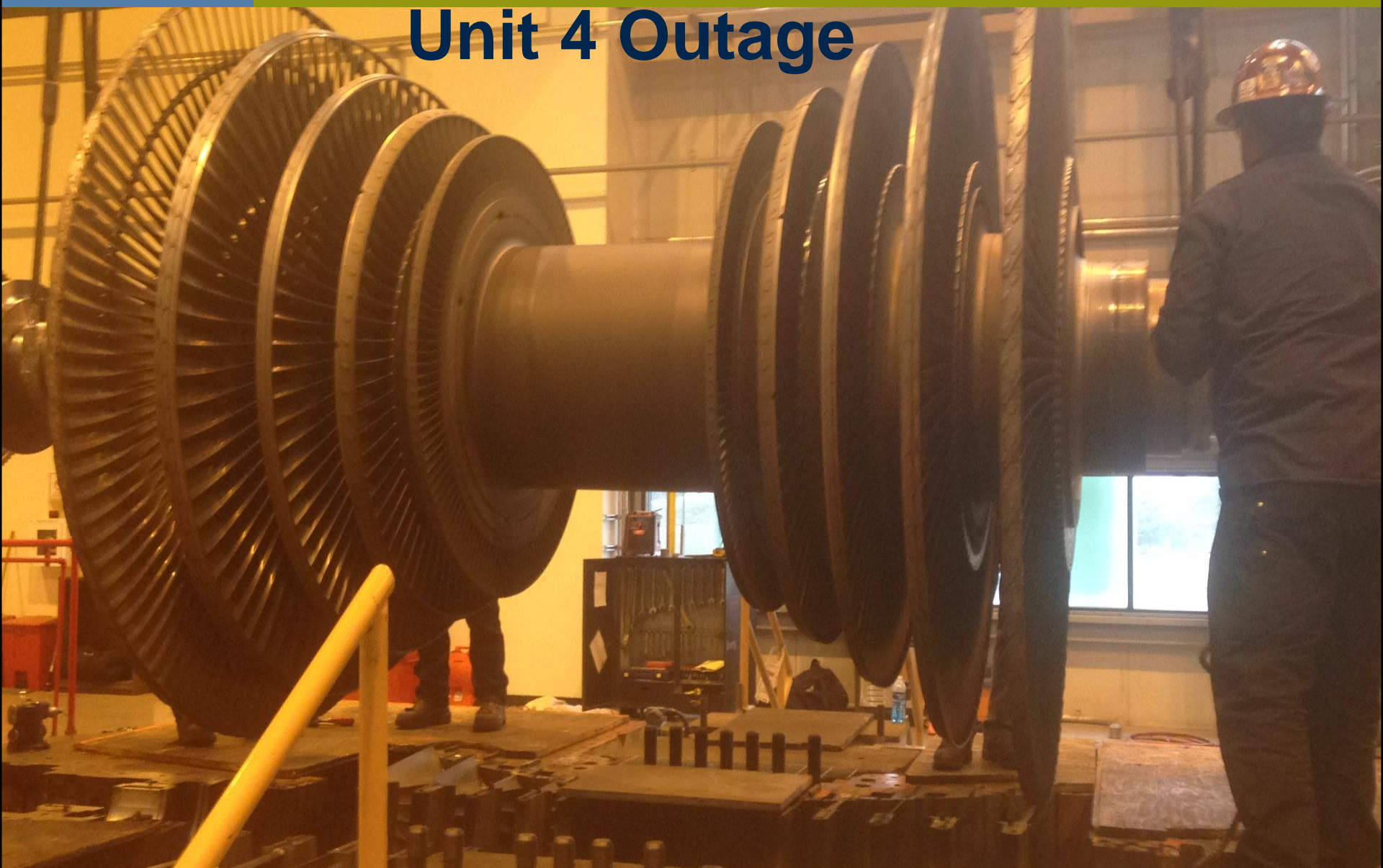


# Unit 4 Outage



## Unit 4 Objectives

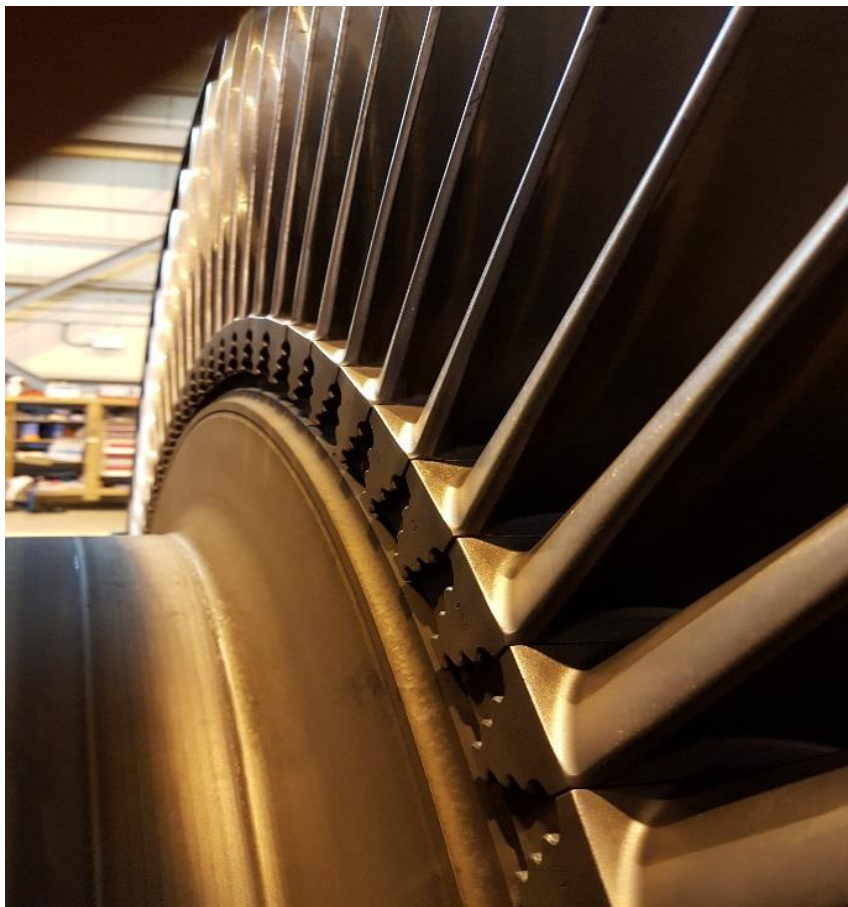
- Pull apart Unit 4 Turbine and determine the source of the high vibration
- Unit 4 Main Steam Pipeline
- Clean the Stretford System
- Unit 4 Vacuum Pump Maint
- Replace the Condensate system valves





## Unit 4 Turbine

The Case was pulled and it was discovered that the .125" wire that holds the Z Lock Flex Blades had come out



## The Old 'Spare' Rotor was installed Unit 4 back on Line Thursday (3/30), 1 day Ahead of Schedule



April 3, 2017



# •Unit 4 Main Steam Pipeline

•Proposed Re-Route

•Existing Unit #3 & #4 Pipelines

Google earth

292 ft

## Unit 4 Main Steam pipeline Financial assumptions

- Project Life - 15 years
- Project Cost - \$950,000
- Benefit – 1 MW Gain Declining @ 2% per year
- 10 Day Outage required in FY 2017 to do pipeline tie-ins
  - Loss of 30 MW during this period
- 6 Week Outage Every 6 Years
- 97% Unit Availability



## Install New Main Steam Line to Turbine



April 3, 2017

**Tie in 48" line to Plant, completed in 10 days,  
Analysis of Gain will be done soon.**





## Annual Stretford Cleaning & Additional Maintenance

- Cleaning of all the tanks, replacing the Glitches and cleaning the Dip Tube in the Stretford System
- Replaced the 16" Condensate System Valves in the Turbine Building
- Replaced the Vacuum Pump Bearings
- Replace leaking GRS Steam Valves





Questions?



April 3, 2017