

# IHP Alliance Buyer-Supplier Connect Sessions Participating Suppliers

This packet contains information about participating suppliers for the upcoming IHP Alliance Buyer-Supplier Connect Sessions on November 17 and 18, 2025. The information and language that follows was directly provided by the suppliers. Suppliers include IHP manufacturers, distributors, financing providers, and consultants or service providers with related offerings. If you have any questions about this event, please reach out to Ruth Checknoff at <a href="mailto:ruth@dgardiner.com">ruth@dgardiner.com</a>, Oren Lieber-Kotz at <a href="mailto:oren@dgardiner.com">oren@dgardiner.com</a>, and Steve Griffith at <a href="mailto:steve.griffith@nema.org">steve.griffith@nema.org</a>.

Please use this form to select companies to meet with for the November 17 and 18 virtual sessions.

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# **Armstrong International**

Available for November 17: Yes Available for November 18: Yes

## Participating staff:

Rajkumar Gnanaraj, <u>rkumar@armstronginternational.com</u>; Peter DeWitt, <u>pdewitt@armstronginternational.com</u>; Steve Ashby, <u>sha@armstronginternational.com</u>

# Potential role in a heat pump project:

Armstrong International has a full line of water sourced heat pumps that can produce hot water or steam up to 248°F (120°C). Additionally, Armstrong has the ability to study your facility and find waste heat sources and sinks. This is an important step to confirm the viability of the heat pump and see if there is direct waste heat recovery available. Lastly, Armstrong can provide turnkey or project management services to guarantee the performance of the heat pump and installation.

# Geographic scope:

Global

#### Best fit for:

Food & Beverage, Consumer Goods, Pharmaceuticals & Biotechnology, Institutional & Government

Heat pump temperature range: Heat pump size range: Heat sources:

Source of -8°C (18°F) and sink up 2,000 kW Any source is available to use to 120°C (248°F) from air, sewer, geothermal, and waste heat from process.

## Experience with heat pump projects:

We have completed more than 100 projects ranging from HVAC systems, domestic hot water, district heating, to processing chocolate.

# What sets your company apart?

Armstrong Heat Pumps packages can produce hot water up to 250°F and have the ability to produce steam. We engineer to order heat pumps so they are right sized for the application and we can study the source and sinks in the facility.

#### Website & Additional Links:

https://armstronginternational.com, https://armstronginternational.com/products-landing/heat-pump-packages



# AtmosZero

Available for November 17: Yes Available for November 18: Yes

# Participating staff:

Chris Fraughton, <a href="mailto:chris.fraughton@atmoszero.energy">chris.fraughton@atmoszero.energy</a>; Denis Schweizer, <a href="mailto:denis.schweizer@atmoszero.energy">denis.schweizer@atmoszero.energy</a>

# Potential role in a heat pump project:

OEM - supplying heat pump equipment to distributors, engineering firms, and end users.

# Geographic scope:

North America & Europe

#### Best fit for:

Automotive, Food & Beverage, Consumer Goods, Technology, Pharmaceuticals & Biotechnology, Institutional & Government

Heat pump temperature range: Heat pump size range: Heat sources:

-20°C to 185°C 1MW Any air or liquid between -20°C

to 50°C

# Experience with heat pump projects:

We have a unit running at New Belgium Brewery in Fort Collins, a R&D test stand (full-scale heat pump), and projects delivering in 2026 (client information under NDA).

# What sets your company apart?

Modular plug-and-play high lift heat pumps for low temperature heat sources. (Cascaded heat pump cycle with optimized controls.)

#### Website:

https://atmoszero.energy/

#### Additional links or information:

We can share cut sheets and information files with any interested parties.



# **Danfoss**

Available for November 17: Yes

Available for November 18: Yes

#### Participating staff:

Stephen Hamlin, stephen.hamlin@danfoss.com

# Potential role in a heat pump project:

Danfoss designs the components for heat pumps. Compressors, sensors, and partners with OEMs through TurboCore. Danfoss also develops the solutions for heat pump use and the best viable options for implementation.

## Geographic scope:

United States, Canada, France, Germany, UK, Poland, Middle East, Asia, almost all regions and countries.

#### Best fit for:

Automotive, Food & Beverage, Consumer Goods, Technology, Pharmaceuticals & Biotechnology, Heavy Industry & Materials, Textiles & Apparel, Institutional & Government

#### Heat pump temperature range:

All temperatures up to low grade steam.

#### Heat pump size range:

All ranges. Mainly for industry and large-scale applications. Apartments, hospitals, business centers, you name it, we design it.

#### Heat sources:

Air, water, ground source, waste heat, reclaimed heat. If there is a base source, we can utilize this for a heat pump.

#### Experience with heat pump projects:

Several completed heat pump projects. 345 Hudson with Energy Machines, Sondeburg Hospital, several other case studies completed.

# What sets your company apart?

We provide the selections and system development for the Heat Pump Manufacturers. We also provide a large market share of Compressors for the Heat Pumps and Chillers on the market. We also integrate and develop complete systems.

# Website & Additional information:

https://www.danfoss.com/en/, https://www.danfoss.com/en/markets/buildings-commercial/dcs/heat-pumps/#tab-overview



# **Echogen Power Systems**

Available for November 17: Yes Available for November 18: Yes

# Participating staff:

Robert Bernard, <a href="mailto:rbernard@echogen.com">rbernard@echogen.com</a>; Jason Miller, <a href="mailto:jmiller@echogen.com">jmiller@echogen.com</a>;

# Potential role in a heat pump project:

Echogen is a technology development company. We are presently developing two heat pump systems using CO2, one for high temperature process heating and one for medium pressure steam generation.

# Geographic scope:

We are sited in North America, and open to global opportunities.

#### Best fit for:

Food & Beverage, Heavy Industry & Materials

Heat pump temperature range: Heat pump size range: Heat sources:

For process heating, up to 400°C, 1000+ kW Air, water, waste heat

and up to 20 bar steam generation

## Experience with heat pump projects:

We are presently at a TRL=4 for both heat pump systems.

# What sets your company apart?

Echogen's sCO2 based heat pump technology uniquely fills the gap for medium temperature applications between 130°C and 400°C. Our system can heat single-phase fluids to high temperatures in a single stage heat pump, with exceptional COP.

#### Website:

https://www.echogen.com

#### Additional links or information:

Detailed technical information available upon request.



# **Energy Integration Inc.**

Available for November 17: Available for November 18:

Yes Yes

## Participating staff:

Zach Schafer, zschafer@energyintegrationinc.com; William Schafer, bill@energyintegrationinc.com

#### Potential role in a heat pump project:

We assess the feasibility, technical and economic, of applying our integrated heat pump technology for industrial processes, and we license the technology to customers for application to their operations. Our novel system design integrates to optimize across existing processes and avoid optimizing a single process at the expense of the total process design. We have two commercial systems operating in Europe's largest biorefinery and a large number of system installations in development.

#### Geographic scope:

U.S.A., Canada, E.U., South Africa, Brazil, India, China

#### Best fit for:

Food & Beverage, Heavy Industry & Materials

Heat pump temperature range:

We design systems using commercially available blowers and compressors. Our systems currently accommodate temperatures up to

230°C.

Heat pump size range:

Systems with up to 6MW shaft

power

Heat sources: Waste heat

## Experience with heat pump projects:

We have installed two commercial systems at Pannonia Bio that have operated for more than four years and received the IChemE Energy Award in 2021. We have projects ranging from designed with equipment ordered to projects funded awaiting initiation.

#### What sets your company apart?

Our technology is in full commercial operation and has operated flawlessly for more than five years. We were awarded the IChemE Energy Award in 2021. The efficiency, cost-effectiveness, and reduction in carbon intensity provided are unmatched.

# Website & Additional Information:

http://www.energyintegrationinc.com

https://ethanolproducer.com/articles/stretching-out-steam

https://ethanolproducer.com/articles/an-optimal-blend-of-stories

https://ethanolproducer.com/articles/replicating-success



# **GEA Heating & Refrigeration Technologies North America**

Available for November 17: Yes Available for November 18: Yes

## Participating staff:

German Robledo, <u>german.robledo@gea.com</u>; Simon Keller, <u>simon.keller@gea.com</u>; Varun Kothari, <u>varun.kothari@gea.com</u>

# Potential role in a heat pump project:

Manufacturer, Provider, Consulting, Holistic Solution

# Geographic scope:

Global

#### Best fit for:

Automotive, Food & Beverage, Consumer Goods, Technology, Pharmaceuticals & Biotechnology, Heavy Industry & Materials, Textiles & Apparel, Institutional & Government, Air Carbon Capture Technologies, EV Battery Manufacturer, District Heating, Wastewater Treatments, Chemical, Oil & Gas

# Heat pump temperature range:

95°C with ammonia, but coupled with MVR or other technologies, we can provide steam solutions, finishing developing other solutions with other refrigerants to make steam.

# Heat pump size range:

Starting from 500kW up to any size or capacity

#### Heat sources:

Any source, any source will dictate it that becomes a single stage or multiple stage

# Experience with heat pump projects:

We have sold over 250 plus heat pumps in Europe and over 8 in North America, due to NDAs many customers do not want us to share info, we can share some general aspects but not full detail customer name, locations, etc.

# What sets your company apart?

Highest COP in the market, longer TCO in the market, able provide Holistic Solutions, able to provide steam up to 160°C, heat pumps using just natural and sustainable refrigerants. More than 8 projects sold in NAM and over 250 plus in Europe.

#### Website:

https://www.gea.com/en/products/heat-pumps/



# Generate Capital

Available for November 17: Yes

Available for November 18: Yes

#### Participating staff:

Charlie Daum, charlie.daum@generatecapital.com; Fiona Dearth, fiona.dearth@generatecapital.com

#### Potential role in a heat pump project:

Generate identifies, develops, funds, and implements a wide range of resource efficiency and decarbonization technologies, including IHPs. We are technology agnostic and are open to working with our customers' preferred vendors and engineering partners. We can support projects at any stage - from investment grade audit to late-stage design/engineering. Generate uses an energy-as-a-service approach to provide performance and savings guarantees without requiring upfront capital from our customers.

#### Geographic scope:

North America and Europe

#### Best fit for:

Automotive, Food & Beverage, Consumer Goods, Technology, Pharmaceuticals & Biotechnology, Heavy Industry & Materials

#### Heat pump temperature range:

We typically look for waste streams with temperatures ~80 to 90°F to produce 180°F water temperatures. However, we have also evaluated heat pumps that provide cooling at 45°F on the low side and provide heat for process at 140°F on the high side. We have developed heat pump projects that generate steam at greater than 100 psi with Mechanical Vapor Recompression (MVR) turbines or 2 stage systems.

# Heat pump size range:

5 to 15 MMBTH

#### Heat sources:

We have implemented projects that use ammonia from cooling systems and process waste water. We can support projects for air and waste heat sources as well.

#### Experience with heat pump projects:

We have one large industrial heat pump project in construction. We are in advanced development at four other manufacturing sites.

# What sets your company apart?

We set ourselves apart by delivering turnkey, fully funded solutions that remove complexity and capital burden for our customers. Because we are technology-agnostic and partnership-driven, we tailor each energy-as-a-service program to the customer.

#### Website & Additional Information:

https://generatecapital.com/

We can share anonymized case studies upon request.



# Johnson Controls

Available for November 17: Yes

Available for November 18: Yes

# Participating staff:

Rajesh Dixit, <u>rajesh.dixit@jci.com</u>; Mark Lessans, <u>mark.lessans@jci.com</u>; Micah Lehman, <u>micah.lehman@jci.com</u>; Adrian Marticorena, <u>Adrian.marticorena@jci.com</u>; Ivo Eiermann, <u>ivo.eiermann@jci.com</u>; Per Skov, <u>per.skov@jci.com</u>

# Potential role in a heat pump project:

Design and Manufacturing of heat pumps using variety of low GWP and natural refrigerants. Heat pumps are made and tested in our global factories, supported by our global sales and service network.

# Geographic scope:

Global

#### Best fit for:

Automotive, Food & Beverage, Consumer Goods, Technology, Pharmaceuticals & Biotechnology, Heavy Industry & Materials, Textiles & Apparel, Institutional & Government, District Heating

Heat pump temperature range: Heat pump size range: Heat sources:

115°F (46°C) to 248°F (120°C) 1000 - 20,000 kW Chilled water, municipal wastewater,

geo-exchange, process waste heat (example ammonia gas, flue gas condensation), industrial process

water and such sources.

#### Experience with heat pump projects:

We ship several hundred IHPs from our factories in San Antonio TX, Waynesboro PA, Nantes France and Wuxi China. These are based on refrigerants such as R-513A, R-1234ze, Ammonia, Water, ammonia and water, Butane. Recently, we tested MVR. CO2 is next.

# What sets your company apart?

Global factories, sales and service network, variety of refrigerants, most of our R&D is invested in climate related innovation such as heat pumps.

# Website & Additional Information:

https://www.johnsoncontrols.com

https://www.sabroe.com/

https://www.york.com/

https://www.frickcold.com/

https://mmcarnot.com/about-us/



# Karman Industries

Available for November 17: Yes Available for November 18: No

# Participating staff:

Willem Landman, willem@karmanindustries.com; David Tearse, david@karmanindustries.com

# Potential role in a heat pump project:

We are an MVR heat pump OEM with a high performance heat pump with increased performance at a fraction of the cost and size.

# Geographic scope:

USA, Europe, Asia, India

#### Best fit for:

Automotive, Food & Beverage, Consumer Goods, Technology, Pharmaceuticals & Biotechnology, Heavy Industry & Materials, Textiles & Apparel

Heat pump temperature range: Heat pump size range: Heat sources:

# Experience with heat pump projects:

Our first demo is up and running for 200 hours at our facility, validating our design and system capabilities.

#### What sets your company apart?

Our system achieves a 10-15 performance boost at a fraction of the cost and size required of a traditional HTHP. We can deliver 1-20MW thermal in a standard shipping container for ~70% cheaper. Installations are significantly faster as well.

#### Website:

https://karmanindustries.com

#### Additional links or information:

We can provide case studies to interested parties.



# **Kyotherm**

Available for November 17: No Available for November 18: Yes

Participating staff:

Elise Heath, elise.heath@kyotherm.com

# Potential role in a heat pump project:

Kyotherm provides turnkey and off-balance sheet financing for renewable heat and energy efficiency projects, including heat pumps, to clients in the industrial and commercial sectors, as well as public authorities.

Geographic scope:

Global

Best fit for:

N/A

Heat pump temperature range: Heat pump size range: Heat sources:

N/A N/A All

# Experience with heat pump projects:

Kyotherm has financed and owns multiple water and ground source heat pumps in Germany and in the UK (total installed capacity of 40 MW).

# What sets your company apart?

Kyotherm is a long-term investor (projects duration 7-25 years) with low-cost capital, specializing in renewable thermal projects. Its expertise ensures a strong grasp of technology risks and balanced risk allocation.

Website:

https://kyotherm.com/en/about-us/

Additional links or information:

N/A



# **Modern Thermal Design**

Available for November 17: Yes Available for November 18: Yes

## Participating staff:

Perry Johnson, <u>perry@modernthermaldesign.com</u>; Bill Selkirk, <u>bill@modernthermaldesign.com</u>; Don Frank, <u>don@solaruvsolutions.com</u>

# Potential role in a heat pump project:

Sales, design, proposal and project management.

# Geographic scope:

United States, Canada, Mexico, Caribbean +

#### Best fit for:

Automotive, Food & Beverage, Consumer Goods, Technology, Pharmaceuticals & Biotechnology, Heavy Industry & Materials, Textiles & Apparel, Institutional & Government, All Industries

Heat pump temperature range: Heat pump size range: Heat sources:

-5°F to 140°F 0.5 kW to 500 kW Air, water, ground & waste

heat

## Experience with heat pump projects:

Completed projects: Popeyes, Homewood Suites, Best Western & Motel 6. Others in development/quoting process.

# What sets your company apart?

We are a Design/Build company with heavy engineering experience and multiple solutions to offer. Sometimes the best solution involves multiple products, like thermal storage with heat pumps.

#### Website:

https://ModernThermalDesign.com

## Additional links or information:

We offer several USA brands, UK and Finland models.



# Piller TSC Blower Corp

Available for November 17: Yes

Available for November 18: Yes

# Participating staff:

Patrick Reiss, <u>patrick.reiss@piller.de</u>; Caldwell Reed, <u>caldwell.reed@piller.de</u>; Prathamesh Ternikar, <u>prathamesh.ternikar@piller.de</u>

# Potential role in a heat pump project:

Heat pump manufacturing, heat pump system design and sizing, heat pump project supervision, heat pump servicing

## Geographic scope:

Global

#### Best fit for:

Automotive, Food & Beverage, Consumer Goods, Technology, Pharmaceuticals & Biotechnology, Heavy Industry & Materials, Textiles & Apparel

Heat pump temperature range:

Min 50°C and max 230°C

Heat pump size range:

Compressor capacity 37kW to 160kW that can be connected in

series for higher capacity

Heat sources:

Cooling tower water, exhaust from fryers, dryer exhaust, vapor from distillation columns, evaporators, paper machines, hot water heat

pump condenser flow, etc.

# Experience with heat pump projects:

Many completed heat pump projects. Mechanical vapor recompression (MVR) technology to recover thermal energy from the whisky distillation process, MVR for potato fryers, MVR for paper machine drying, MVR for ethanol production.

#### What sets your company apart?

Piller MVR Heat Pumps are TRL 8-9, proven in field by hundreds of installations globally with decades in operation. Piller Heat Pumps, with water as refrigerant, deliver COP far exceeding Elec/Gas price ratio, translating to payback as low as 2 years.

#### Website & Additional Information:

https://www.piller.de/

https://www.piller.de/industrial-heat-pump/

https://www.renewablethermal.org/piller-chivas-case-study/

https://www.piller.de/fileadmin/media/pdf-files/product-sheets/vapor-compression-heat-pump-technology.pdf



# Schneider Electric

Available for November 17: Yes

Available for November 18: Yes

#### Participating staff:

David Phillippe, <u>david.phillippe@se.com</u>; Pawan Gogna, <u>pawan.gogna@se.com</u>; Dave Kramer, david.kramer@se.com

#### Potential role in a heat pump project:

Schneider Electric would be your design/build partner to develop turnkey solutions utilizing IHPs, oversee installation, and if needed provide a performance guarantee. We are able to work within a traditional Capex process or 'as-a-service' which can be structured to be fully off-balance sheet. Our in-house team brings both the commercial and technical expertise necessary to build a programmatic framework to deploy IHP solutions at scale and pace across a customer's facility portfolio.

#### Geographic scope:

North America (particular focus in USA). Global counterparts able to support with Europe and APAC as well.

#### Best fit for:

Food & Beverage, Consumer Goods, Pharmaceuticals & Biotechnology, Textiles & Apparel, Institutional & Government

#### Heat pump temperature range:

There are several types of industrial heat pumps that can offer maximum temperatures from 180°F to 300°F and produce hot water or low pressure steam. We are manufacturer agnostic and look for the best unit to fit the need.

#### Heat pump size range:

The only limits in heat pump size would be related to what is available in the marketplace.

#### Heat sources:

We typically see air source, water source, and ammonia being the most ideal heat sources for heat pumps.

# Experience with heat pump projects:

Yes, we have an IHP project for a large brewery currently in installation. It will be completed in the next 4-6 months. We also have several additional heat pump projects in development, with significant outside grant and tax credit funding secured.

#### What sets your company apart?

As the #1 ranked Energy Services Company and EaaS Provider, we have direct experience delivering large scale IHP solutions at industrial facilities. We deliver turnkey design-build solutions that leverage both capex or EaaS offers.

#### Website:

https://www.se.com/us/en/work/services/sustainability-business/energy-management-sustainability-services.jsp



# Skyven Technologies

Available for November 17: Yes Available for November 18: Yes

# Participating staff:

Juliette Strasser, juliette.strasser@skyven.co; Jim Saccone, jim.saccone@skyven.co

# Potential role in a heat pump project:

Skyven cuts costs and emissions for manufacturers with our Arcturus steam-generating heat pump. Arcturus recovers and upgrades industrial waste heat from onsite processes to produce steam for use in manufacturing. Skyven deploys Arcturus using our proven Energy-as-a Service model, which enables industrial manufacturers to reduce emissions with zero upfront capital expenditure and up to 30% cost savings on steam.

## Geographic scope:

Europe, North America, South America, Asia

#### Best fit for:

Automotive, Food & Beverage, Consumer Goods, Textiles & Apparel, Chemicals & Ethanol

Heat pump temperature range: Heat pump size range: Heat sources:

Up to 420°F (215°C) Up to 70 MWth for a single Industrial waste heat

system (multiple systems can be

placed in parallel)

# Experience with heat pump projects:

We have completed feasibility studies and proceeded to basic engineering for multiple Arcturus projects, with planned operation in late 2026. Our Arcturus demonstration center is operational and open for visitors from Q4 onward.

#### What sets your company apart?

Arcturus generates steam at temperatures and pressures up to 420°F (215°C) and 300 psig (20.7 barg). With our Energy-as-a-Service model, Skyven offers end-to-end project development, installation, and O&M, freeing up capital for other projects.

#### Website:

https://skyven.co/

#### Additional links or information:

https://skyven.co/arcturus/



# Thermal Energy International

Available for November 17: Yes Available for November 18: Yes

## Participating staff:

Robert Triebe, robert.triebe@thermalenergy.com; David Coletta, david.coletta@thermalenergy.com

# Potential role in a heat pump project:

TEI delivers turnkey solutions that integrate heat recovery with heat pumps to improve system efficiency and reduce costs. By capturing thermal energy from exhaust and raising the source temperature, we enhance the heat pump's COP, reduce its size, and lower infrastructure costs. Our expertise ensures maximum savings, stable output temperatures, and optimized performance across the system. From concept to commissioning, TEI delivers fully scoped and optimized heat recovery + HP projects.

#### Geographic scope:

Global

#### Best fit for:

Food & Beverage, Consumer Goods, Pharmaceuticals & Biotechnology, Textiles & Apparel, Institutional & Government

Heat pump temperature range:

We partner with heat pump OEMs and so this is dependent upon

market availability.

Heat pump size range: Heat sources:

All sizes Boiler Exhaust; Dryer Exhaust

# Experience with heat pump projects:

TEI has completed dozens of heat pump project feasibility studies for industrial partners and has been awarded and are currently executing two turnkey heat pump projects at industrial sites in the USA.

# What sets your company apart?

Thermal Energy International combines OEM heat recovery expertise with integrated heat pump solutions, optimising waste heat to boost COP. We deliver turnkey, performance-guaranteed projects using the best in-house and third-party technologies.

#### Website:

https://www.thermalenergy.com/

#### Additional links or information:

N/A



# **Trane Technologies**

Available for November 17: Yes

Available for November 18: Yes

Participating staff: Mike Filler, <u>mike.filler@tranetechnologies.com</u>; John Sustar, <u>john.sustar@tranetechnologies.com</u>; Erica Gallant, <u>erica.gallant@trane.com</u>; Matt Cambio, <u>mcambio@trane.com</u>; Chance Brofft, <u>chance.brofft@oilon.com</u>; Jacob Kramer, <u>Jacob.kramer@oilon.com</u>; Morgan Copeland, <u>morgan.copeland@oilon.com</u>

#### Potential role in a heat pump project:

Trane Technologies, a global innovator, offers a wide range of products and services for heat pump projects, providing efficient and sustainable solutions for thermal management needs. We provide comprehensive building and heat pump plant controls, remote connectivity, diagnostics, and autonomous control for long-term efficiency. Our extensive network of application engineers and guides ensures expert design and implementation support. We are the exclusive distribution partner for Oilon industrial and high-temperature heat pumps across the U.S. and Canada.

Geographic scope: Globally, we operate in over 100 countries around the world.

#### Best fit for:

Automotive, Food & Beverage, Consumer Goods, Technology, Pharmaceuticals & Biotechnology, Heavy Industry & Materials, Textiles & Apparel, Institutional & Government

## Heat pump temperature range:

We offer WWHPs up to 500kW that achieve up to 250°F (120°C). We also have larger WWHPs (10MW) that achieve up to 180°F (82°C). Our AWHP can operate as a heat source for cascade systems at temps down to -15°F (-26°C) ambient conditions.

# Heat pump size range:

10 to 10,000 kW per unit - multiple 10,000 kW units can be used for larger projects.

## Heat sources:

Air- or hydronic- source, which includes groundsource, waste heat, thermal storage, as well as cascade systems

#### Experience with heat pump projects:

We've completed many heat pump projects for commercial and industrial applications- it's already a significant portion of our business. Here's a recent example of 55 Water St in NYC. With Oilon, we also have currently 3 projects completed here in the US and 12 more projected to be started up and commissioned by the end of this year or early next year.

#### What sets your company apart?

Trane excels by offering holistic solutions that include top-tier equipment, a dedicated service team, advanced service products, and comprehensive controls and applications, ensuring optimal performance, efficiency, and reliable support.

Website & Additional Information: <u>Trane website</u>, <u>All-electric or hybrid heat pumps for higher-efficiency heating and cooling</u>, <u>Heat pumps</u>, <u>Oilon IHPs</u>, <u>Oilon Finnish heat pump</u>, <u>Oilon helps Puratos</u>



# Trio

Available for November 17: Yes

Available for November 18: Yes

## Participating staff:

Daniel Grdovic, <u>dan.grdovic@trioadvisory.com</u>; Brian Fronapfel, <u>brian.fronapfel@trioadvisory.com</u>; Simon Horton, <u>simon.horton@trioadvisory.com</u>

# Potential role in a heat pump project:

Programmatic support, feasibility, and evaluation of energy efficiency and waste heat recovery applications in industrial and manufacturing applications. Additional support on sustainability consulting, reporting, conventional energy procurement, and renewable power procurement in local markets.

Ability to manage design and installation of IHP projects on behalf of our clients.

## Geographic scope:

USA, Canada, some European Countries, other locations on a case by case basis.

#### Best fit for:

Automotive, Food & Beverage, Technology, Pharmaceuticals & Biotechnology, Institutional & Government

Heat pump temperature range: Heat pump size range: Heat sources:

N/A Any N/A

# Experience with heat pump projects:

Provided conceptual and programmatic approaches to industrial heat pumps in educational, automotive, medical device, pharmaceutical and other industrial/manufacturing applications.

# What sets your company apart?

We are independent advisors and are brand agnostic and work to ensure our clients obtain the best energy solutions. We have decades of experience providing our clients with energy optimization engineering from audit phase through construction.

#### Website:

https://trioadvisory.com/

# Additional links or information:

N/A



# Turboden SpA

Available for November 17: No Available for November 18: Yes

Participating staff:

Davide Rizzi, davide.rizzi@turboden.it

# Potential role in a heat pump project:

Turboden's LHP leads the way in developing complex, customized solutions to meet the unique requirements of projects. Thanks to the expertise of Turboden's engineers and ongoing research in the field, our innovative heating solutions can efficiently operate at large-scale thermal outputs (starting from 5 MWth) and high temperatures (exceeding 200°C), including steam generation. The MVR technology finds its application either as a bottom technology for large scale heat pumps or stand alone.

#### Geographic scope:

Global, with focus on EU and North America

#### Best fit for:

Food & Beverage, Pharmaceuticals & Biotechnology, Heavy Industry & Materials, Textiles & Apparel, Pulp & Paper, Chemical & Petrochemical, District Heating, Carbon Capture

Heat pump temperature range:

Temperature output from 90 up to 250°C and steam production. Delta

Temperature up to >100K

Heat pump size range: Heat sources:

from 5000 to 50000 kW Water, ground, waste heat,

direct evaporation

# Experience with heat pump projects:

Turboden completed two projects: The first is a heat pump of 6 MW power producing 120°C hot water for district heating application. The second is a heat pump +MVR producing 12 MW steam 170°C in a paper mill in Finland, which has been started up and is now operating at full load.

#### What sets your company apart?

Turboden can provide tailor made solutions for industrial heat pumps, designing it specifically for the process needs. We are pioneering company in steam producing heat pumps. Reference plant recently installed in Finland 20 ton/h steam @170°C.

#### Website:

https://www.turboden.com/

## Additional links or information:

https://www.youtube.com/watch?v=QAb99mRBGQ0 https://www.turboden.com/solutions/2602/large-heat-pump



# Vilter by Copeland

Available for November 17: Yes Available for November 18: Yes

# Participating staff:

Brendan Daly, <u>brendan.daly@copeland.com</u>; Jonathan Berney, <u>jonathan.berney@copeland.com</u>; Jake Krause, <u>jake.krause@copeland.com</u>; Andrew Forster, <u>Andrew.forster@copeland.com</u>

# Potential role in a heat pump project:

Vilter is a global manufacturer of Industrial compression equipment. We offer a range of standardized and configurable Ammonia heat pump packages that can produce up to 203°F leaving water temperatures. These system are available from 1 to 5MW heat output per package. Vilter can work with your team to size a heat pump solution that is optimized for you application. Our heat pump packages are self contained and only require sink and source field connections and main electrical power feeds on site.

#### Geographic scope:

Global

#### Best fit for:

Food & Beverage, Technology, Pharmaceuticals & Biotechnology, Institutional & Government, District Energy

Heat pump temperature range: Heat pump size range: Heat sources:

Up to 95°C (203°F) LWT Starting at 1MW and up to 5MW Water, Glycol, direct Ammonia per skid - "water sourced" heat pump

#### Experience with heat pump projects:

Vilter has been building Ammonia heat pumps for more than 15 years, we have systems operating in Canada, Europe and USA. Our newest configured to order systems were released at chillventa 2024. In 2025 we have shipped 6 units.

# What sets your company apart?

Our compressor technology is different and offers an ideal combination of efficiency, reliability and cost. Our heat pump design offers excellent COP with a large capacity in a small footprint, well suited to tough retrofits and new builds.

## Website & Additional Information:

https://www.copeland.com/en-us

https://www.copeland.com/en-us/products/heating-and-air-conditioning/industrial-heat-pumps?utm\_source=google&utm\_medium=search-ad&utm\_campaign=7015G0000014583QAA-2305-hq-BrandAware-L1&utm\_term=vilter&utm\_content=viltermay25&gad\_source=1