

# ICB® RO Case Study

## BACKGROUND

**Application:** Power Generation

**Location:** CA, USA

**Site:** 560 MW Combined Cycle Power Plant  
with 2  
Siemens SGT6-5000F Combustion Turbines  
and 2 Siemens SST-800 Steam Turbines

## PROBLEM

A coalescer was struggling to keep up with the amount of water making its way into one of the Plant's steam turbine lube oil systems. Oil analysis revealed that the lubricant's water separation abilities (demulsibility) had degraded significantly over time. As a result, the contaminant moisture in this system was present in an emulsified form which cannot be readily separated from the oil, significantly increasing the turbine's risk of failure.

## SOLUTION

An SVR® Lubricant Conditioning skid employing ICB® RO filters was installed on the Steam Turbine whose oil separated poorly from water.

## RESULTS

The installed SVR Skid/ICB RO filters effectively removed varnish and other soluble contaminants from the steam turbine oil. These breakdown products increase a fluid's tendency to form harmful emulsions. With them gone, the amount of emulsion that the oil produced fell by 95%, allowing the unit's coalescer to do its job. Free from water, the Plant's steam turbine has operated reliably ever since.



# DEMULSIBILITY

