATSS 2
Determine Subsequent Creditable Events

TSR4: 10 MW
TSR5: 20 MW

Rvs. Flow after AG1 + New Rvs. Flows = Rvs. Flow after AG2

5 MW + 0 MW = 5 MW

Reverse Flow = 5 MW

Under 195 MW Threshold for Credits
ATSS 3
Determine Subsequent Creditable Events

TSR6: 20 MW (R)
TSR7: 5 MW

Forward Flow = 140 MW

140 MW + 5 MW = 145 MW
**ATSS 3**
Determine Subsequent Creditable Events

- **TSR6**: 20 MW (R)
- **TSR7**: 5 MW

\[ \text{Rvs. Flow after AG2} = 5 \text{ MW} + \text{New Rvs. Flows} = 20 \text{ MW} \]
\[ \text{Rvs. Flow after AG3} = 25 \text{ MW} \]

Reverse Flow = 5 MW

Is the impact of TSR6 on the Creditable Upgrade deemed a Creditable Event? **NO**
ATSS 4
Determine Subsequent Creditable Events

TSR8: 50 MW (R)
TSR9: 50 MW (R)
TSR10: 25 MW

Forward Flow = 145 MW

Fwd. Flow after AG3 + New Fwd. Flow = Fwd. Flow after AG4
145 MW + 25 MW = 170 MW

Load

Gen

300 MW
ATSS 4
Determine Subsequent Creditable Events

TSR8: 50 MW (R)
TSR9: 50 MW (R)
TSR10: 25 MW

Rvs. Flow after AG3 + New Rvs. Flows = Rvs. Flow after AG4
25 MW + 50 MW + 50 MW = 125 MW

Reverse Flow = 25 MW

Under 195 MW Threshold for Credits
ATSS 5
Determine Subsequent Creditable Events

TSR11: 15 MW
TSR12: 20 MW
TSR13: 50 MW (R)

170 MW + 15 MW + 20 MW = 205 MW

Forward Flow = 170 MW

Gen 300 MW
Load
ATSS 5
Determine Subsequent Creditable Events

TSR11: 15 MW
TSR12: 20 MW
TSR13: 50 MW (R)

125 MW + 50 MW = 175 MW

Under 195 MW Threshold for Credits

Reverse Flow = 125 MW
**ATSS 6**

Determine Subsequent Creditable Events

- **TSR14:** 20 MW
- **TSR15:** 25 MW
- **TSR16:** 10 MW (R)
- **TSR17:** 15 MW (R)

Forward Flow = 205 MW

\[
\text{Fwd. Flow after AG5} + \text{New Fwd. Flow} = \text{Fwd. Flow after AG6}
\]

\[
205 \text{ MW} + 20 \text{ MW} + 25 \text{ MW} = 250 \text{ MW}
\]
ATSS 6
Determine Subsequent Creditable Events

- TSR14: 20 MW
- TSR15: 25 MW
- TSR16: 10 MW (R)
- TSR17: 15 MW (R)

Rvs. Flow after AG5: 175 MW
New Rvs. Flows: 10 MW
Rvs. Flow after AG6: 200 MW

300 MW
Reverse Flow = 175 MW

Over 195 MW Threshold
ATSS 6
Determine Subsequent Creditable Events

TSR14: 20 MW
TSR15: 25 MW
TSR16: 10 MW (R)
TSR17: 15 MW (R)

Which of the TSRs in the reverse flow are eligible for revenue credits?
Both – both part of same study that pushed reverse flow over threshold

Over 195 MW Threshold

Rvs. Flow after AG5 + New Rvs. Flows = Rvs. Flow after AG6
175 MW + 10 MW + 15 MW = 200 MW

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Key Take-Aways – Long-Term RSA

• Subsequent TSR deemed Creditable Event:
  – If meets 3% TDF minimum criterion and flows in same direction which caused upgrade
  – If meets 3% TDF minimum criterion and flows in reverse direction which caused upgrade, and reverse stack exceeds threshold

• Stack remains fixed until conclusion of next ATSS
Short-Term Stack Analysis

Short-Term Stack placed on top of long-term stack
Short-Term Stack Analysis

Short-Term TSRs

- Vary from 1 hour to 18 months
- Can be approved up to four (4) months prior to start
  - Means always some pre-existing short-term TSR in stack
Poll Question #3

**True or False:** When Z2 Tool analyzes short-term TSRs, it deems all short-term TSRs in the forward flow as Creditable Events (the TSRs meet the 3% or greater TDF impact threshold).

A. True
B. False
Short-Term Example

- Just completed ATSS 4 (from long-term stack example)
- Remember: All short-term TSRs in Forward Flow deemed Creditable Events
- Threshold for Reverse Flow is still 195 MW
Short-Term Example – Reverse Flow

Start of Long and Short-Term Stacks

- **30 MW** one (1) hour request with reverse flow impact = 15 MW
- **50 MW** Off-Peak request with reverse flow impact = 20 MW
- **50 MW** On-Peak request with reverse flow impact = 10 MW
- **100 MW** three (3) hour request with reverse flow impact = 30 MW
- **100 MW** Monthly request with reverse flow impact = 10 MW
- **100 MW** Monthly request with reverse flow impact = 5 MW

Start with long-term stack from ATSS4 (Reverse Flow = 125 MW)

Threshold for Credit

Request already approved
Short-Term Example – Reverse Flow
New Short-Term Hourly Request 1

- Threshold for Credits: 195MW
- New Hourly Req. 10 MW Impact
- Total Less than Target Value = No Credits

Add new request to STS Total For Hour 1

- Short-term Stack, previously Approved requests
- Long-term Stack 125MW

Hours of Operating Day

MW
Short-Term Example – Reverse Flow
New Short-Term Daily Request 1

Threshold for Credits: 195MW
Request for Daily Service, adds 25MW in Reverse direction
Short-term Stack, previously Approved requests
Long-term Stack 125MW

Daily Request Exceeds Target Hours 14-16, Creates Credits
Short-Term Example – Reverse Flow

New Short-Term Hourly Request 2

- Hourly Requests adds 10MW in Reverse Direction in Hour 11
- Threshold for Credits: 195MW
- Total with Hourly Request is Less than Target Value, No Credits

- Short-term Stack, previously Approved requests
- Long-term Stack 125MW

Hours of Operating Day
Short-Term Example – Reverse Flow

New Short-Term Hourly Request 3

Hourly Requests adds 10MW in Reverse Direction in Hour 15

Total with Hourly Request is Greater than Target Value, Create Credits

Threshold for Credits: 195MW

Short-term Stack, previously Approved requests

Long-term Stack 125MW

Hours of Operating Day
Key Take-Aways – Short-Term RSA

• If short-term TSR impact is in forward direction, automatically Creditable Event

• Short-term TSRs generate credits in reverse flow if flow stack above threshold

• Short-term TSRs only stay in stack for duration of their term
Key Points – Short-Term RSA

• Not all short-term TSRs in reverse flow are creditable; only if long-term stack is above reverse threshold

• Once crediting determination is made for short-term TSR, does not change due to subsequent reservations
Check and Balance

Which statements are correct?

1. The TDF Impact threshold for a TSR to be deemed a Creditable Event is $\geq 3\%$.

2. All short-term TSRs in the reverse flow direction are deemed Creditable Events.

3. TSRs in forward flow direction only satisfy “but for” test if reach applicable threshold.

4. Short-term TSRs only stay in the stack for the duration of their terms.

5. A GI Network Upgrade is deemed a Creditable Upgrade by definition.
Check and Balance – Summary

Which statements are correct?

1. The TDF Impact threshold for a TSR to be deemed a Creditable Event is ≥ 3%.

2. All short-term TSRs in the **forward flow** direction are deemed Creditable Events. **Corrected**

3. TSRs in **reverse flow** direction only satisfy “but for” test if reach applicable threshold. **Corrected**

4. Short-term TSRs only stay in the stack for the duration of their terms.

5. A GI Network Upgrade is deemed a Creditable Upgrade by definition.
Step 3
Calculate the Credit Payment Obligation (CPO)

1. Determine Creditable Upgrades
2. Determine Subsequent TSR Impact
3. Calculate the Credit Payment Obligation (CPO)
4. Determine How CPO is Paid: Rates and/or DAUC
5. Distribute Payments to Sponsors
CPO Principles
Network (NITS) Service

- Calculate Credit Payment Obligation (CPO) for each TSR and each upgrade
- Based upon revenue requirements for each upgrade
  - No revenue requirements associated with GI Network Upgrades; upfront payment of investment costs
- Takes into account time value of money
- Includes the impact ratio
CPO Calculation
Network Service – GI Network Upgrade

1. Net Plant Value* of Upgrade at Service Start
2. TC’s Total Obligation

\[
\text{Net Plant Value of Upgrade at Service Start} \times \frac{\text{**Impact Ratio}}{} = \text{TC’s Total Obligation}
\]

3. CPO (CPO = TC’s Total Obligation Levelized over Term of Service on a Present Value Basis)

*Initial sponsored amount less depreciation to date
**Impact Ratio = \(\frac{TDF \times TSR \text{ Requested Amount}}{\text{Added Capacity of GI Network Upgrade}}\)
CPO Calculation

Network Service – Service and Sponsored Upgrades

1. Total Annual Transmission Revenue Requirements (ATRR)
2. Total Present Value ATRRs
3. TC’s Total Obligation
   \[
   \text{TC’s Total Obligation} = \text{TSR’s Total Present Value ATRR} \times \text{*Impact Ratio}
   \]
4. CPO
   \[
   \text{CPO} = \frac{(TDF \times TSR \text{ Requested Amount})}{\text{Added Capacity of Sponsored Upgrade}}
   \]
   \[
   \text{MW Impact} = \frac{\text{TDF} \times \text{TSR Requested Amount}}{\text{Sum of Current MW Impact and All Previous MW Impacts}}
   \]
Calculate CPO
Network Service – Sponsored Upgrade

Initial Upgrade Costs: $10M

<table>
<thead>
<tr>
<th>Year</th>
<th>ATRR ($)</th>
<th>ATRR Present Value ($)</th>
<th>TSR_A Present Value ($)</th>
<th>TSR_B Present Value ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1,731,250</td>
<td>1,573,864</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>1,693,750</td>
<td>1,399,793</td>
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<tr>
<td>3</td>
<td>1,656,250</td>
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<tr>
<td>4</td>
<td>1,618,750</td>
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<td>...</td>
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<tr>
<td>40</td>
<td>268,750</td>
<td>5,938</td>
<td>5,938</td>
<td>5,938</td>
</tr>
<tr>
<td>Total</td>
<td>40,000,000</td>
<td>13,594,261</td>
<td>12,020,397</td>
<td>9,376,239</td>
</tr>
</tbody>
</table>

*ATRR = Annual Transmission Revenue Requirement (formula)
## Calculate CPO
### Network Service – Sponsored Upgrade

Initial Upgrade Costs: $10M

<table>
<thead>
<tr>
<th>Year</th>
<th>ATRR ($)</th>
<th>ATRR Present Value ($)</th>
<th>TSR&lt;sub&gt;A&lt;/sub&gt; Present Value ($)</th>
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<tr>
<th>Impact Ratio</th>
<th>25%</th>
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</tr>
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<tbody>
<tr>
<td>TSR Present Value ATRR (Total x Impact Ratio)</td>
<td>$3,005,099</td>
<td>$2,344,060</td>
</tr>
<tr>
<td>CPO – Each Year of TSR</td>
<td>$1,329,234</td>
<td>$984,251</td>
</tr>
<tr>
<td>(3 Year Term)</td>
<td>(4 Year Term)</td>
<td></td>
</tr>
</tbody>
</table>
CPO Principles
Point-to-Point (PTP)

- Calculate CPO for each TSR and each upgrade
- Based upon the applicable PTP rates (Schedules 7, 8 and 11)
  - Firm PTP Schedules: 7 & 11
  - Non-Firm PTP Schedules: 8 & 11
CPO Calculation

PTP Service

Use following CPO calculation:

Total Monthly Schedule Rate ($ per MW-Month) \times MW Impact on Facility \times 12 Months = Annual PTP CPO
Calculate CPO – PTP

Initial Upgrade Costs: $10M

<table>
<thead>
<tr>
<th>Schedule</th>
<th>Rates ($ per MW- Month)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sch. 7</td>
<td>2,000</td>
</tr>
<tr>
<td>Sch. 11 Zonal</td>
<td>1,000</td>
</tr>
<tr>
<td>Sch. 11 Regional</td>
<td>1,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>4,000</strong></td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>TSR</th>
<th>Reservation (MW)</th>
<th>MW Impact on Facility</th>
<th>Rate ($)</th>
<th>Monthly CPO</th>
<th>Annual CPO</th>
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</thead>
<tbody>
<tr>
<td>(\text{TSR}_C)</td>
<td>5</td>
<td>1.5</td>
<td>4,000</td>
<td>6,000</td>
<td>72,000</td>
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<tr>
<td>(\text{TSR}_D)</td>
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<td>2.0</td>
<td>4,000</td>
<td>8,000</td>
<td>96,000</td>
</tr>
</tbody>
</table>
Complete the Statement – Summary

1. The CPO calculation for _______ PTP ______ Service is based on _______ Schedule Rates _______.

2. The CPO calculation for _______ Network ______ Service is based on the _______ ATRR ______ for each upgrade.

A. PTP
B. Network
C. Schedule Rates
D. ATRR
1. Determine Creditable Upgrades
2. Determine Subsequent TSR Impact
3. Calculate the Credit Payment Obligation (CPO)
4. Determine How CPO is Paid: Rates and/or DAUC
5. Distribute Payments to Sponsors

Step 4
Determine How CPO Paid: Rates and/or DAUC
Principles of DAUC
Network (NITS) Service

• Portion of CPO covered by the Safe Harbor Cost Limit (SHCL) shall be funded through Schedule 11 rates
  – SHCL = $180,000 x MW Reserved
• Any portion over and above SHCL shall become the DAUC
Engineering and Construction (E&C) Costs

**TSR Present Value ATRR**
Upgrade Total Present Value ATRR

**Upgrade Total E&C**

**TSR E&C Cost**

Initial Upgrade Costs: $10M

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Impact Ratio

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CPO – Each Year of TSR

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### Engineering and Construction (E&C) Costs – $\text{TSR}_A$

\[
\frac{\$3,005,099}{\$13,594.261} = 22\% \times \$10,000,000 = \$2,210,564
\]

**Initial Upgrade Costs: $10M**

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**Impact Ratio**

- 25%  

**TSR Present Value ATRR**

- (Total x Impact Ratio)  
  - $\$3,005,099$  
  - $\$2,344,060$  

**CPO – Each Year of TSR**

- $\$1,329,234$  
- $\$984,251$

(3 Year Term)  
(4 Year Term)
Engineering and Construction (E&C) Costs – TSR$_B$

\[
\frac{2,344,060}{13,594.261} = 17\% \times 10,000,000 = 1,724,301
\]

Initial Upgrade Costs: $10M

<table>
<thead>
<tr>
<th>Year</th>
<th>ATRR ($)</th>
<th>ATRR Present Value ($)</th>
<th>TSR$_A$ Present Value ($)</th>
<th>TSR$_B$ Present Value ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>40,000,000</td>
<td>13,594,261</td>
<td>12,020,397</td>
<td>9,376,239</td>
</tr>
</tbody>
</table>

Impact Ratio 25% 25%

- TSR Present Value ATRR (Total x Impact Ratio) $3,005,099 $2,344,060
- CPO – Each Year of TSR $1,329,234 $984,251
  (3 Year Term) (4 Year Term)
Calculate Portion of E&C in Rates and Directly Assigned – Network

<table>
<thead>
<tr>
<th>Sponsor Type</th>
<th>TSR</th>
<th>MW Reserved</th>
<th>Engineering and Construction Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Total ($)</td>
</tr>
<tr>
<td>Initial Sponsor</td>
<td></td>
<td></td>
<td>10,000,000</td>
</tr>
<tr>
<td>Network (NITS)</td>
<td>TSR_A</td>
<td>5</td>
<td>2,210,564</td>
</tr>
<tr>
<td>Network (NITS)</td>
<td>TSR_B</td>
<td>10</td>
<td>1,724,301</td>
</tr>
</tbody>
</table>

*Safe Harbor Cost Limit (SHCL) = $180,000 x MW Reserved

TSR_A E&C SHCL: $180,000 x 5 = $900,000

TSR_B E&C SHCL: $180,000 x 10 = $1,800,000
Calculate Portion of E&C in Rates and Directly Assigned – Network

<table>
<thead>
<tr>
<th>Sponsor Type</th>
<th>TSR</th>
<th>MW Reserved</th>
<th>Engineering and Construction Cost</th>
<th>Total ($)</th>
<th>Under SHCL ($)</th>
<th>DAUC* ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial Sponsor</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Network (NITS)</td>
<td>TSR_A</td>
<td>5</td>
<td>2,210,564</td>
<td>2,210,564</td>
<td>900,000</td>
<td>1,310,564</td>
</tr>
<tr>
<td>Network (NITS)</td>
<td>TSR_B</td>
<td>10</td>
<td>1,724,301</td>
<td>1,724,301</td>
<td>1,724,301</td>
<td>0</td>
</tr>
</tbody>
</table>

*DAUC = Any portion above SHCL

TSR_A Assigned Costs: $2,210,564 - $900,000 = $1,310,564

TSR_B Assigned Costs: All $1.7M funded through Sch. 11 rates
## Reminder – TSR CPOs

### Network Service

<table>
<thead>
<tr>
<th>Engineering and Construction Cost</th>
<th>Present</th>
<th>TSR&lt;sub&gt;A&lt;/sub&gt; Present Value ($)</th>
<th>TSR&lt;sub&gt;B&lt;/sub&gt; Present Value ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total ($)</td>
<td>Under SHCL ($)</td>
<td>Directly Assigned Costs * ($)</td>
<td></td>
</tr>
<tr>
<td>10,000,000</td>
<td>2,210,564</td>
<td>900,000</td>
<td>1,310,564</td>
</tr>
<tr>
<td>1,724,301</td>
<td>1,724,301</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Impact Ratio</th>
<th>25%</th>
<th>25%</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSR Present Value ATRR (Total x Impact Ratio)</td>
<td>$3,005,099</td>
<td>$2,344,060</td>
</tr>
<tr>
<td>CPO – Each Year of TSR</td>
<td>$1,329,234</td>
<td>$984,251</td>
</tr>
<tr>
<td>(3 Year Term)</td>
<td>(4 Year Term)</td>
<td></td>
</tr>
</tbody>
</table>
## Calculate Portions of CPO in Rates and Directly Assigned – Network

<table>
<thead>
<tr>
<th>Sponsor Type</th>
<th>TSR</th>
<th>MW Reserved</th>
<th>Credit Payment Obligation (CPO)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Total ($)</td>
</tr>
<tr>
<td>Initial Sponsor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Network (NITS)</td>
<td>TSR_A</td>
<td>5</td>
<td>1,329,234</td>
</tr>
<tr>
<td>Network (NITS)</td>
<td>TSR_B</td>
<td>10</td>
<td>984,251</td>
</tr>
</tbody>
</table>

*CPO in Sch. 11 Rates = (TSR’s E&C SHCL ($) / TSR’s E&C Cost) x CPO

TSR_A: ($900,000 / $2,210,564) = 41% x $1,329,234 = $541,179

TSR_B: ($1,724,301 / $1,724,301) = 100% x $984,251 = $984,251
## Calculate Portions of CPO in Rates and Directly Assigned – Network

<table>
<thead>
<tr>
<th>Sponsor Type</th>
<th>TSR</th>
<th>MW Reserved</th>
<th>Credit Payment Obligation (CPO)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Total ($)</td>
<td>Sch. 11 Rate ($)</td>
</tr>
<tr>
<td>Initial Sponsor</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Network (NITS)</td>
<td>TSR_A</td>
<td>5</td>
<td>1,329,234</td>
<td>541,179</td>
</tr>
<tr>
<td>Network (NITS)</td>
<td>TSR_B</td>
<td>10</td>
<td>984,251</td>
<td>984,251</td>
</tr>
</tbody>
</table>

*DAUC = Any portion not covered in Sch. 11 rates

TSR_A Assigned Costs: $1,329,234 - $541,179 = $788,055

TSR_B Assigned Costs: All $984K funded through Sch. 11 rates
Poll Question #4

Select the Best Answer: Why is determining the E&C costs attributable to each TSR necessary to calculate the DAUC for the TSR Customer?

A. The TSR Customer must also pay these E&C costs out of pocket.
B. The DAUC is equal to the E&C costs attributable to each TSR.
C. E&C costs are needed to calculate how much of the CPO is funded via Schedule 11 rates.
Principles of DAUC
Point-to-Point (PTP)

• Portion of CPO covered by the Schedules 7 and 11 rates shall be funded through those rates
• Any portion over and above Schedule 7 and 11 rates shall become the DAUC
• Amount over and above Schedule 7 and 11 rates affected by any amount resulting from another Service Upgrade
# Reminder – PTP Rates and CPOs

## PTP Service

Initial Upgrade Costs: $10M

<table>
<thead>
<tr>
<th>Schedule</th>
<th>Rates ($ per MW-Month)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sch. 7</td>
<td>2,000</td>
</tr>
<tr>
<td>Sch. 11 Zonal</td>
<td>1,000</td>
</tr>
<tr>
<td>Sch. 11 Regional</td>
<td>1,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>4,000</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TSR</th>
<th>Reservation (MW)</th>
<th>MW Impact on Facility</th>
<th>Rate ($)</th>
<th>Monthly CPO</th>
<th>Annual CPO</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSR_C</td>
<td>5</td>
<td>1.5</td>
<td>4,000</td>
<td>6,000</td>
<td>72,000</td>
</tr>
<tr>
<td>TSR_D</td>
<td>10</td>
<td>2.0</td>
<td>4,000</td>
<td>8,000</td>
<td>96,000</td>
</tr>
</tbody>
</table>
Annual Base Rate Revenue (BRR)

Total Rate per MW-Month \times MW Reservation \times 12 Months = Annual Base Rate Revenue

TSR_C

- $4,000 MW-Month
- 5 MW
- 12 Months
- $240,000

TSR_D

- $4,000 MW-Month
- 10 MW
- 12 Months
- $480,000
### Creditable Upgrades Impacted

<table>
<thead>
<tr>
<th><strong>TSR_C</strong></th>
<th><strong>TSR_D</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Impact on Creditable Upgrade 1 (CU1)</td>
<td>• Impact on Creditable Upgrade 1 only (CU1)</td>
</tr>
<tr>
<td>• Paying for Service Upgrade 2 (SU2)</td>
<td></td>
</tr>
</tbody>
</table>

Will pay for SU2 via Service Upgrade Revenue Requirements (SURR)
Higher of Pricing – PTP TSR\textsubscript{C}

<table>
<thead>
<tr>
<th>TSR</th>
<th>SURR/Other CPO ($)</th>
<th>Annual CPO ($)</th>
<th>Annual BRR ($)</th>
<th>Higher of: ($)</th>
<th>DAUC Pd. To Spons. ($)</th>
<th>Rev Realoc. to Sponsors ($)</th>
<th>Retained by TO(s) ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSR\textsubscript{C}</td>
<td>200K</td>
<td>72K</td>
<td>240K</td>
<td>272K</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TSR\textsubscript{D}</td>
<td>0</td>
<td>96K</td>
<td>480K</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Higher of Pricing:**

Higher of: Total Obligation **OR** Annual Base Rate Revenue

Higher of: $200,000 + $72,000 = $272,000 **OR** $240,000

$272,000
## Portion of CPO as DAUC – PTP TSR<sub>C</sub>

<table>
<thead>
<tr>
<th>TSR</th>
<th>SURR/ Other CPO($)</th>
<th>Annual CPO</th>
<th>Annual BRR ($)</th>
<th>Higher of: ($)</th>
<th>DAUC Pd. To Spons. ($)</th>
<th>Rev Realloc. to Sponsors ($)</th>
<th>Retained by TO(s) ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSR&lt;sub&gt;C&lt;/sub&gt;</td>
<td>200K</td>
<td>72K</td>
<td>240K</td>
<td>272K</td>
<td>32K</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TSR&lt;sub&gt;D&lt;/sub&gt;</td>
<td>0</td>
<td>96K</td>
<td>480K</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Directly Assigned Upgrade Costs:**

Any portion of “higher of” amount above standard rates

\[ \text{Higher of: } \text{standard rates} \text{ cost} = 272,000 \text{ (Higher of) } - 240,000 \text{ (Annual BRR) } = 32,000 \]
# Portion of CPO in Rates – PTP TSR<sub>c</sub>

<table>
<thead>
<tr>
<th>TSR</th>
<th>SURR/Other CPO($)</th>
<th>Annual CPO</th>
<th>Annual BRR ($)</th>
<th>Higher of: ($)</th>
<th>DAUC Pd. To Spons. ($)</th>
<th>Rev Realoc. to Sponsors ($)</th>
<th>Retained by TO(s) ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSR&lt;sub&gt;c&lt;/sub&gt;</td>
<td>200K</td>
<td>72K</td>
<td>240K</td>
<td>272K</td>
<td>32K</td>
<td>40K</td>
<td></td>
</tr>
<tr>
<td>TSR&lt;sub&gt;D&lt;/sub&gt;</td>
<td>0</td>
<td>96K</td>
<td>480K</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Revenue Reallocated to Sponsors:**

$72,000 (CPO) – $32,000 (DAUC) = $40,000
# Portion of CPO in Rates – PTP TSR\(_C\)

<table>
<thead>
<tr>
<th>TSR</th>
<th>Other CPO Off ($</th>
<th>Annual CPO ($)</th>
<th>DAUC Pd. To Spons. ($)</th>
<th>Rev Realloc. to Sponsors ($)</th>
<th>Retained by TO(s) ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSR(_C)</td>
<td>200K</td>
<td>72K</td>
<td>240K</td>
<td>272K</td>
<td>32K</td>
</tr>
<tr>
<td>TSR(_D)</td>
<td>0</td>
<td>96K</td>
<td>480K</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Revenue Retained by TOs:**

- $240,000 (Annual BRR)
- $40,000 (Revenue Realloc.)
- **= $200,000**

- Paying $32K in DAUC to fund CPO for CU1; distributed to previous Upgrade Sponsors for CU1
- Paying $40K through standard rates to fund CPO for CU1; reallocated from TOs to previous Upgrade Sponsors for CU1
- Paying $200K through standard rates to fund construction of SU2; distributed to TO who built SU2
## Higher of Pricing – PTP TSR$_D$

<table>
<thead>
<tr>
<th>TSR</th>
<th>SURR/Other CPO($)</th>
<th>Annual CPO</th>
<th>Annual BRR ($)</th>
<th>Higher of: ($)</th>
<th>DAUC Pd. To Spons. ($)</th>
<th>Rev Realloc. to Sponsors ($)</th>
<th>Retained by TO(s) ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSR$_C$</td>
<td>200K</td>
<td>72K</td>
<td>240K</td>
<td>272K</td>
<td>32K</td>
<td>40K</td>
<td>200K</td>
</tr>
<tr>
<td>TSR$_D$</td>
<td>0</td>
<td>96K</td>
<td>480K</td>
<td>480K</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Higher of Pricing:**

Higher of: Total Obligation **OR** Annual Base Rate Revenue

Higher of: $0 + $96,000 = $96,000 **OR** $480,000

$480,000
### Portion of CPO as DAUC – PTP \( \text{TSR}_D \)

<table>
<thead>
<tr>
<th>TSR</th>
<th>SURR/Other CPO($)</th>
<th>Annual CPO</th>
<th>Annual BRR ($)</th>
<th>Higher of: ($)</th>
<th>DAUC Pd. To Spons. ($)</th>
<th>Rev Realoc. to Sponsors ($)</th>
<th>Retained by TO(s) ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \text{TSR}_C )</td>
<td>200K</td>
<td>72K</td>
<td>240K</td>
<td>272K</td>
<td>32K</td>
<td>40K</td>
<td>200K</td>
</tr>
<tr>
<td>( \text{TSR}_D )</td>
<td>0</td>
<td>96K</td>
<td>480K</td>
<td>480K</td>
<td>0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Directly Assigned Upgrade Costs:**

Any portion of “higher of” amount above standard rates

\[ \$480,000 \text{ (Higher of)} - \$480,000 \text{ (Annual BRR)} = \$0 \]
## Portion of CPO in Rates – PTP TSR_D

<table>
<thead>
<tr>
<th>TSR</th>
<th>SURR/Other CPO($)</th>
<th>Annual CPO</th>
<th>Annual BRR ($)</th>
<th>Higher of: ($)</th>
<th>DAUC Pd. To Spons. ($)</th>
<th>Rev Realloc. to Sponsors ($)</th>
<th>Retained by TO(s) ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSR_C</td>
<td>200K</td>
<td>72K</td>
<td>240K</td>
<td>272K</td>
<td>32K</td>
<td>40K</td>
<td>200K</td>
</tr>
<tr>
<td>TSR_D</td>
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<td>96K</td>
<td>480K</td>
<td>480K</td>
<td>0</td>
<td>96K</td>
<td></td>
</tr>
</tbody>
</table>

**Revenue Reallocated to Sponsors:**

\[ \$96,000 \text{ (CPO) } - \$0 \text{ (DAUC) } = \$96,000 \]
### Portion of CPO in Rates – PTP TSR<sub>D</sub>

<table>
<thead>
<tr>
<th>TSR</th>
<th>SURR/Other CPO($)</th>
<th>Annual CPO ($)</th>
<th>DAUC Pd. To Spons. ($)</th>
<th>Rev Realloc. to Spons. ($)</th>
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<td>TSR&lt;sub&gt;C&lt;/sub&gt;</td>
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<td>200K</td>
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<tr>
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<td>96K</td>
<td>480K</td>
<td>480K</td>
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<td>96K</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>384K</td>
</tr>
</tbody>
</table>

**Revenue Retained by TOs:**
- $480,000 (Annual BRR)
- $96,000 (Revenue Realloc.)
  - Total = $384,000

- Paying $0 in DAUC to fund CPO for CU1
- Paying $96K through standard rates to fund CPO for CU1; reallocated from TOs to previous Upgrade Sponsors for CU1
- Paying $384K through standard rates; distributed to TOs who normally receive this revenue

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If TSR_D were part of a later ATSS than TSR_C, revenue from TSR_D’s CPO would provide revenues to all previous Upgrade Sponsors, including TSR_C.
Make Your Mark – Summary

Which of the following factors are included in calculating how the CPO for PTP Service is paid?

(A) Annual Base Rate Revenue
(B) Safe Harbor Cost Limit
(C) Higher of Pricing
(D) Revenue Reallocation
1. Determine Creditable Upgrades
2. Determine Subsequent TSR Impact
3. Calculate the Credit Payment Obligation (CPO)
4. Determine How CPO is Paid: Rates and/or DAUC
5. Distribute Payments to Sponsors

Step 5
Distribute Payments to Sponsors
Credit revenues distributed based upon the cost responsibility of each entity with an impact on that upgrade, less credits previously received.

\[
\begin{align*}
\text{TSR}_D &= $$$* \\
\text{TSR}_C &= $$$* \\
\text{TSR}_B &= $$$* \\
\text{TSR}_A &= \text{Initial Sponsor}
\end{align*}
\]

*CPO is the revenue amount distributed. DAUC is the revenue amount that may be receivable.
Distribution Principles
GI Network and Sponsored Upgrades

• Credit revenues distributed FIRST to Initial Sponsor until fully compensated
• After Initial Sponsor fully compensated, credit revenues distributed based upon cost responsibility of each entity with an impact on that upgrade, less credits previously received

$TSR_C = $$$^*$
$TSR_B = $$$^*$
$TSR_A = $$$^*$

Initial Sponsor

* CPO is the revenue amount distributed. DAUC is the revenue amount that may be receivable.
Creditable Balance
Network and PTP Service

DAUC (Cost Responsibility) + Interest Accum. On Unpaid Bal. - Credits Received to Date = Creditable Balance

What does DAUC mean?

- **GI Network Upgrade:**
  - E&C Costs

- **Service Upgrade:**
  - DAUC over term of TSR

- **Sponsored Upgrade:**
  - Project Sponsorship over term of contract
**Poll Question #5**

**TRUE or FALSE:**
An Upgrade Sponsor can receive compensation even if the new facility is **not** used by other Transmission Customers.

A. True
B. False
Z2 Settlement Reporting
# Transmission Reports

<table>
<thead>
<tr>
<th>XML Settlement Statements</th>
<th>EXCEL Pre-Summary &amp; Summary</th>
<th>Settlement Invoices</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Daily PTP Settlement</td>
<td>• Pre-Summary for TC and TO</td>
<td>• Posted third business day of month</td>
</tr>
<tr>
<td>• Monthly NITS Settlement</td>
<td>• Summary for TC and TO (all settlement for given invoice month by charge type)</td>
<td>• Displays Transmission Settlement only for each TC and TO</td>
</tr>
<tr>
<td>• Z2 Monthly Detailed</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Transmission Reports

**Daily PTP Statement, Z2 Monthly Detailed XML, TO/TC Summary**

<table>
<thead>
<tr>
<th>TC1</th>
<th>TC2</th>
<th>TC3</th>
</tr>
</thead>
<tbody>
<tr>
<td>$50 → $50</td>
<td>$100 → $100</td>
<td>$50 → $50</td>
</tr>
<tr>
<td>TSR₁, Upgrade₁</td>
<td>TSR₆, Upgrade₉</td>
<td>TSR₃, Upgrade₉</td>
</tr>
<tr>
<td>$100 → $100</td>
<td>$50 → $50</td>
<td>$50 → $50</td>
</tr>
<tr>
<td>TSR₆, Upgrade₉</td>
<td>TSR₅, Upgrade₂₇</td>
<td>TSR₃, Upgrade₉</td>
</tr>
</tbody>
</table>

- **Details on Z2 Monthly Detailed XML**
- **Sums of debits/credits pertaining to Z2 Crediting via Manual Adj. on Daily PTP XML Statement and Summary for TC and TO**

SPP

Proprietary and Confidential. Unauthorized distribution prohibited.
Transmission Data Exchange

• Settlement Data is passed back/forth via Portal URL
  – Certification controlled access – granted by Customer Relations Department
  – [https://portal.spp.org/SPP](https://portal.spp.org/SPP)

• Settlement Reports posted to specific folders
  – Transmission
    ▪ Daily
    ▪ Monthly
    ▪ Z2_Crediting
Transmission Dates for Financials

Invoices, Summaries and NITS Initial XML posted to Portal by 3rd business day of month

Payments due to SPP 15 days after Invoices are posted

Payments from SPP sent 5 business days after collection listed above
Summary and Resources
Key Take-Aways

Upgrade Sponsor
- Initial Sponsor first to fund upgrade
- Upgrade Sponsor could be TC, GI Customer, or Project Sponsor paying DAUC

Eligible Upgrades
- GI Network Upgrade
- Service Upgrade
- Sponsored Upgrade

Creditable Upgrades
- GI Network: Automatically Creditable Upgrade by definition
- Service: If costs not fully covered by BPF or PTP rates, then Creditable Upgrade
- Sponsored: If SPP determines Sponsored Upgrade is needed as part of Transmission System, then Creditable Upgrade
Key Take-Aways

Subsequent TSR Impact
- Run ATSS (>3% Impact and direction of flow)
- ATSS applies “But For” test and feeds data to Z2 Tool for RSA
  - Forward Flow: Automatically Creditable Event
  - Reverse Flow: If reverse flow exceeds threshold, Creditable Event

Calculate CPO for each TSR and each Upgrade
- Network: Annual CPO is levelized annual amount over term of reservation that corresponds to TSR Present Value ATRR
- PTP: Based on applicable PTP rates outlined in Schedules 7, 8, & 11 of Tariff

Determine How CPO is Paid
- Network: Portion of E&C and CPO covered by SHCL funded through Schedule 11 rates; portion over & above are DAUC
- PTP: Portion of CPO covered by Schedule 7 & 11 rates is funded through rates; portion over and above rates becomes DAUC (dependent on amount resulting from another Service Upgrade)
Key Take-Aways

Distributing Credit Revenues
- Service Upgrade: Distributed based on cost responsibility of each entity with impact on upgrade, less credits received
- Sponsored/GI Network: Distributed FIRST to Initial Sponsor until fully compensated; then same as Service Upgrade

Settlements
- Financial activity around Z2 Crediting transactions found in Daily PTP and Z2 Monthly Detailed XML Settlement Statements, as well as EXCEL Summary for TC and TOs
- Reporting in Portal