

Market Path/Interface Pricing Point Alignment

MIC

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Monitoring Analytics

Interface Pricing

- **Transactions can be scheduled to an interface based on a contract transmission path.**
- **Pricing points are developed and applied based on the electrical impact of the external power source on PJM tie lines, regardless of contract transmission path.**

Interface Pricing

- **PJM establishes prices for transactions with external balancing authorities by assigning interface pricing points to individual balancing authorities based on the Generation Control Area (source) and Load Control Area (sink) as specified on the NERC Tag.**

Interface Pricing

- **The current approach will correctly identify the interface pricing point only if the market participant provides the complete path in the NERC Tag.**
- **The current approach will not correctly identify the interface pricing point if market participants submit external energy schedules that are inconsistent with the actual power flow and that result in energy settlements that are inconsistent with the actual power flow.**

Interface Pricing

- **Scheduling energy inconsistent with power flows creates harmful market inefficiencies, regardless of intent.**
- **Intentionally scheduling energy inconsistent with power flows can constitute prohibited market manipulation.**

Proposed Solution

- **Explicitly ban the breaking of transactions into segments, or submitting individual simultaneous transactions, that result in different interface pricing points than would have been received on a continuous transaction.**



Proposed Solution

- **Explicitly ban market participants from submitting multiple transactions in the PJM Energy Market that represent offsetting segments, in part or in whole, during the same interval.**



Proposed Solution

- **Explicitly prohibit market participants from submitting transactions in the PJM Energy Market on inefficient paths, where a more direct market path is available.**

Proposed Solution

- **Implement after the fact adjustments to settle interchange transactions at the interface price consistent with expected actual flows.**
- **Actual flows are determined for each market participant, on a parent level basis, considering all NERC Tags.**
- **Financial adjustments may be positive or negative.**

Proposed Solution

- **Require market participants scheduling in the PJM Energy Market to schedule energy on market paths that correspond to the interface pricing point they will receive in real time based on the expected power flows as identified by the GCA and LCA on the NERC Tag(s).**
- **This can be determined using the “Pricing Point Calculator.”¹**

¹ <https://exschedule.pjm.com/exschedule/pages/public/pricing-point-calculator.jsf>

Proposed Solution

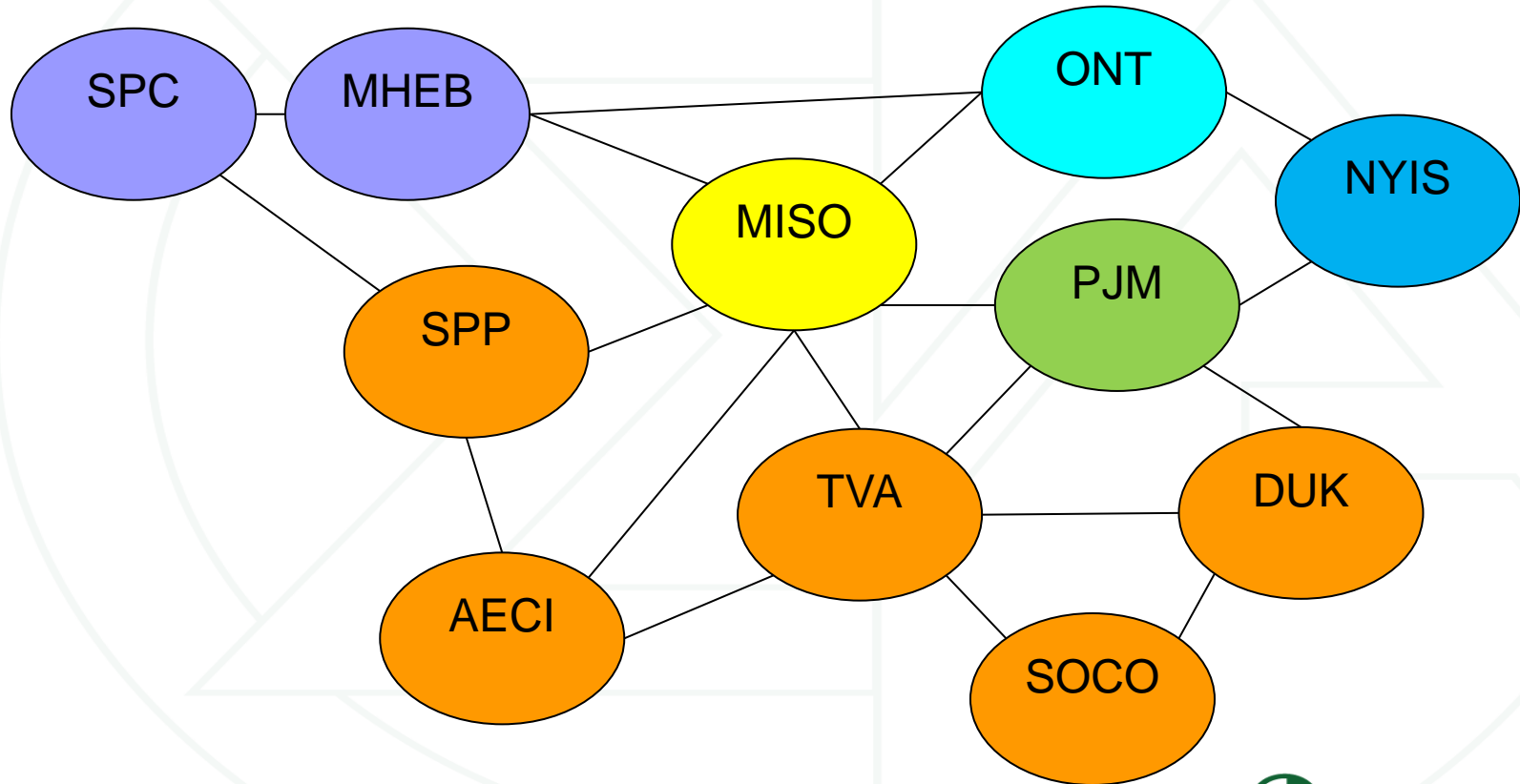
- **If the contract path does not correspond to the appropriate interface pricing point, PJM would deny the transaction on an ex ante basis.**



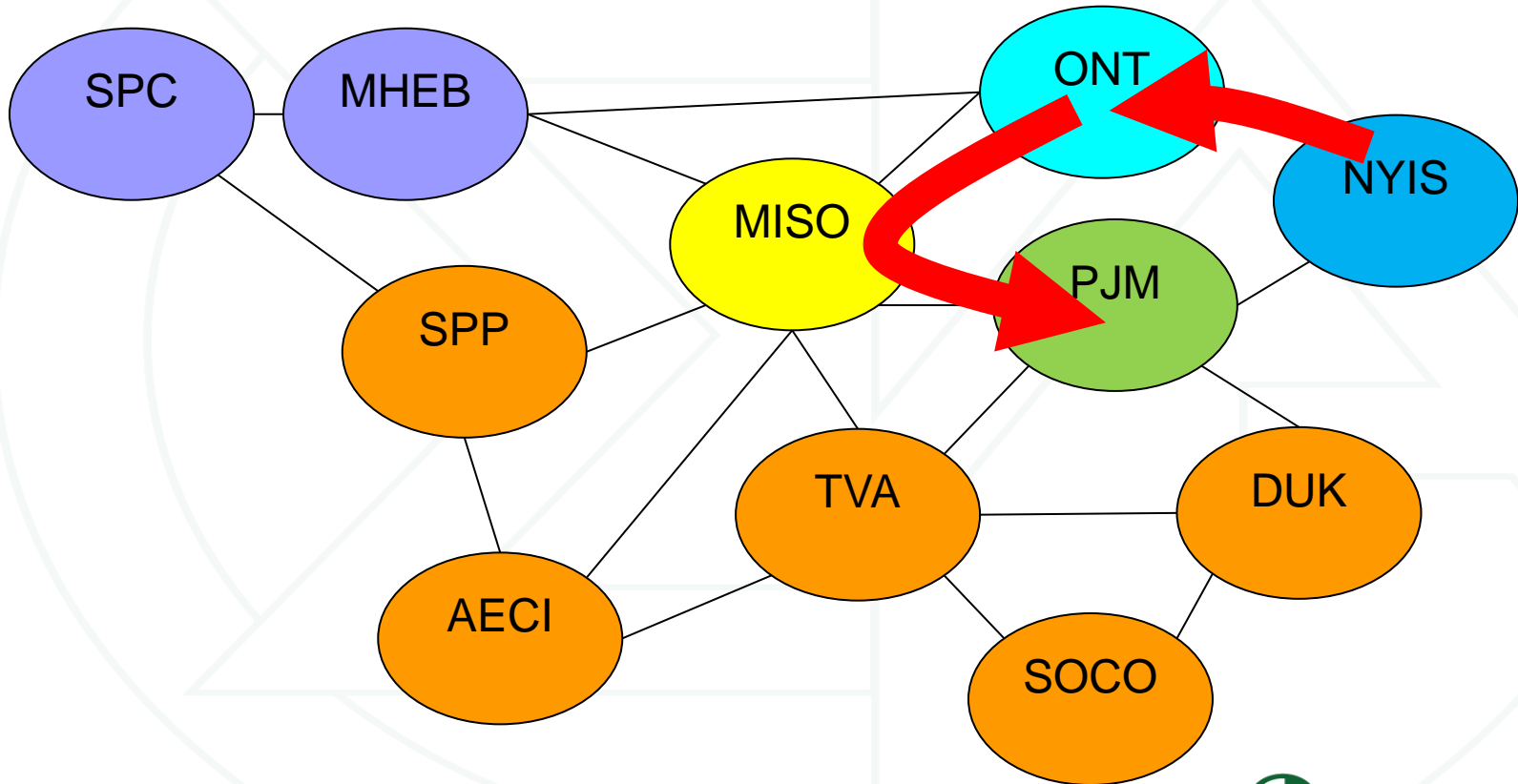
Proposed Solution

- **Scheduling inconsistent with expected actual flows could be cause for referral.**
- **A monthly report will be sent to FERC showing all schedules transacted on paths inconsistent with expected actual flows and all associated price adjustments.**

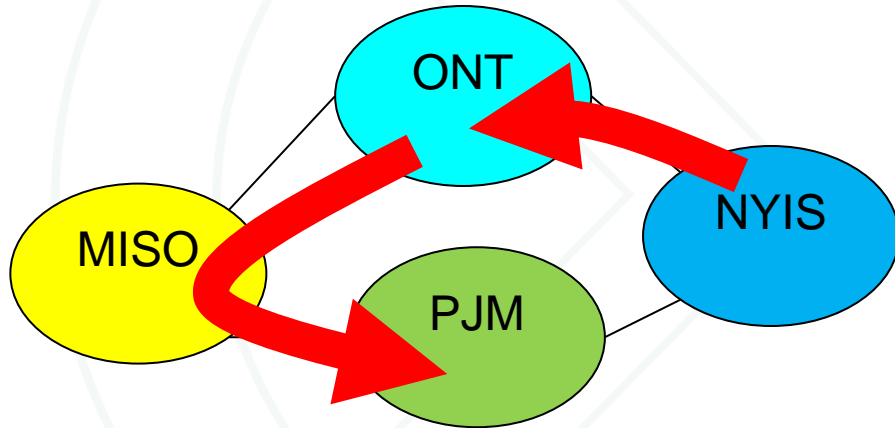
How it will work...



Example 1



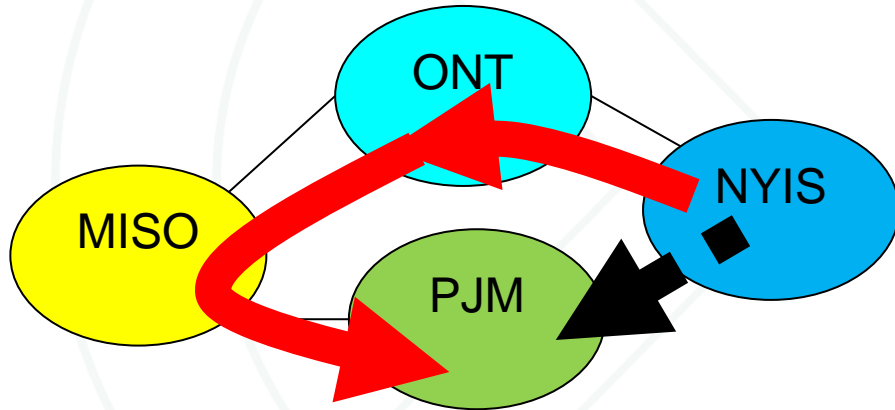
Example 1



Current Pricing

- **NYIS-ONT Transaction not in PJM Market.**
- **ONT-MISO-PJM**
 - $GCA = ONT$
 - $LCA = PJM$
 - *Priced at PJM/ONT*

Example 1



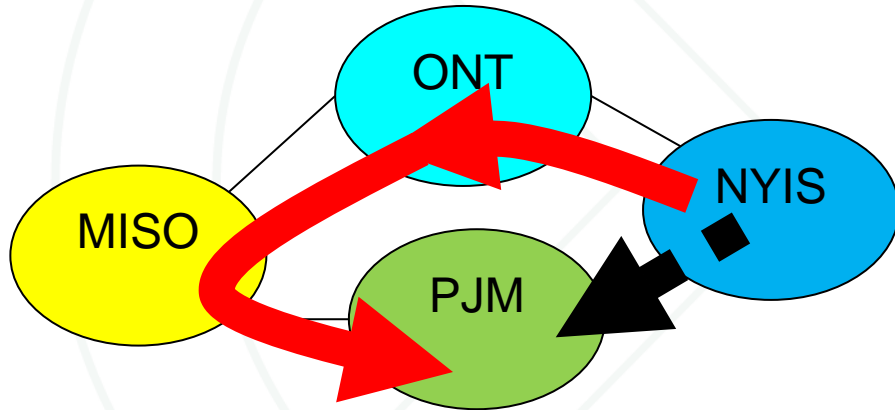
Future Pricing

- **NYIS-ONT Transaction linked with ONT-MISO-PJM transaction.**
 - $GCA = NYIS$
 - $LCA = PJM$
 - *ONT-MISO-PJM transaction adjusted to PJM/NYIS*

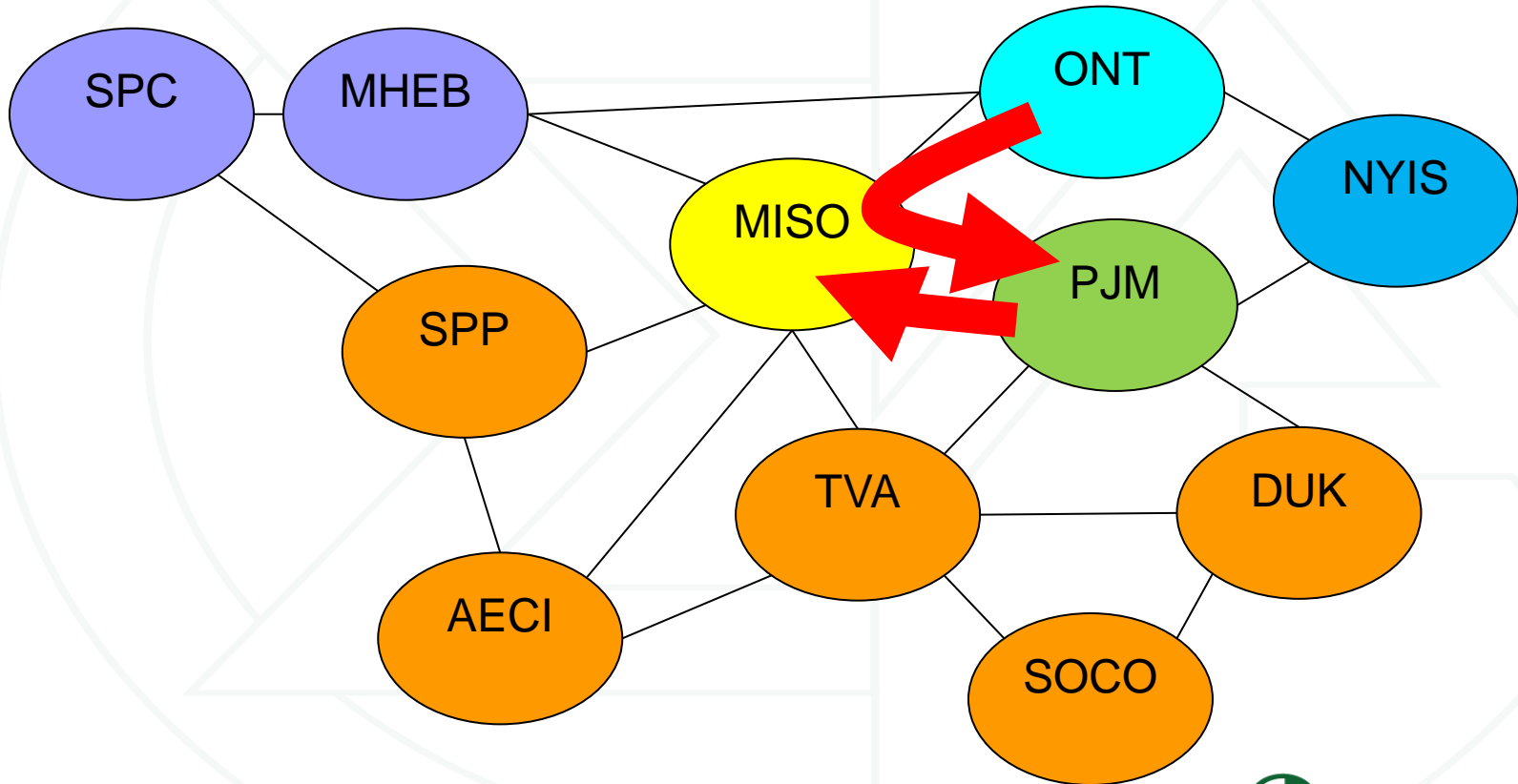
Example 1

Future Pricing

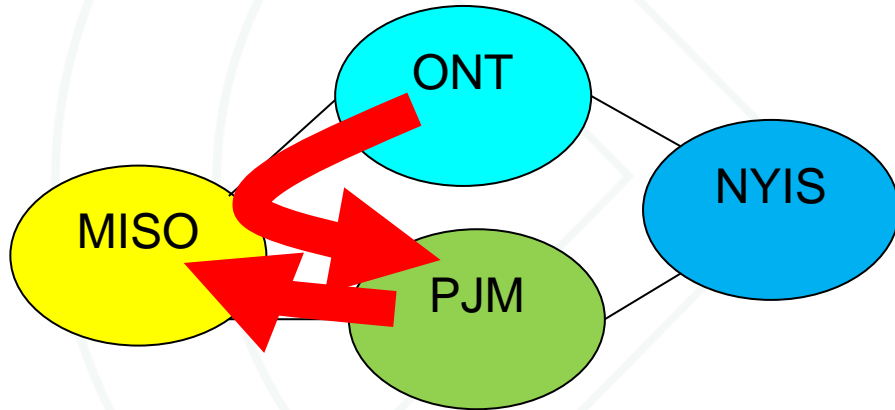
- **PJM/NYIS price reflects actual expected flow**
- **Note that settlement adjustment can benefit market participant if PJM/NYIS price is higher than PJM/ONT price**



Example 2



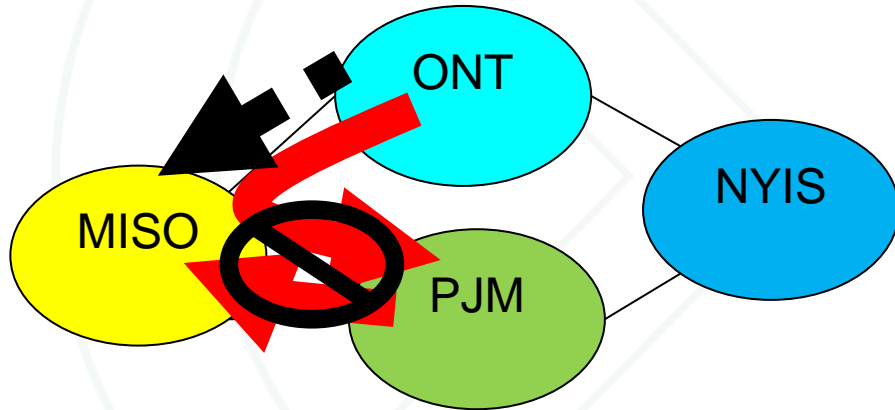
Example 2



Current Pricing

- **ONT-MISO-PJM:**
 - $GCA = ONT$
 - $LCA = PJM$
 - *Priced at PJM/ONT*
- **PJM-MISO:**
 - $GCA = PJM$
 - $LCA = MISO$
 - *Priced at PJM/MISO*

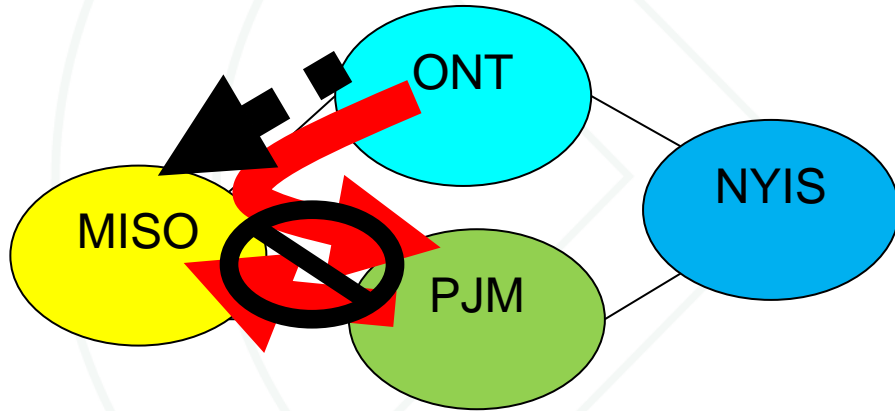
Example 2



Future Pricing

- **ONT-MISO-PJM**
Transaction linked with PJM-MISO transaction.
- **MISO-PJM** portion cancels PJM-MISO portion.
- **No PJM Settlement** for either transaction

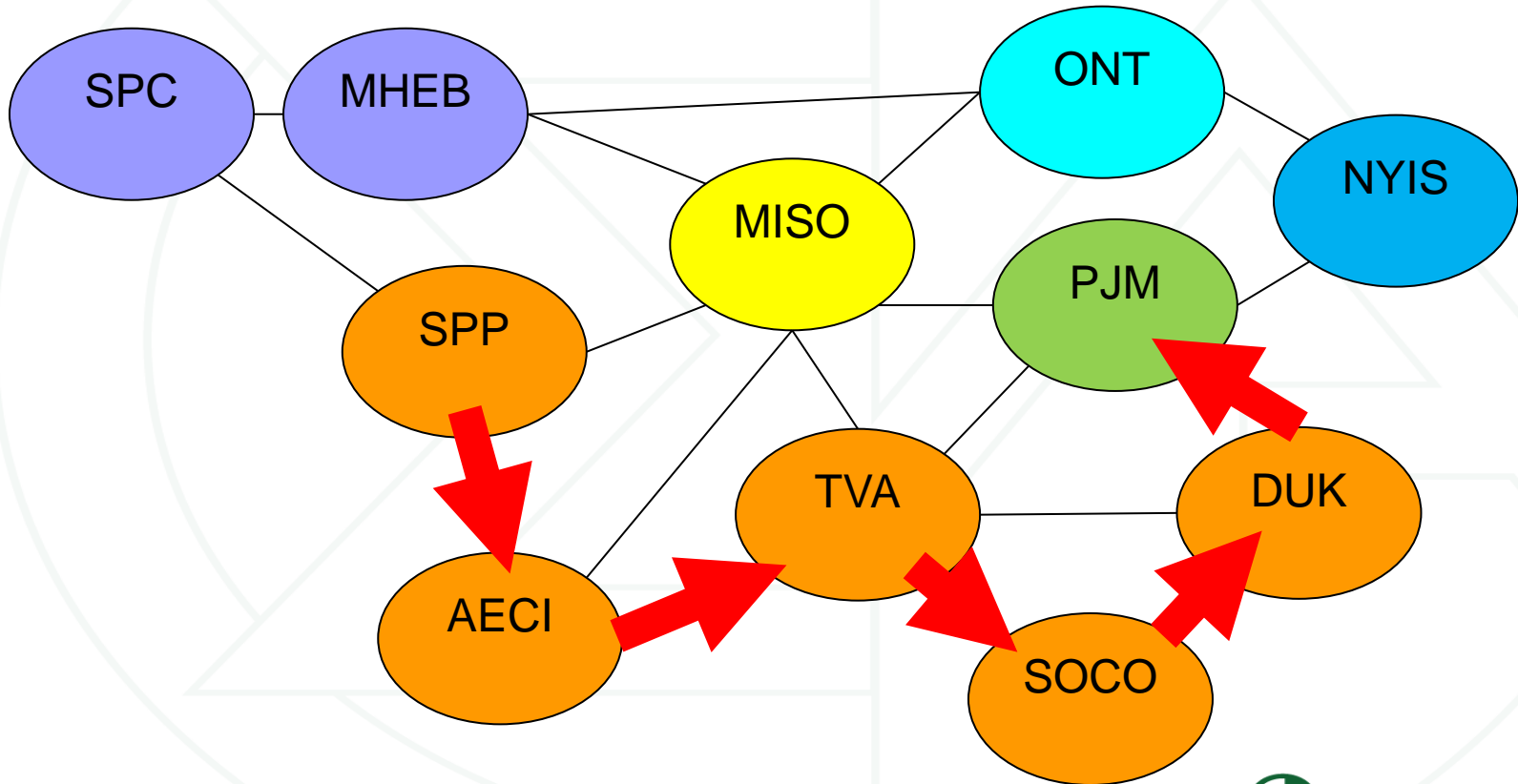
Example 2



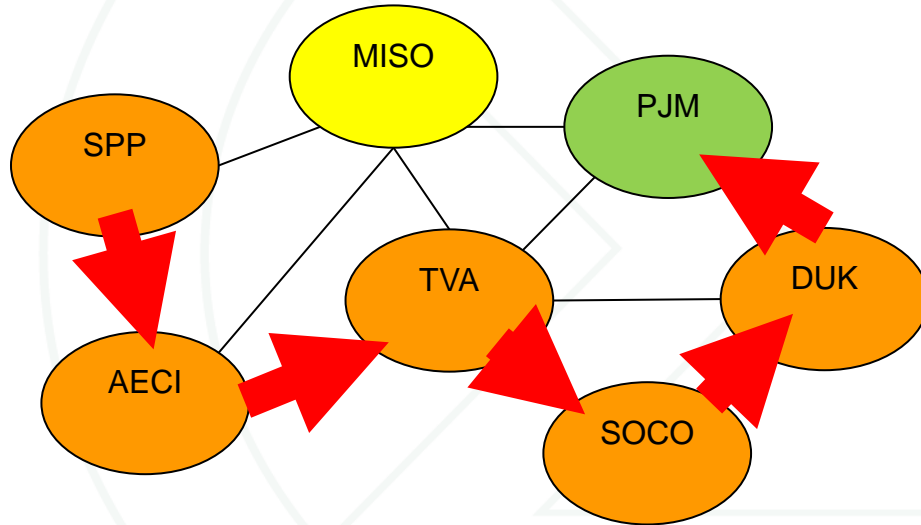
Future Pricing

- Resulting transaction is **ONT-MISO**
- Settlement reflects **no expected actual flow in PJM**

Example 3

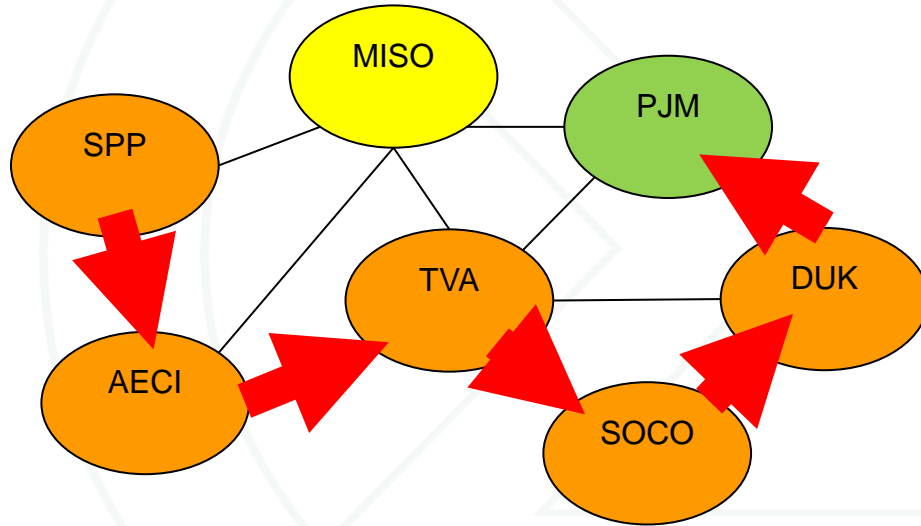


Example 3



- ## Current Pricing
- Only PJM transaction is DUK-PJM
 - $GCA = DUK$
 - $LCA = PJM$
 - *DUK-PJM transaction priced at PJM/SOUTHIMP*

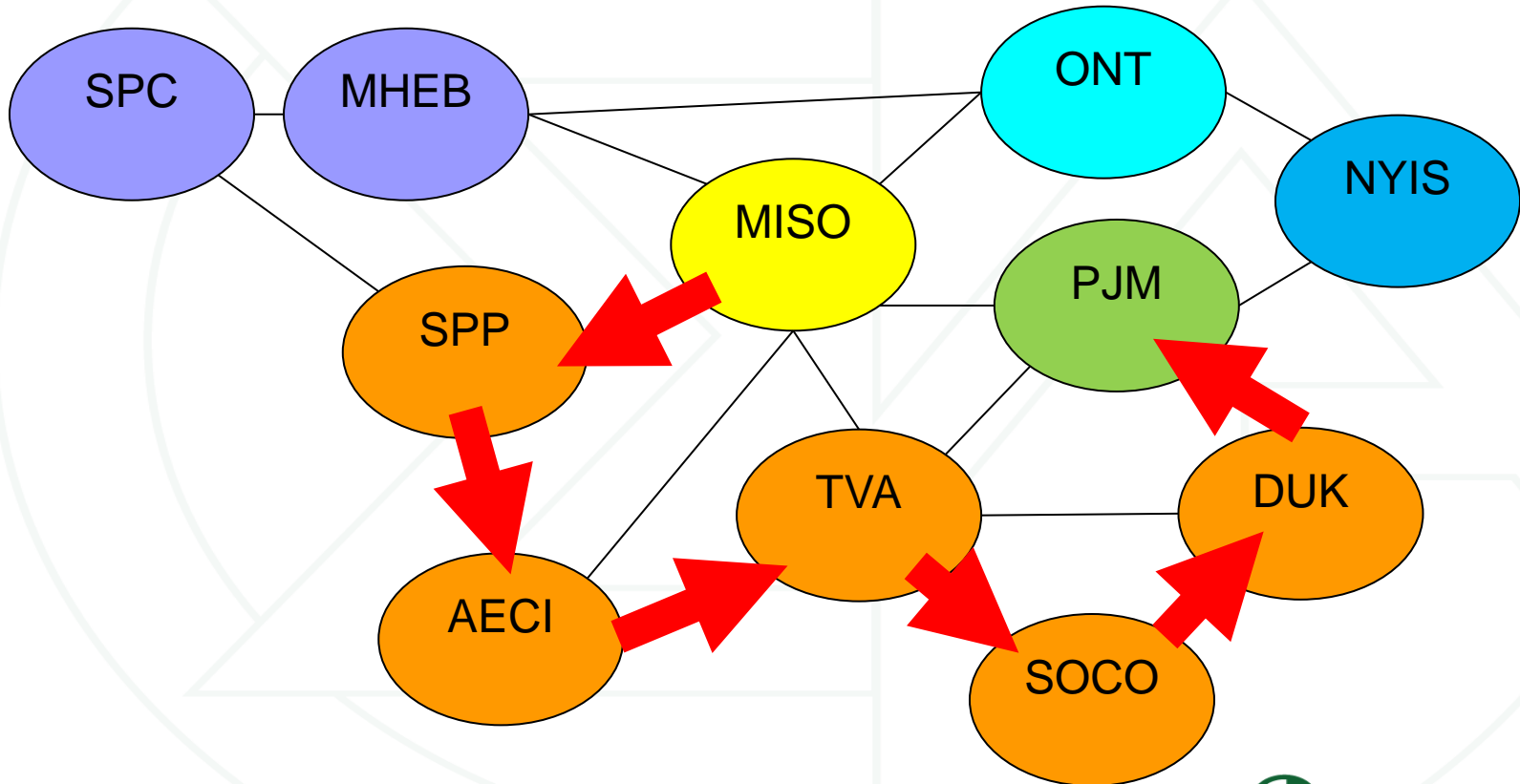
Example 3



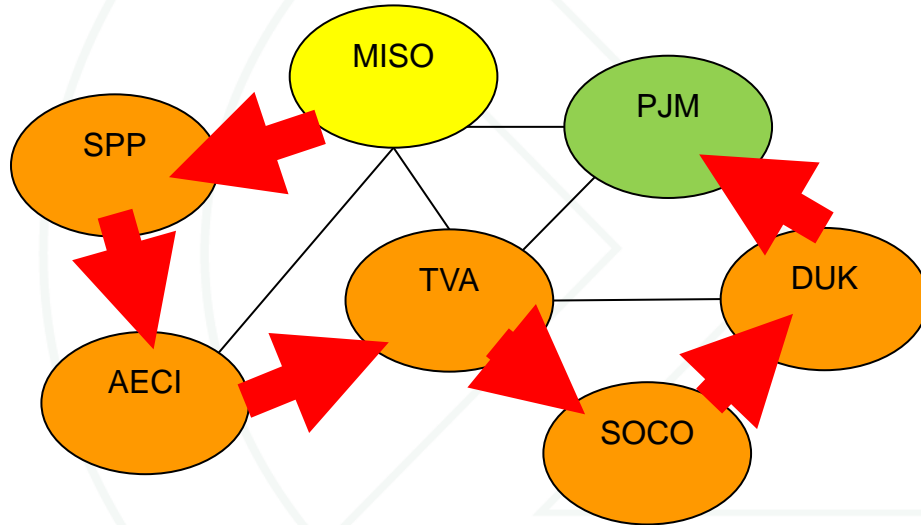
Future Pricing

- All transactions linked together
 - $GCA = SPP$
 - $LCA = PJM$
 - *DUK-PJM transaction still priced at PJM/ SOUTHIMP*
- All segments in **SOUTHIMP BA's**

Example 4

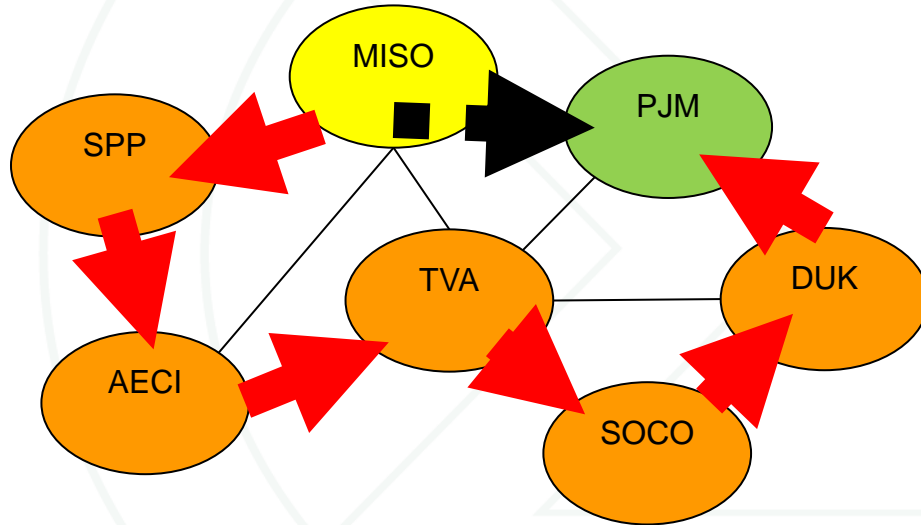


Example 4



- ## Current Pricing
- Only PJM transaction is **DUK-PJM**
 - $GCA = DUK$
 - $LCA = PJM$
 - *DUK-PJM transaction priced at PJM/SOUTHIMP*

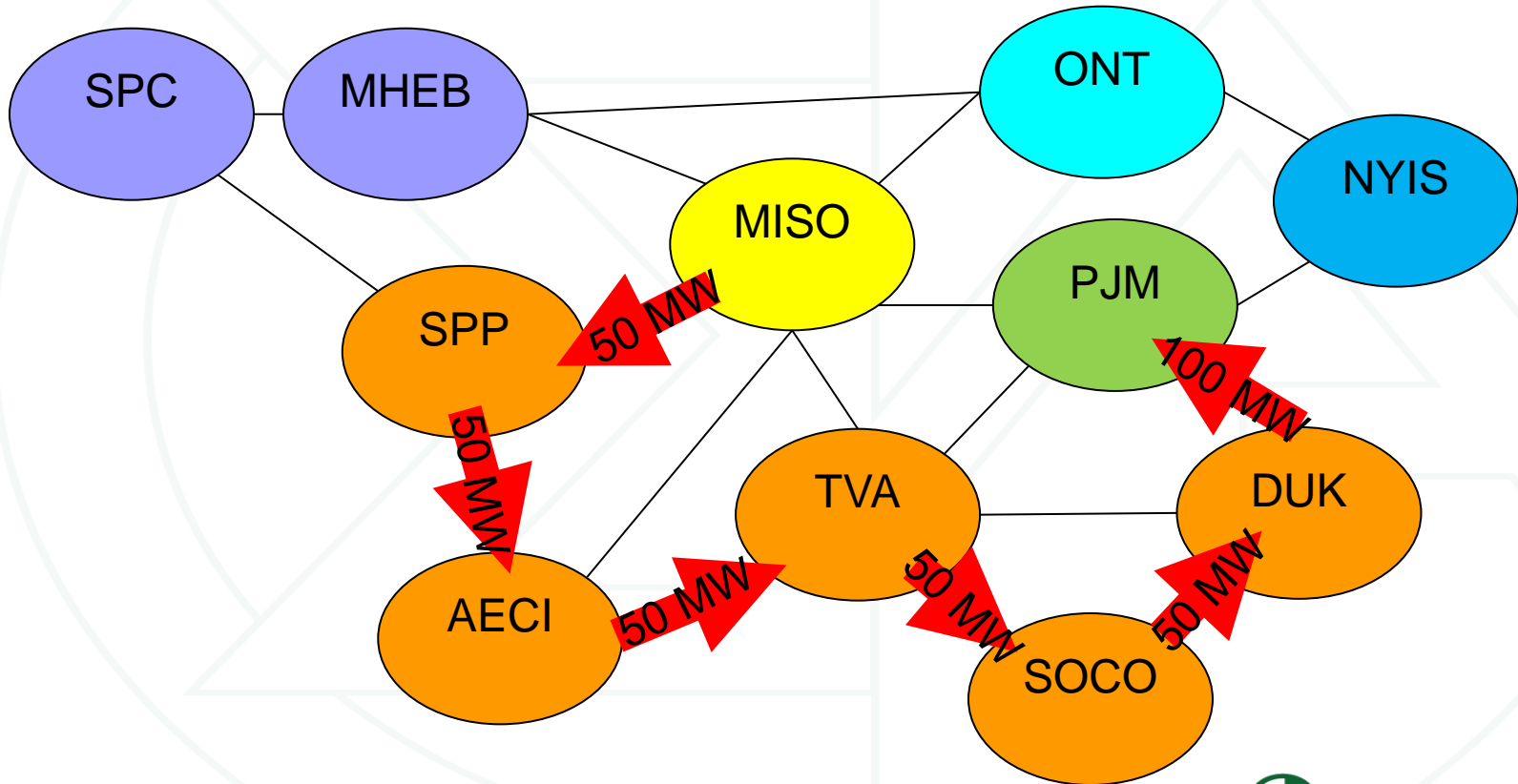
Example 4



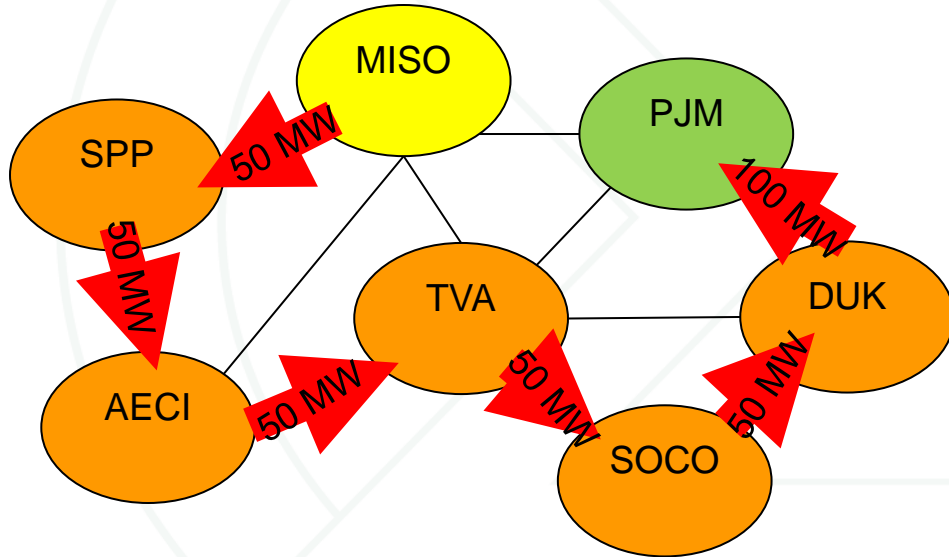
Future Pricing

- All transactions linked together
- Expected actual flow is **MISO-PJM**
 - $GCA = MISO$
 - $LCA = PJM$
 - *DUK-PJM transaction price adjusted to PJM/ MISO*

Example 5



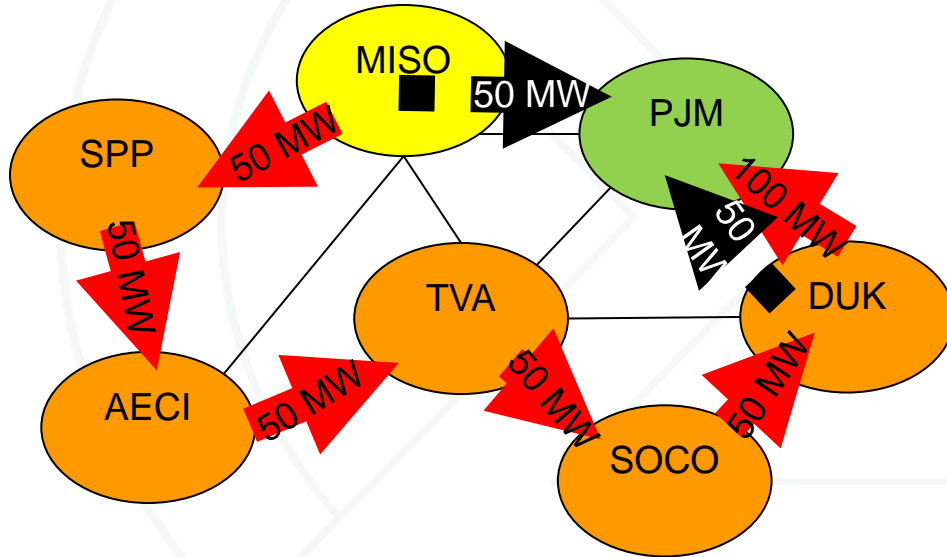
Example 5



Current Pricing

- Only PJM transaction is DUK-PJM
 - $GCA = DUK$
 - $LCA = PJM$
 - *DUK-PJM transaction priced at PJM/SOUTHIMP*

Example 5



Future Pricing

- All transactions linked together
- Expected actual flow is:
 - 50 MW DUK-PJM
 - 50 MW MISO-PJM
- **DUK-PJM**
 - *transaction split*
 - 50 MW PJM/SOUTHIMP
 - 50 MW PJM/MISO

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