



ArcelorMittal

ArcelorMittal Cleveland  
DOE Better Plant Summit

July 10, 2019





ArcelorMittal

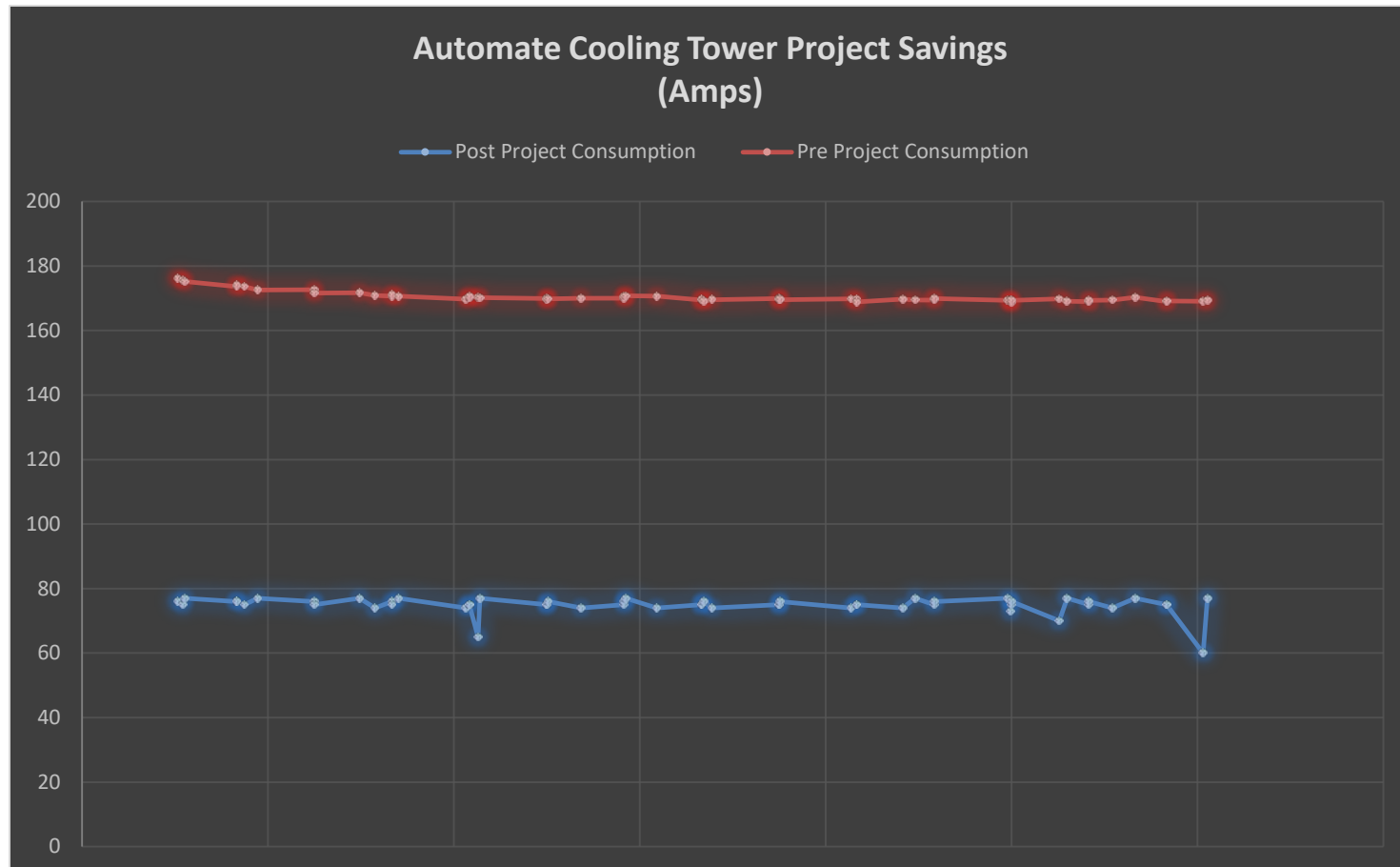
# Cooling Tower Automation





# Cooling Tower Automation

ArcelorMittal

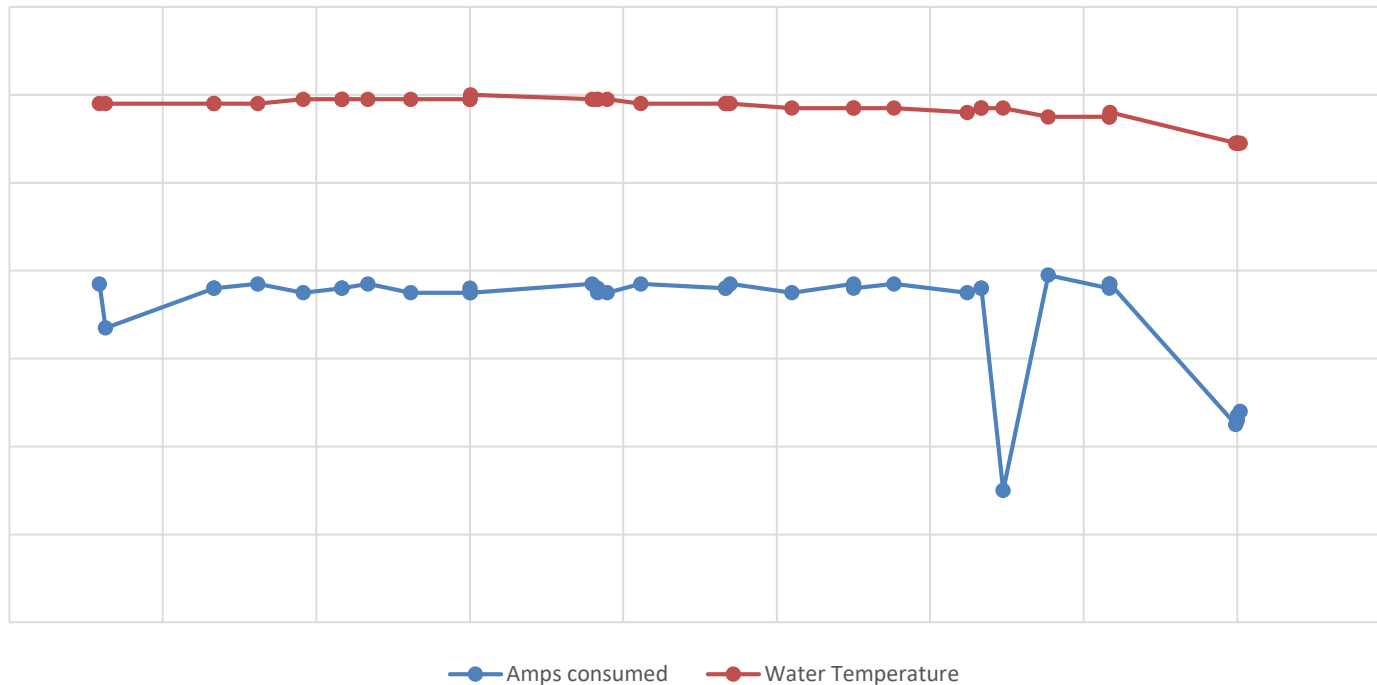




# Cooling Tower Automation

ArcelorMittal

Amps Vs Differential Temperature



# Cooling Tower Automation



ArcelorMittal

- **Automate Cooling Tower Fans at SPWTP, SMWTP and 5&6 WTP**
  - Install VFD on fans (x12) and control the fan speed based on water temperature
    - 5 Fans – 75 HP, 4 Fans – 100 HP and 3 Fans – 150 HP
  - Currently, the fans are controlled by a high and low switch
  - All fans are running during winter which increases reliability risks
  - This would reduce maintenance and energy costs of running all fans throughout the year
  - Cost of Project: \$330,000
  - Rebate Received : \$165,000
  - Yearly MWh Savings: 3,422 MWh
  - Yearly Cost Savings: \$171,116
  - ***DOE Better Project Award Winner***