

The Edge

October 2014

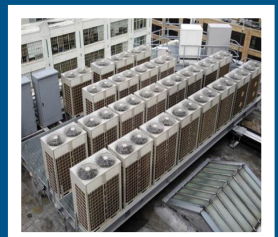


GROUP, INC. | *Employee Owned*



Transfer Solutions, Inc.

A DVL Group Company | Employee Owned



***The Edge, Inaugural Edition:
Featured articles, tips, and all
the latest news on HVAC and
Data Center Solutions!***



Message from our CEO

Welcome to our first edition of The Edge. In February of 2014, two great organizations, DVL and ETSI, became one. Our passion has been and will always be to exceed client expectations through unique problem solving. Our vision for this newsletter is to take our passion to a new level by providing worthwhile and valuable application tips. We hope that you, our customers, can use these tips in the design and construction of the most efficient and industry leading solutions. We are honored to represent

such high quality products. Please review this newsletter as we have created several industry articles, featuring: Cooling Towers, Data Center Solutions, Service, etc. You will also meet our “inside team” that is here to serve you and make your specifying and ordering experience a great one.

As I enter into my 30th year with DVL, I am excited to lead this company. Forecasts show we are in for a healthy couple of years in construction and we are growing to prepare for this. We continuously are looking for ways we can improve how we serve you. We are open to your suggestions of how to improve and would like to hear how we can make this newsletter more worthwhile to you, or any other ideas on how we can assist you. Please e-mail me, mbeck@dvlnet.com, Enjoy.

Mike Beck

President and CEO, DVL Group, Inc.

Data Center Solutions

Data Center 2025 Report **3**

Useful Tools

DVL Toolkit **3**

Featured Engineers

Meet the Energy Transfer Solutions Engineers **4**

Cooling Towers

6 Tips for Evaporative Cooling Equipment... **5**

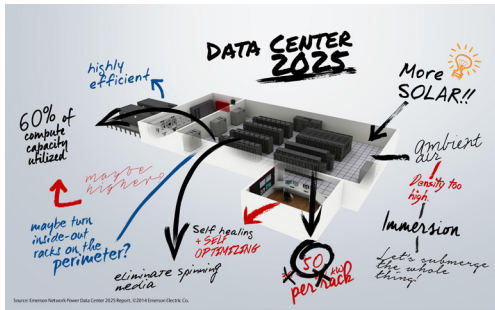
Service

The Importance of Battery Maintenance **6-7**

Prepackaged Solutions

How One Manufacturer Came To The Rescue... **7**

Data Center 2025 Report



A final report, *Data Center 2025: Exploring the Possibilities* summarizes the findings of the initiative to identify the industry's vision of the data center in the year 2025. The results range from the expected – increased utilization of the cloud – to the ambitious – largely solar-powered data centers with power densities exceeding 50 kW per rack. One thing was clear: Most experts believe the data center as we know it will undergo massive changes over the next decade.

The year 2025, eleven years from the writing of this report, represents a horizon that is close enough to project how current trends could play out – the data centers being commissioned today will be at the halfway points in their projected life-cycle in 2025 – and yet far enough away that there is still opportunity to shape what the future will look like.

As you review the Data Center 2025 findings, you may be struck by the optimism of the participants in some areas. From use of renewable energy to power density to sophisticated management tools, participants set a high bar for the future. In some cases their projections are so optimistic they seem almost impossible when compared to the current state.

[DOWNLOAD THE FULL REPORT HERE](#)

DVL Toolkit

We are pleased to announce the availability of several software tools that will help you design, and analyze your data center!

The Data Center Worksheet tool allows users to estimate the power & cooling infrastructure required based on rack loads. This comprehensive tool will also calculate recommended floor space, airflow and, if you have a raised floor - perforated floor tiles.

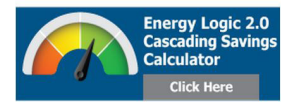
The Digital Scroll Compressor Energy Savings allows users to enter a geographic location and, based on energy cost, predict the operating savings using digital scroll compressor technology.

This technology incidentally can be found in many Liebert cooling systems!

The Data Center Cooling Calculator allows users to estimate the time before a data center reaches critical temperature after the loss of cooling. Users have found this helpful in their disaster planning. The Energy Logic tools are useful in helping users understand how data center efficiency can be improved by taking steps ranging from using low power processors to variable cooling capacity technology.

Lastly the **Lease Payment Calculator** determines the monthly payment for a financed data center project.

You can find these tools at www.dvlnet.com under the Tools section.



Featured Engineers



Chris Delp
Lehigh University -
Mechanical Engineering



Jordan Bellomo
University of Delaware -
Mechanical Engineering



Danielle Sargent
DelTech Community College -
Lead Mech. Estimator 14 years



Adam Sorantino
University of Delaware -
Operations Management



Ben Lopresti
Catholic University of America -
Civil Engineering/Construction
Management



Ryan Vaccaro
Temple University -
Mechanical Engineering



Kenny Josel
Penn State University -
Chemical Engineering

The **Inside Sales Team** at Energy Transfer Solutions provides unrivaled value to our sales team. Our team strives to have complete technical knowledge of all manufacturers' product lines and constantly trains to remain on top of product changes and trends. Their expertise is projected in engineering selections, project management including order entry and financial aspects, quotes, submittals, and more. In addition to their highly regarded project management, the Inside Sales Engineers have a vast amount of work experience in a multitude of concentrations. They've worked in land surveying, pipeline site inspection, estimation, nuclear power systems and even NASA!

To contact an ETSI Inside Sales Engineer Call: 610-444-0333

Ridiculously Good-Looking UPS



Liebert® eXL™ UPS is a good-looking addition to a maximum efficiency data center.

[Learn More:](#)

EmersonNetworkPower.com/LieberteXL



Cooling Towers

6 Tips For Evaporative Cooling Equipment To Survive Another Cooling Season

As we approach the winter shut down season, inspecting cooling towers, closed circuit coolers and evaporative condensers for worn or damaged parts is essential to ensuring peak equipment performance in the future. Now is the time to replace aging or inefficient equipment and parts.

Diagnosing problems early may prevent unexpected spring start-up failures and costly emergency repairs. As an Evapco Mr. GoodTower representative, we provide parts, service, inspection, and consultation relating to evaporative cooling equipment, regardless of the equipment's age, model, or manufacturer.



The following key components should be inspected to ensure peak equipment performance:

1. **Fill (for Cooling Towers):** Check the cooling tower fill for physical damage, excessive dirt and/or scale build-up. If there is any, the equipment may be operating at less than maximum capacity and replacement fill may be required.
2. **Coil (Coolers & Condensers):** Check for leaks and scale build-up. Energy Transfer Solutions can provide an evaluation and recommendations.
3. **Eliminators:** Check for proper positioning, scale build-up, corrosion or clogged eliminators. Damaged eliminators can result in excessive drift and corroded/clogged eliminators will reduce thermal performance.
4. **Fan Wheels:** Check centrifugal wheels for excessive vibration. Replace vibrating or damaged fan wheels. Check vane axial fans for cracks in the blades or fan hub. Replace any damaged fans.
5. **Bearings:** Check for any unusual bearing noise. Grease bearings in accordance with manufacturer's recommended maintenance schedule. Consider stocking spare bearings.
6. **Belts:** Check for frayed and worn belts. Check for proper tensioning. Consider stocking spare belts.

As a Mr. GoodTower Service Center, Energy Transfer Solutions is a specialist in restoration and upgrading of all types of evaporative cooling equipment, for all manufacturers (Evapco, BAC, Marley, IMECO, Recold).



For more tips about evaporative cooling equipment maintenance, or to discuss a specific unit, contact the [ETSI Service Department at 610-444-0333](#) and [Click Here to Learn More about ETSI Service](#).

Service: Battery Maintenance

Pay attention to your batteries, so they are ready when you need them most!



Did you ever have the lights go off at home and grab your handy flashlight, press the switch, and nothing happens? The batteries are more than likely dead. You put them in and never gave a second thought, until you needed that flashlight in the dark. Batteries are like that, all batteries, no matter what their purpose. If you don't check on them and take care of them, at some point they won't perform when you really need them to.

Almost every electronic and electrical device in the modern world relies on battery power of some sort to function; cell phones, laptop computers, smoke alarms, clocks, your car, your watch, even your TV and children's electronic toys have batteries to maintain internal memory settings. Batteries are necessary and a critical device in our modern world.

The same basic things are true with the batteries that support the critical systems for your business infrastructure. There are batteries that hold memory functions intact on digital control equipment, and batteries that maintain critical system functions during power outages or power events. When I get into discussions with people regarding what is the most important thing to maintain that supports their data center equipment, I always answer your batteries!

Which batteries you may ask? There are several that are most critical:

1. UPS batteries. Your business invested a good deal of money to purchase an Uninterrupted Power Supply (UPS) system to provide critical power to the Information Technology (IT) systems that employees and customers rely on, most UPS use batteries of some type.
2. Stand by generators. Unless your UPS is relatively small, if your business has a UPS system supporting your IT equipment, it probably has a back-up emergency generator of some sort. If it does, guess what the generator needs to start? Good batteries!
3. Electrical system batteries. Many large data center facilities have dedicated battery systems to provide power to their electrical distributions systems to maintain function during power outages. This acts as a UPS for electrical systems that need to operate during utility power failures before the generators have come back on-line.
4. Emergency lighting and life safety systems (fire alarms, communications systems, exit lights). These are required by code and usually have batteries too.

There are many other types of batteries; but let's focus on the batteries for those four systems. A basic rule when it comes to any type of a equipment; if you need to rely on it, it should be regularly checked and serviced by a qualified technician. Since there are different battery types and designs used for all of these applications, I won't get into the weeds on the technical stuff and try to keep it general:

1. Develop a regular maintenance schedule based on the battery manufacturers' recommended maintenance instructions. The maintenance frequency can be anything from

once a year to once a week or more depending on the application, type, environment, and use. There really is no such thing as a 'maintenance free' battery. You still need to check on them from time to time.

2. Pay attention to the battery's age and surroundings (environment). As batteries get older their capacity may diminish. Replace batteries before they fail. The most common batteries used in many of these applications are Valve Regulated Lead Acid (VRLA) which have a standard 3 to 4 year life expectancy depending on how much use they have experienced (Charge and discharge cycles). If batteries are installed in areas that are typically hot, cold, wet, or dirty you will experience much shorter life and decreased performance characteristics when you need them.
3. Use qualified technicians to maintain your batteries. Preferably factory trained technicians. These individuals will be able to perform the routine maintenance functions and inspections safely and efficiently per the OEM requirements.

Remember, batteries can be dangerous. If they are holding a charge you can get shocked and they can't be easily turned off. Batteries can explode. If they are improperly maintained and overheat, they can go into thermal runaway, possibly exploding and releasing hydrogen gas and hot electrolyte (acid). These are just some of the reasons why trained personnel and proper maintenance practices are so important. Take care of your batteries with proper maintenance and care and they will be there to serve you when you need them most; sometimes during your darkest hour.....pun intended. For More Information [Click Here](#).

Ray Fegley

*Vice President, Strategic Account Services
DVL Group, Inc.*

Prepackaged Solutions

How One Manufacturer Came To The Rescue When Faced With Tough Applications

When Brookside Elementary school wanted to add air conditioning to their school, they had a big problem: they didn't have a mechanical room for a chiller. Sysstecon to the rescue. Sysstecon, a Modular Central Plant and Pumping Systems manufacturer represented by DVL and Energy Transfer Solutions, provided a "Chiller in a Box" solution that included all the necessary components (pumps, separator, expansion tank, etc.) all set in the parking lot and piped into the school. With Sysstecon, the chiller and boiler plant design focuses on reducing the kilowatts to the plant, not the component.



When a Philadelphia engineering firm needed to design and optimize a pump system with little time and little space available, they had a big problem. Sysstecon to the rescue. Sysstecon designed a pump system that was all factory mounted on a skid and factory tested. They back tested various pump HP configurations against the load profile of the building and came up with 60 HP, 40 HP and 25HP solutions to handle all aspects of the load profile, using a unique system called "Wire to Water Efficiency". In wire to water efficiency, you look at the kilowatts coming into your building and optimize the pumps, drives and motors together versus the typical design of optimizing them individually.

If you are using water, you want to include Sysstecon. They are the premier experts in balancing efficiency, cost, pipe distribution and system control for water systems. Don't miss your opportunity to have Sysstecon review your design and recommend options that you may not have considered. Contact your Sales Engineer to learn more about solutions from Sysstecon. Or, [click here](#), to review Sysstecon's capabilities.

Coming Soon:



Becomes



GROUP, INC. | Employee Owned

Since 1985 TSS and DVL have been representatives of Emerson Network Power. In 2004 DVL acquired TSS which to this day is being operated in Harrisburg, PA. You already know us, so look for the DVL name in Harrisburg coming January 2015!

Up Coming Events:

Emerson's Data Center User Group

November 3-5, 2014

***AFCOM Midlantic Chapter Board Meeting
at the Holiday Event***

December 4, 2014

[Click Here](#) for more Emerson Network Powers's Critical Advantage Webcasts

DVL Group, Inc. | 115 Sinclair Road, Bristol, PA 19007 | 215-785-5950
TSS | 200 South 41st Street, Suite D, Harrisburg PA 17111 | 717-564-2600

www.dvlnet.com

Energy Transfer Solutions, Inc. | 425 McFarlan Road, Suite 209, Kennett Square, PA 19348 | 610.444.0333

www.energytransfersolutions.com