# Performance Rating Calculation

SODRSTF

August 2, 2018

Skyler Marzewski

Monitoring Analytics

# MMU Performance Rating

- **These slides present the performance rating calculation for the MMU proposed solution option.**
- **The MMU performance rating calculation uses the PLC as the target during triggered hours.**

Monitoring Analytics

# MMU Performance Rating

- **Rolling average of performance rating for the three most recent years**

- **Hourly performance cannot exceed 100 percent**

- **Hourly shortfall is the maximum of the metered load minus the Target PLC, or 0**

  - $$Shortfall_{hour} = Max((Metered\ Load - Target\ PLC), 0)$$

- **Performance rating is one minus the average shortfall divided by the reduction in the forecast requirement**

  - $$Performance\ Rating = 1 - \frac{Avg\ Shortfall}{Forecast\ Reduction}$$
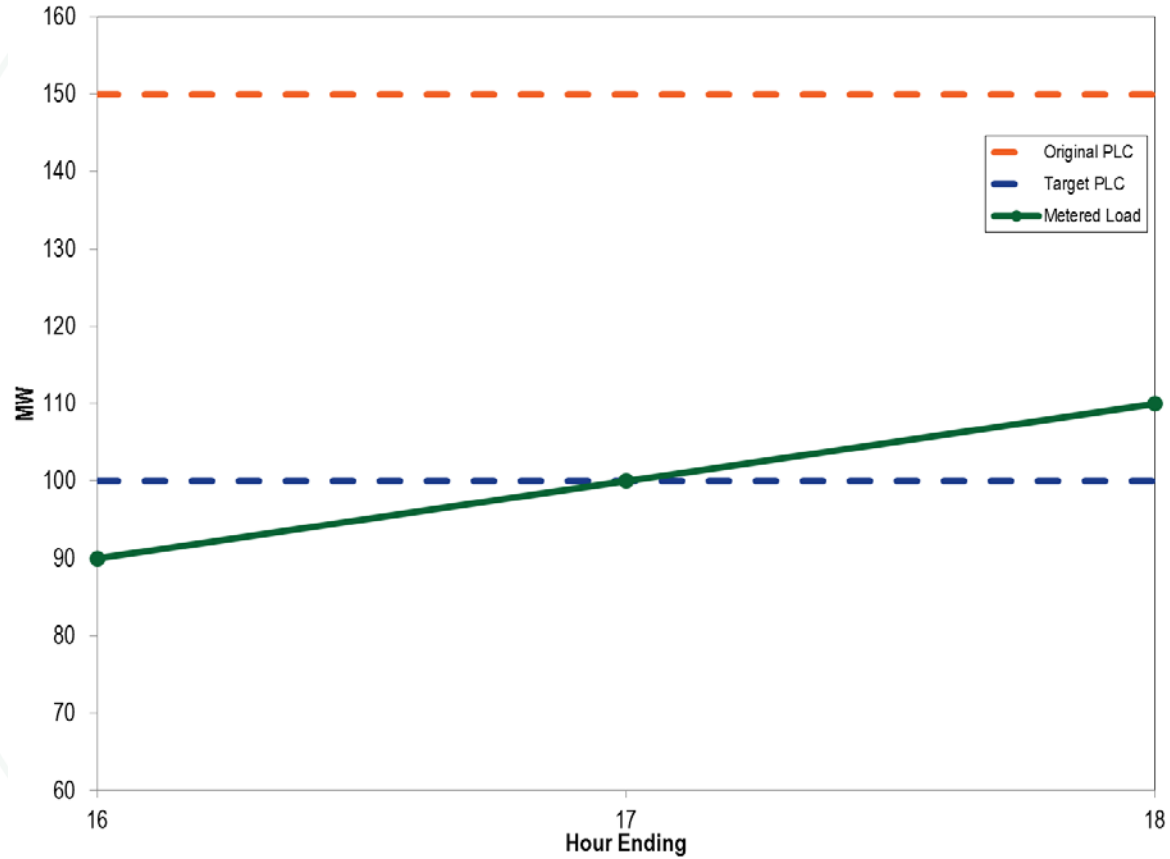
Monitoring Analytics

# Example

- **Original PLC requirement of 150 MW**
- **Program receives a 50 MW forecast reduction**
- **Target PLC is the original PLC minus the forecast reduction**
  - $Target\ PLC = Original\ PLC - Forecast\ Reduction$
  - $Target\ PLC = 150\ MW - 50\ MW = 100\ MW$

Monitoring Analytics

# Example day with trigger

Monitoring Analytics

# Trigger Hours
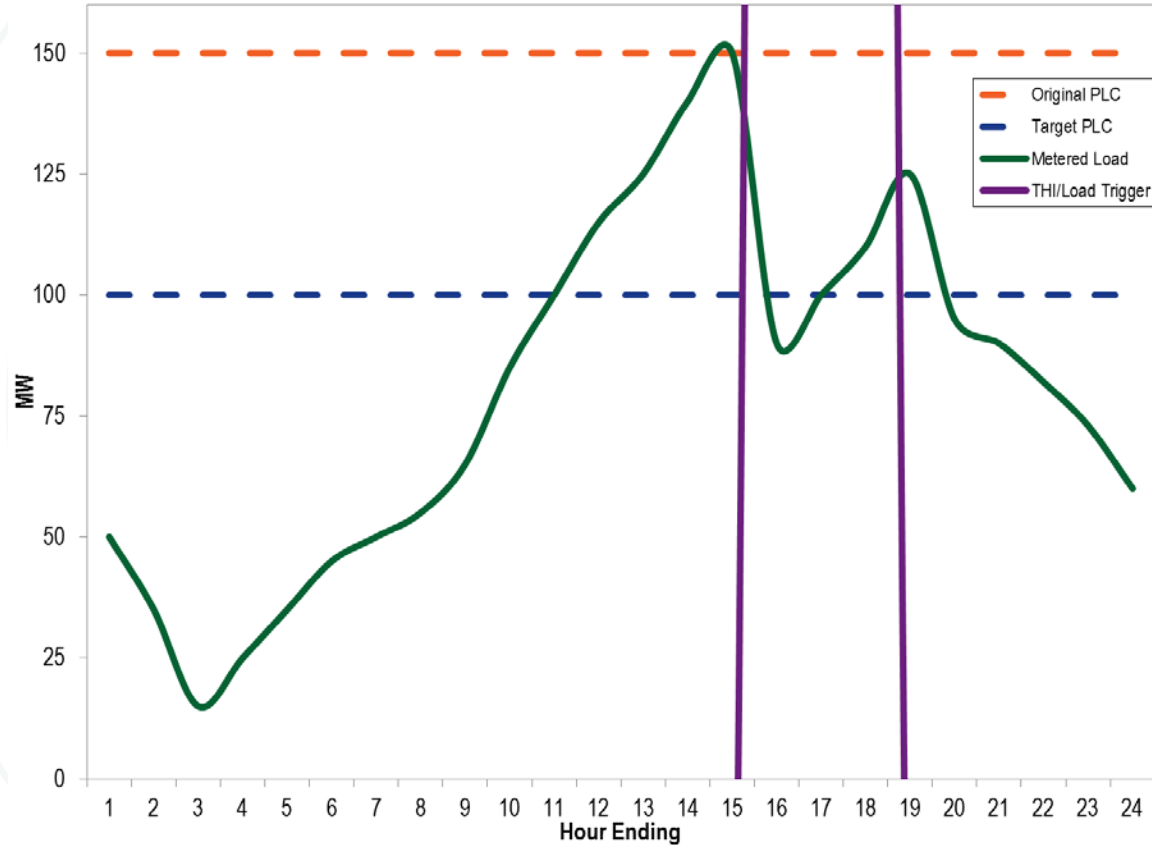
Monitoring Analytics

# Shortfall Calculation

- $Shortfall_{hour} = Max((Metered\ Load - Target\ PLC), 0)$

- $Shortfall_{16} = Max((90 - 100), 0) = Max(-10, 0) = 0\ MW$

- $Shortfall_{17} = Max((100 - 100), 0) = Max(0, 0) = 0\ MW$

- $Shortfall_{18} = Max((110 - 100), 0) = Max(10, 0) = 10\ MW$

Monitoring Analytics

# Performance Calculation

- $Performance\ Rating = 1 - \dfrac{Avg\ Shortfall}{Forecast\ Reduction}$

- $Avg\ Shortfall = \dfrac{0+0+10}{3} = 3.33\ MW$

- $= 1 - \dfrac{3.33}{50} = 1 - 0.0667 = 93.33\%$

Monitoring Analytics

**Monitoring Analytics, LLC**

**2621 Van Buren Avenue**

**Suite 160**

**Eagleville, PA**

**19403**

**(610) 271-8050**

**MA@monitoringanalytics.com**

**www.MonitoringAnalytics.com**

Monitoring Analytics