

# FTR Forfeiture Rule Education

MIC

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Seth Hayik



Monitoring Analytics

# FERC FTR Forfeiture Rule Requirements

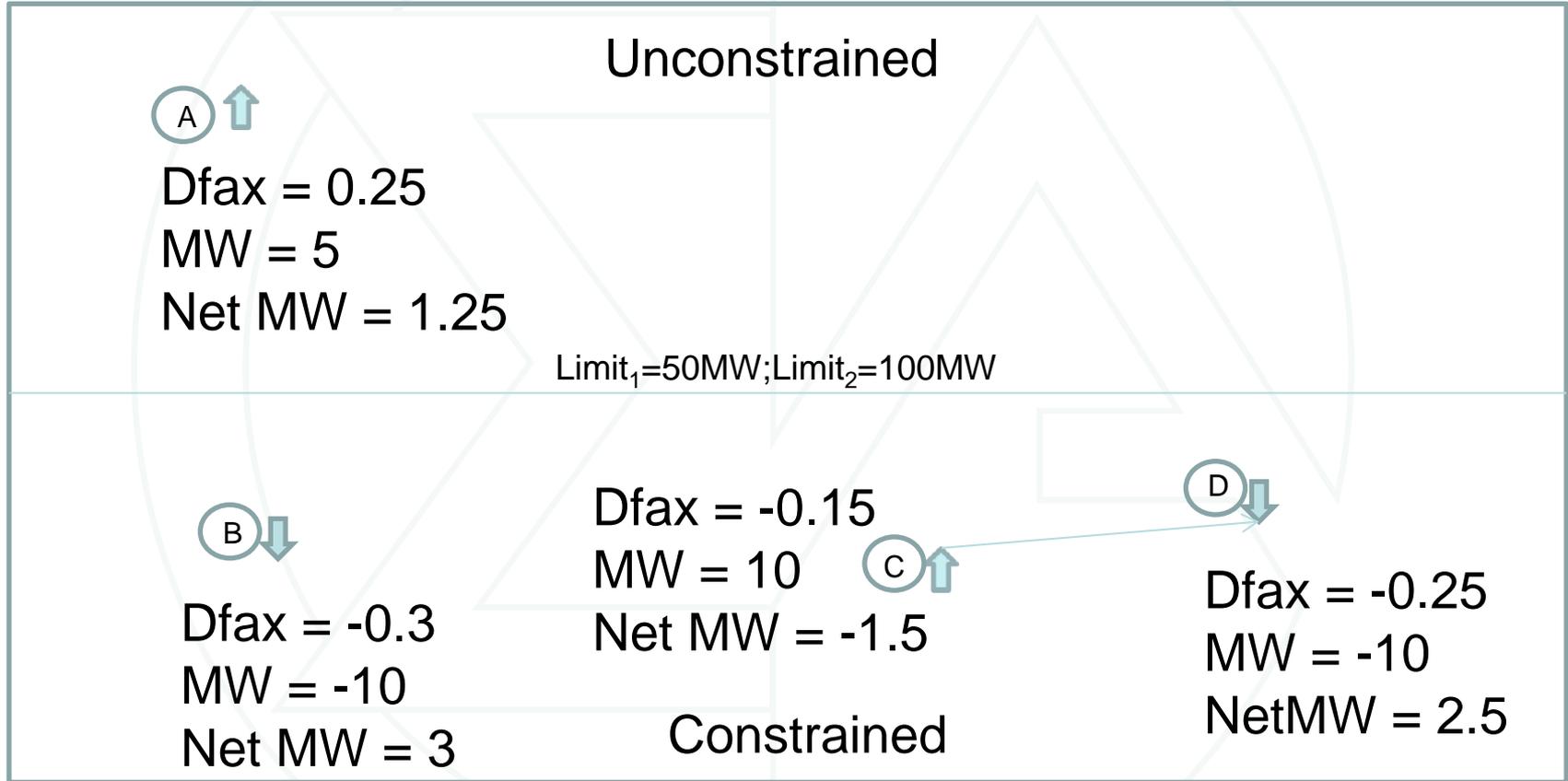
- **Must reflect participant's virtual transactions' net impacts on a constraint**
- **Must use load-weighted reference bus to calculate power flows across constraints**
- **Must use “trigger based percentage of the total binding MW limit of the constraint related to the FTR path”**
  - **Net flow must increase FTR value**
  - **Net flow must exceed a certain percentage of limit**
- **Must include virtuals at hubs, zones and interfaces**
- **Must include counter flow FTRs**



# FTR Forfeiture Outline

- 1. Identify virtuals and calculate net virtual impact by portfolio on each constraint**
  - Keep those over threshold net impact on limit
- 2. Identify candidate FTRs**
  - $\Delta LMP_{DA} > \Delta LMP_{RT}$
  - FTR TA  $\geq$  \$0.01
- 3. Pair candidate FTRs impacted by each constraint with virtuals on that constraint for an org**
  - If virtuals help value of FTR, forfeit profits

# 1. Identify Virtuals



# 1. Calculate Net Impact on Constraint

INC @ A = 1.25

DEC @ B = 3

UTC Net C-D = 1

Net Impact = 5.25MW

Constraint1 Limit = 50MW

Percent Impact =  $5.25/50 = 0.105 = 10.5\%$

Constraint2 Limit = 100MW

Percent Impact =  $5.25/100 = 0.0525 = 5.3\%$

- Positive Net MW means constraint is exacerbated, negative means constraint is alleviated
- Constraint1 and Constraint2 have identical dfax values, but different limits
- Constraint1 violates the impact threshold
- Constraint2 does not violate the impact threshold and no forfeitures will be triggered from it

## 2. Identify Candidate FTRs

FTR Path	DA > RT	Target Allocation	Hourly Cost
1	Y	(\$1.500)	(\$1.00)
2	Y	\$0.005	\$3.00
3	N	\$3.000	\$2.50
4	Y	\$1.500	\$1.00

- FTR 2 is removed due to  $TA < \$0.01$
- FTR 3 is removed due to  $DA < RT$
- Hourly cost calculated for each FTR path
- FTRs sold are removed from total FTR quantity

### 3. Pair virtual portfolio with FTRs

FTR Path	DA > RT	Target Allocation	Hourly Cost	Net MW	Constraint1 Impact	Constraint2 Impact
1	Y	(\$1.500)	(\$1.00)	5.25	10.5%	5.3%
2	Y	\$0.005	\$3.00	5.25	10.5%	5.3%
3	N	\$3.000	\$2.50	5.25	10.5%	5.3%
4	Y	\$1.500	\$1.00	5.25	10.5%	5.3%

- FTR 1: No forfeiture due to virtuals not increasing FTR value
- FTR 2: No forfeiture due to TA < 0.01
- FTR 3: No forfeiture due to DA < RT spread
- FTR 4: Forfeiture of \$0.50 profit on FTR due to constraint 1 impact threshold and virtual portfolio increasing value of FTR

# Participant Reports Available

- **Participant reports are available for FTR forfeitures upon request**
- **Provides hour, constraint, FTR source/sink and forfeiture amount**
- **Detailed reports allow participants to understand impacts of behavior and reduce forfeitures**

**Monitoring Analytics, LLC**

**2621 Van Buren Avenue**

**Suite 160**

**Eagleville, PA**

**19403**

**(610) 271-8050**

**[MA@monitoringanalytics.com](mailto:MA@monitoringanalytics.com)**

**[www.MonitoringAnalytics.com](http://www.MonitoringAnalytics.com)**

