NAES

TECHNICALLY SPEAKING

Vol. 4.4 - November 2017

What Your Fuel Supplier Doesn't Want You to Know

At NAES, we strive to treat our plant owners' money as if it were our own. Since the fuel line item plays a major role in slimming down the owner's wallet every year, we pay particular attention to it. While you and your plant team may have only minimal input into the unit price ($/mmBTU) your owner pays for gas or coal, you can exert considerable impact on the efficiency (heat rate) at which the fuel is converted into megawatt hours.

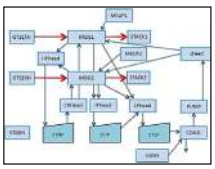
We as plant operators often tend to focus on major projects that we ought to recommend to the owner to improve performance. In the process, we overlook those less obvious areas such as thermal performance, where uncovering a few minor issues can go a long way toward improving annual returns. A ½ percent improvement in heat rate can yield an annual fuel savings of $250,000 at a typical NAES-operated combined cycle plant.

But there's more than just fuel savings. Improving your heat rate usually increases your plant's capacity; boosts your availability; reduces your emissions; and lowers your chemical, water and other variable costs. So let's commit to giving our owners a bigger slice of the pie by taking a little bit from their fuel supplier's revenues. Your client will love you for it.

In this issue of *Technically Speaking*, our engineering team gives you some ideas on how to get started with heat rate improvement and offers insight into other technical initiatives as well. Click on this **Go-To Sheet** for a current list of our experts, their skill sets and contact information. If you'd like to benchmark performance improvement projects your industry peers have done, or find where those missing thermal performance dollars are hidden – these are things we can help with.

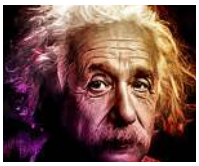
— Henry Scheck, General Manager, Engineering & Technical Services, NAES Corporation

---



Remote Thermal Monitoring – Or, How to Mitigate Degradation Early On: Thermal performance monitoring is a powerful tool for monitoring plant performance on a continuous basis. Sanjeev Jolly explains how to get your stakeholders' buy-in, set up thermal modeling, measure degradation and monitor performance remotely using one of several secure options.

How Good is Your High-Energy Piping Program? If you don't manage your high-energy piping effectively and make it an integral part of your overall inspection regimen, according to Brian Beatty, you're putting your people and plant at risk of a possible catastrophic failure.



Expanding the Objectives of Our Root Cause Analysis Program: There's more to the RCA process than identifying the underlying causes of an incident and taking measures to prevent recurrences. Dave Righthouse outlines five ways in which you can increase the overall impact of your RCA investigations by broadening your objectives and communicating what you've learned to others.

Maximo Barcoding for Beginners: Barcode scanning promises many benefits. You can make it a reality at your plant – but only with a lot of work up front as well as ongoing maintenance of your inventory program. Megan Matthews walks you through the joys and pitfalls of this technology.

Don't Neglect Your Protection Systems: We all understand the basic purpose of protective relays, which is to trip a generator or other component, but they do a lot more for us than just that. Gregg Massar talks about why they fail and what you can do to make sure they don't.