

# RESOURCE GUIDE

September 14, 2016

This Turbine Inlet Cooling (TIC) Buyer's Guide has been developed and is maintained by, and for, the membership of TICA.

Each member company in good standing in TICA is entitled to two types of inclusion in the Guide, at no charge:

1. Inclusion in the Product and Service Matrix, with single or multiple entries, and
2. A detailed entry in the Corporate Profile section of the Guide, including company name and address, contact name and title, telephone, facsimile, e-mail, and website, plus a narrative description (up to 100 words) of the company's TIC experience, capabilities, products, and/or services.

Inclusion in the Guide is not available to non-member companies.

Electronic versions of the Guide may incorporate links to member company e-mail and website addresses, probably for free for the first link, and probably with a fee for additional links.

Product and Service

Categories: TIC

Facilities

Develop / Finance / Own  
Operate and Maintain

Gas / Combustion Turbines

TIC System Designers and/or

Installers Consulting /  
Design Engineering Design  
/ Build TIC Systems  
Contractors / Installers

Suppliers of TIC Equipment and/or Subsystems

Chillers, individual equipment  
Chillers, packaged systems  
Evaporative Cooling and  
Fogging Indirect Evaporative  
Cooling  
Wet Compression  
Heat Rejection Equipment  
Inlet Air Coils  
Thermal Energy Storage  
Other Products and Services

	TIC Facilities		Gas / Combustion Turbines	TIC System Design / Installation			Suppliers of TIC Equipment and/or Subsystems								Other Products & Services
TICA Member Companies	Develop / Finance / Own	Operate and Maintain		Consulting / Design / Engineering	Design / Build TIC Systems	Contractor / Installer	Chillers / Individual Equipment	Chillers / Packaged Systems	Evaporative Cooling & Fogging	Indirect Evaporative Cooling	Wet Compression	Heat Rejection Equipment	Inlet Air Coils	Thermal Energy Storage	
<a href="#">Avalon Consulting, Inc.</a>				X											
<a href="#">Baltimore Aircoil Company</a>											X		X		
<a href="#">Caldwell Energy Company</a>	X	X		X	X	X	X	X		X	X	X	X		
<a href="#">CB&amp;I</a>													X		
<a href="#">The Cool Solutions Co.</a>				X									X	X	
<a href="#">Danfoss H-P Systems</a>														X	
<a href="#">DN Tanks</a>													X	X	
<a href="#">Distributed Storage Tech</a>														X	
<a href="#">GEA Refrigeration North America</a>							X	X			X		X		
<a href="#">Johnson Controls, Inc.</a>	X	X		X	X	X		X				X	X	X	
	TIC Facilities		Gas / Combustion Turbines	TIC System Design / Installation			Suppliers of TIC Equipment and/or Subsystems								Other Products & Services
TICA Member Companies	Develop / Finance / Own	Operate and Maintain		Consulting / Design / Engineering	Design / Build TIC Systems	Contractor / Installer	Chillers / Individual Equipment	Chillers / Packaged Systems	Evaporative Cooling & Fogging	Indirect Evaporative Cooling	Wet Compression	Heat Reject Equipment	Inlet Air Coils	Thermal Energy Storage	
<a href="#">Munters Corp.</a>				X	X	X			X	X				X	
<a href="#">Parker Hannifin Corporation</a>														X	
<a href="#">Pasteris Energy Inc.</a>	X			X	X										
<a href="#">Shuangliang Eco-Energy Systems</a>					X		X	X						X	
<a href="#">SPX Cooling Technologies, Inc.</a>											X			X	
<a href="#">Stellar Energy Systems</a>	X	X		X	X	X		X			X	X	X	X	
<a href="#">TAS Energy, Inc.</a>	X	X		X	X	X		X				X	X	X	

# TURBINE INLET COOLING ASSOCIATION turbineinletcooling.org

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Company Name: **Avalon Consulting, Inc.** (*TICA Founding Member*)  
Address: 427 Prairie Knoll Drive  
City, State, Code, Country: Naperville, Illinois 60565 U.S.A.

Contact Name, Title: Dharam (Don) Punwani, President  
Telephone: 1-630-983-0883  
Facsimile: 1-630-357-1004  
E-mail: [dpunwani@avalonconsulting.com](mailto:dpunwani@avalonconsulting.com)  
Website: [www.avalonconsulting.com](http://www.avalonconsulting.com)

Corporate TIC Capabilities, Products, or Services: Avalon Consulting, Inc. provides consulting services for turbine inlet cooling (TIC) systems. The scope of our services includes technical and economic analyses of alternative technologies for TIC, and optimization of TIC systems for specific power plants and markets. Our analyses cover all TIC technologies: evaporative cooling (wetted media and fogging), electric and absorption chillers with or without thermal energy storage (TES), and hybrid systems. We provide objective analyses for power plant owners, energy service companies, design and engineering contractors, and cooling equipment manufacturers and sales representatives.

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Company Name: **Baltimore Aircoil Company.** (*TICA Founding Member*)  
Address: 7600 Dorsey Run Road  
City, State, Code, Country: Jessup, MD 20794 U.S.A.

Contact Name, Title: Andrew Sickler, Industrial Project Engineer  
Telephone: 1- 407-973-4583  
Facsimile:  
E-mail: [asickler@baltimoreaircoil.com](mailto:asickler@baltimoreaircoil.com)  
Website: [www.baltimoreaircoil.com](http://www.baltimoreaircoil.com)

Corporate TIC Capabilities, Products, or Services: Baltimore Aircoil Company (BAC) is a global supplier of heat transfer and ice thermal storage products. BAC provides high-capacity modular equipment for power generation, industrial processes, refrigeration, and comfort cooling applications. BAC engineers and manufactures an extensive catalog of evaporative cooling towers, closed loop cooling towers, evaporative condensers and hybrid products. BAC delivers certified performance and world class solutions.

# TURBINE INLET COOLING ASSOCIATION [turbineinletcooling.org](http://turbineinletcooling.org)

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Company Name: **Caldwell Energy Company** (*TICA Founding Member*)  
Address: 4020 Tower Road  
City, State, Code, Country: Louisville, Kentucky 40219 USA

Contact Name, Title: Don Shepherd, Vice President  
Telephone: 1-502-964-3361 Ext. 2124  
Facsimile: 1-502-810-0984  
E-mail: [DSheperd@caldwellenergy.com](mailto:DSheperd@caldwellenergy.com)  
Website: [www.caldwellenergy.com](http://www.caldwellenergy.com)

Corporate TIC Capabilities, Products, or Services: Caldwell Energy Company was founded in 1995 with the mission of providing combustion turbine users with inlet cooling systems. Caldwell is the only provider of all inlet cooling technologies including evaporative cooling with fog, on-line chilling, chilling with Thermal Energy Storage (ice or water) and patented Wet Compression Technology, giving Caldwell the unbiased ability to fairly evaluate which technology best serves a Customer's need. Caldwell is an experienced turnkey provider of all inlet cooling systems with proven installations on all combustion turbines: aero-derivative, mature industrial and advanced turbines. Caldwell provides aftermarket support and services for all technologies.

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Company Name: **The Cool Solutions Company** (*TICA Founding Member*)  
Address: 5007 Lincoln Avenue, Suite 201  
City, State, Code, Country: Lisle, Illinois 60532 USA.

Contact Name, Title: John S. Andrepont, President  
Telephone: 1-630-353-9690  
Facsimile: 1-630-353-9691  
E-mail: [CoolSolutionsCo@aol.com](mailto:CoolSolutionsCo@aol.com)  
Website: [www.CoolSolutionsCo.com](http://www.CoolSolutionsCo.com)

Corporate TIC Capabilities, Products, or Services: The Cool Solutions staff provides consulting services for both the business and technical aspects of CTIC developments of various types, from analysis and planning through installation and operation. Past projects include: CT plant capacities from 1 MW to 500 MW; simple cycle and combined cycle plants; direct refrigerant evaporation and water-cooled air coils; mechanical and absorption refrigeration; non-storage, water storage and ice storage systems. Our staff is particularly experienced with identifying and capturing the benefits of Thermal Energy Storage (TES), including applications of patented **SoCool**<sup>SM</sup> low temp TES.

# TURBINE INLET COOLING ASSOCIATION [turbineinletcooling.org](http://turbineinletcooling.org)

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Company Name: **Danfoss H-P Systems**  
Address: 7560 Southwest Jack Janes Drive  
City, State, Code, Country: Stuart, FL 34997 USA

Contact Name, Title: Steven Good, National Sales Manager  
Telephone: 1 (813) 404-3250  
Facsimile:  
E-mail: [steven.good@danfoss.com](mailto:steven.good@danfoss.com)  
Website: [www.danfoss.com](http://www.danfoss.com)

**Corporate TIC Capabilities, Products, or Services:** Danfoss H-P Systems offers the Nessie® Water Hydraulics product line, covering high temperature/pressure and proportional water valves and the most advanced Technical Water pump in the market. The PAH series of “positive-displacement” Technical Water Pumps are completely manufactured out of 316SS (also Duplex and Super Duplex SS) and are offered in displacements up to 43USGPM and pressures to 2000PSI. Our pumps are direct-coupled providing a minimal footprint and can be 40% more efficient than existing pumps. The PAH pump is an axial-piston design, requiring no pulsation dampening and NO lubrication. They are employed in water-wash, power-augmentation and water-injection systems for Gas Turbines.

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Company Name: **Distributed Storage Technologies, LLC**  
Address: 241 Cold Spring Road  
City, State, Code, Country: Avon, CT 06001 USA

Contact Name, Title: David F Dahlem - Owner  
Telephone: 1-860-255-7146  
Facsimile: 1-860-255-7146  
E-mail: [dfdahlem@aol.com](mailto:dfdahlem@aol.com)  
Website: N o n e

**Corporate TIC Capabilities, Products, or Services:** **Distributed Storage Technologies, LLC (DST)** offers a new and innovative cooling technology for many applications, including, turbine inlet cooling. The DST cooling technology is a low cost technology that does not consume any water and helps reduce emissions. It is also an innovative energy storage technology and helps improve the efficiency of distributed generation technologies. Compared to its competing technologies the DST technology significantly reduces capital costs, construction time, the costs to ratepayers and the impact on the environment.

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# TURBINE INLET COOLING ASSOCIATION [turbineinletcooling.org](http://turbineinletcooling.org)

Company Name: **DN Tanks – Natgun & DYK Divisions**  
Address: 410 E. Trinity Blvd  
City, State, Code, Country: Grand Prairie, TX 75050 U.S.A.

Contact Name, Title: Guy Frankenfield - Manager, TES & Biofuels Division  
Telephone: 1-972-823-3300  
Facsimile: 1-972-823-3333  
E-mail: [gfrankenfield@dntanks.com](mailto:gfrankenfield@dntanks.com)  
Website: [www.dntanks.com](http://www.dntanks.com)

Corporate TIC Capabilities, Products, or Services: Natgun and DYK, divisions of DN Tanks, build the highest quality Thermal Energy Storage (TES) and anaerobic digesters for all energy markets. Each tank is designed by DN Tanks engineers to maximize the energy effectiveness and minimize the operational costs for the owner. Because they are constructed of pre-stressed concrete, they can be built above ground, partially buried, or fully buried. DN tanks are built watertight and maintenance-free, providing decades of continuous service for owners.

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Company Name: **GEA Refrigeration North America** (*TICA Founding Member*)  
Address: 3475 Board Road  
City, State, Code, Country: York, Pennsylvania 17402 USA

Contact Name, Title: Todd Kennedy, Process Systems Sales Manger  
Telephone: 1-717-767-6411  
Facsimile: 1-717-764-3627  
E-mail: [todd.kennedy@gea.com](mailto:todd.kennedy@gea.com) ,  
Website: [www.geafes.com](http://www.geafes.com)

Corporate TIC Capabilities, Products, or Services: FES Systems Inc. provides chilling equipment for the mechanical pre-cooling of turbine inlet air. Air chilling can be provided using chilled water or anti-freeze fluids, or direct refrigerant in coils. Components manufactured at FES Systems Inc. include rotary screw compressors, shell-and-tube heat exchangers, plate-and-frame heat exchangers, vessels and controls. Drives can be electric motor, gas engine, or steam turbine depending on customer requirements, and refrigerants range from halocarbons to natural refrigerants such as ammonia and hydrocarbons. Equipment can be furnished as individual components for field assembly and installation. For those applications requiring complete factory packaged chiller systems, FES Systems Inc. offers screw compressors and heat exchangers through a partnership with Turbine Air Systems.

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# TURBINE INLET COOLING ASSOCIATION turbineinletcooling.org

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Company Name: **Johnson Controls, Inc.**  
Address: 6 Changi Business Park Avenue 1, #06-21/22, UE Bizhub East (North Tower),  
City, State, Code, Country Singapore 486017

Contact Name, Title: Stephen Green, Director, Business Development and Sales  
Telephone: 65-8121-5137  
Facsimile: 65-6287-1210  
E-mail: [Stephen.Green@jci.com](mailto:Stephen.Green@jci.com)  
Website: [http://www.johnsoncontrols.com/en\\_sg/buildings/solutions-by-industry/power-plants/gtiac](http://www.johnsoncontrols.com/en_sg/buildings/solutions-by-industry/power-plants/gtiac)

Corporate TIC Capabilities, Products, or Services: Johnson Controls (JCI) is a global diversified technology and industrial leader serving customers in more than 150 countries worldwide. We are a leading provider of equipment, controls and services for industrial cooling through our globally recognized YORK®, FRICK®, SABROE® and METASYS® product lines. JCI has been at the forefront of the Gas Turbine Inlet Air Cooling (GTIAC) industry from the earliest applications in the 1980's. Today JCI chilling equipment and fully integrated GTIAC systems provide the cooling required to optimize gas turbine performance in power plants across Asia, Africa, the Middle East and the Americas

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Company Name: **Munters Corporation** (*TICA Founding Member*)  
Address: 16900 Jordon  
City, State, Code, Country Selma, Texas 78154 U.S.A.

Contact Name, Title: Pat Zeller, Product Manager/National Accounts  
Telephone: 1-210-249-3867  
Mobile: 1-210-296-8609  
E-mail: [pat.zeller@munters.com](mailto:pat.zeller@munters.com)  
Website: <http://www.munters.us/en/us/Products--Services/HumiCool-Division/ECGT/>

Corporate TIC Capabilities, Products, or Services: For almost 40 years, Munters has been an authority on evaporative cooling technology. Our evaporative cooling products have been installed in hundreds of combustion turbine inlets around the world. Munters can show you how to boost your turbine output by up to 20% when you need it most, during those hot summer afternoons. One of a few companies to supply both fog and media based systems, Munters is uniquely qualified to educate you on the benefits of both types of technology and help you decide which system is best for your specific site. Start increasing profits and contact us today.

# TURBINE INLET COOLING ASSOCIATION [turbineinletcooling.org](http://turbineinletcooling.org)

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Company Name: **Parker Hannifin Corporation** (*TICA Founding Member*)  
Address: 8940 Tyler Blvd.  
City, State, Code, Country: Mentor, Ohio 44060 USA U.S.A

Contact Name, Title: Georges El Helou, Design Engineer  
Telephone: 1-266-2379  
Facsimile: 1-630-553-8440  
E-mail: [Georges.elhelou@parker.com](mailto:Georges.elhelou@parker.com)  
Website: [www.parker.com](http://www.parker.com)

Corporate TIC Capabilities, Products, or Services: Parker Hannifin is the world's leading supplier of motion and control equipment. The Gas Turbine Fuel System Division's patented Macrospray technology offers superior spray performance in the widest array of packaging options including the remarkable multi-point Spider nozzles. Parker offers spray nozzles and accessories including manifolds, valves, connectors, filters, and hose as well as systems and sub-systems for turbine cooling and wet compression.

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Company Name: **Pasteris Energy, Inc.** (*TICA Founding Member*)  
Mailing Address: 430 Trend Road  
City, State, Code, Country: Yardley, Pennsylvania 19067 U.S.A.

Contact Name, Title: Raymond M. Pasteris, President  
Telephone: 1-215-736-8170  
Facsimile: 1-215-736-8171  
E-mail: [rpasteris@pasterisenergy.com](mailto:rpasteris@pasterisenergy.com)  
Website: [www.pasterisenergy.com](http://www.pasterisenergy.com)

Corporate TIC Capabilities, Products, or Services: Pasteris Energy, Inc. located midway between Philadelphia and New York City operates as a unique energy firm providing energy development, engineering, economic and commercial services in district heating and cooling, combined heat and power ("CHP"), turbine inlet air cooling, energy conservation audits, energy asset valuation and energy performance contracting.

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# TURBINE INLET COOLING ASSOCIATION [turbineinletcooling.org](http://turbineinletcooling.org)

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Company Name: **Shuangliang Eco-Energy Systems Co. Ltd.**  
Address: 88 Xili Road, Ligang Town  
City, State, Code, Country: Jiangyin, Jiangsu 214444 CHN

Contact Name, Title: Zheng Ren, G.M. of International Division

Telephone: 86-510-86632086  
Facsimile: 86-510-86634678  
E-mail: [ktsales@shuangliang.com](mailto:ktsales@shuangliang.com)  
Website: [www.shuangliang.com](http://www.shuangliang.com)

Corporate TIC Capabilities, Products, or Services: As the core enterprise of Shuangliang Group, it is committed to providing technologies that save energy and protect the environmental protection. Through more than 30 years' development and innovation, it has become a professional supplier of energy-saving, water saving and new energy system integration, including LiBr absorption chiller/heater, industrial waste heat recovery system, centralized heating system, CCHP system, TIAC system, flue gas condensation heat recovery system, high-efficient heat-exchanging equipment, air-cooled condenser system, zero discharge system of industrial salty wastewater, industrial/municipal wastewater treatment system, seawater desalination system, etc. Shuangliang has provided tailor-made solutions for nearly 300 enterprises of Fortune Global 500.

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Company Name: **SPX Cooling Technologies, Inc.**  
Address: 7401 W. 129<sup>th</sup> St.  
City, State, Code, Country: Overland Park, KS 66213 U.S.A.

Contact Name, Title: Scott Maurer, Global Product Manager – FAP Products

Telephone: 1-913-664-7834  
Facsimile: 1-913-693-9310  
E-mail: [scott.maurer@spx.com](mailto:scott.maurer@spx.com)  
Website: [www.spxcooling.com](http://www.spxcooling.com)

Corporate TIC Capabilities, Products, or Services: Many of the existing turbine air inlet cooling installations use SPX Cooling Technologies products. Marley, Balcke, Hamon Dry Cooling and Recold are brands offered by this technology leading global manufacturer of field erected and factory assembled cooling towers, evaporative coil products and air-cooled condensers. SPX CT equipment has been used in a large number of air-conditioning, refrigeration, industrial, power and other heat rejection applications throughout the world. SPX CT offers its customers lifetime value 9

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in the products and services provided through its global network.

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Company Name: **Stellar Energy Systems** (*TICA Founding Member*)  
Address: 2900 Hartley Road  
City, State, Code, Country: Jacksonville, Florida 32257 U.S.A.

Contact Name, Title: Curtis Lovelace, Vice President, Stellar Energy Systems  
Telephone: 1-904-260-2900, ext. 3283  
Facsimile: 1-904-899-9283  
E-mail: [clovelace@stellar.net](mailto:clovelace@stellar.net)  
Website: [www.stellarenergysystems.com](http://www.stellarenergysystems.com)

Corporate TIC Capabilities, Products, or Services: The Stellar Group provides turnkey turbine inlet chilling systems for aero-derivative and industrial turbine power plants. Stellar's in house engineering, project management, fabrication, field and service personnel have industry leading experience in the design, fabrication, installation and service of water/glycol and direct refrigerant systems including thermal energy storage. Our single source delivery capabilities allow us to offer a wrap around guarantee ensuring expected performance and on time operation. Stellar is the largest industrial refrigeration design/builder in the U.S. with the resources, capabilities and experience to guarantee TIC project success.

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Company Name: **TAS Energy, Inc.** (*TICA Founding Member*)  
Address: 3050 Post Oak Blvd, Suite 1600  
City, State, Code, Country: Houston, Texas 77056 U.S.A.

Contact Name, Title: Russell Thompson, Vice President – Industrial Business  
Telephone: 1-713-877-8700  
Facsimile: 1-713-877-8701  
E-mail: [rthompson@tas.com](mailto:rthompson@tas.com)  
Website: [www.tas.com](http://www.tas.com)

Corporate TIC Capabilities, Products, or Services: TAS Energy is the leading supplier of packaged inlet cooling solutions for new and existing gas turbine facilities. These solutions include on-line and Thermal Energy Storage systems. TAS has provided inlet cooling for over 140 gas turbines, worldwide. These systems comprise over 250,000 tons of water & air-cooled refrigeration systems. TAS's highly efficient packaged solutions provide the lowest operating costs and highest net present value of any inlet cooling solution. TAS is the exclusive packager of highly efficient Trane chillers. In addition TAS is the exclusive packager of FES Systems helical screw

# **TURBINE INLET COOLING** **ASSOCIATION** [turbineinletcooling.org](http://turbineinletcooling.org)

compressor, utilized for air-cooled inlet cooling applications. TAS offers a full product range of air-cooled and water-cooled chilling packages ranging from 500 to over 8000 tons. We also offer service and installation supervision for all of our packaged Inlet Cooling systems.

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