Response to ambient temperature article

By TMI Staff & Contributors  ·  On August 24, 2019

I very much liked the article, “In what all ways ambient temperature affects performance of gas turbines,” in the subject issue of your publication. It is very thorough, except I believe it would have been better and very helpful for the readers to know that many commercially-proven technologies are available to prevent the detrimental effect of high ambient temperature on gas turbine performance.

A number of commercially-proven turbine inlet cooling (TIC) technologies, including wetted-media, fogging, wet compression, chilled water (without and with thermal energy storage), etc. are available and in common usage. Since the demand for electric power and market value of electric energy are generally high when the ambient temperature is high due to the increased air conditioning load, TIC can be very cost-effective.

No one TIC technology is best for all applications. Each technology has its pros and cons. Selection of the most economically-attractive TIC technology depends on many factors including, value of the additional electric energy produced, weather data for the plant location, number of hours TIC will be used per year, gas turbine design capacity, and fuel cost.

A good resource for information on all TIC technologies is the website (www.turbineinletcooling.org) of the Turbine Inlet Cooling Association (TICA), which is a non-profit trade association that promotes the development and exchange of knowledge related to TIC. The TICA Website is the one-stop source of information about TIC. Its website offers the information and resources, including:

- Archived webinars and bibliography for all TIC technologies
- Database of over 400 TIC installations (The actual number of power plants using TIC is several thousands.)
- TIC Performance Calculator
- Access to experts for all TIC technologies
- Online Forum for Gas Turbine Users

While most the information is open to the public, some of the information, such as the TIC Calculator and Installation Database, has two versions. The detailed versions are available only to the TICA members. TICA has 75 members that include 50 gas turbine user members. Complimentary membership for at least one year is available to all gas turbine users.

TICA invites gas turbine users and operators, and others interested in gas turbine cooling, to join the TICA group on LinkedIn [http://www.linkedin.com/groups/Turbine-inlet-Cooling-Association-46663507trk=my_grp_owr], and start discussions to get answers to questions about turbine inlet cooling.

Dharam (Don) Punwani
Executive Director
Turbine Inlet Cooling Association
exedir@turbineinletcooling.org
630-357-3960

TMI STAFF & CONTRIBUTORS
Turbomachinery Blog features postings from experts in all areas of turbomachinery, such as: gas turbines, machine diagnostics, materials, repairs, and aftermarket parts, and encourages users to participate, with reader engagement and interaction as its primary purpose.

YOU MIGHT ALSO LIKE

GAS TURBINES
String test facility blossoms in Missouri

GAS TURBINES
Upgrade completed on GE gas turbines at African power plant

GAS TURBINES
Modernization to boost Munich district heating plant efficiency, output