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BOA
Building Operators Association of Canada

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What's Inside?

Important Phone Numbers

Emergency	911
Alberta Boiler Safety Association	403 291 7070
Alberta Labour (Emergency)	403 297 2222
Buried Utility Locations	1 800 242 3447
City Of Calgary (All Departments)	311
Dangerous Goods Incidents	1 800 272 9600
Environmental Emergency	1 800 222 6514
Poison Centre	403 670 1414
Weather Information (24hr)	403 299 7878

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Front Cover: Monika Bhandari

President's Message

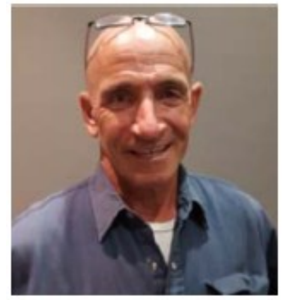
BOA Building Operators Association of Canada

I hope this message finds you & yours well and in good health

The Building Operators Association will delay the trade show to the spring. We send regrets and will try to arrange to not coincide with the oil and gas shows that typically run the spring dates. I will contact the companies that made inquiries to let them know of the proposed schedule.

By now you should have received the membership dues notification. I hope you will process it asap. It is our source of revenue that allows us to continue. Please, support us as we support you.

We are entering into a new year 2025 with promises and challenges. We still have not filled the many empty offices in the downtown core. This leaves the buildings understaffed. The maintenance of facilities must still be done that leaves too few doing too much. This leaves workers tired and frustrated. We still have a job to do, and it must be done with safety in mind. Are workplace accidents, tragic fate or a preventable failure? It is known that workplace accidents never happen 'by chance'? Behind every fall, every injury, and every human tragedy lies a chain of preventable mistakes: a forgotten safety gear, rushed training, or ignored protocols. Are our worksites truly as safe as we claim? Allowing hazardous conditions to exist is setting up for failure; safety inspections of the worksite should be a regular event. Training in task analysis and development in safe work procedures is essential. How many companies genuinely invest in maintaining and upgrading their equipment? Lack of proper training: Being qualified isn't enough. Regular, specific training saves lives.



Neglect of safety protocols: Can meeting a tight deadline ever justify putting lives at risk? What can we do about it? What do you think is the biggest barrier to workplace safety today? Is it a lack of investment, the pressure of tight deadlines, or simply a mindset issue?

Act before it's too late: Building a safety culture isn't optional—it's a necessity. This means thorough audits, correct use of equipment, and open communication between management and employees. **Protecting workers is an investment:** Did you know that every dollar spent on prevention can save up to four dollars in accident-related costs?

Let's have a safe 2025! See you at the next meeting, December 10th at the Danish Canadian Club.

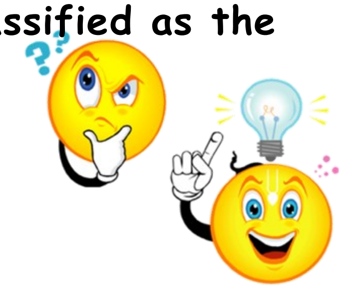
Les Anderson

TEST YOUR OPERATOR IQ!

Are you equally adept at troubleshooting problems in the boardroom and the boiler room? As the resident facility guru, there's a lot riding on whether or not you know the difference between sounds control and a sound investment.

Try our monthly Operator IQ challenge...*answers on page 26*

1. A forced hot water circulating system can be classified as the following type:



a) a) loop system
b) b) one pipe system
c) c) two pipe direct return system
d) d) two pipe reverse return system
e) e) all of the above

2. A hot water boiler of the same output is:

a) larger than a steam boiler
b) smaller than a steam boiler
c) the same size as a steam boiler
d) taller than a steam boiler
e) shorter than a steam boiler

3. A hot water system which circulates water through the pipes with a pump is known as a:

a) circulating system
b) forced system
c) pumped system
d) gravity system
e) return system

4. Advantages of the forced circulation hot water heating systems are:

a) reduction in pipe size and greater heat storage capacity
b) high pressure piping and controls
c) high vacuum in the return lines and pumps
d) higher make-up and better chemical control
e) low water make-up and better temperature control

5. In a hot water heating system compared to a steam heating system, if there is a leak, damage will:

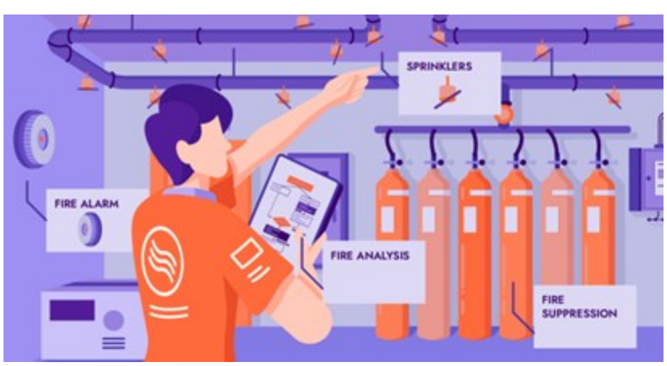
a) be greater in the steam system
b) be greater in the hot water system
c) be about the same in either system
d) depend on where the boiler is located in the system
e) be minimal due to the automatic drain system

Maximising Efficiency: How to Optimise Fire Protection System Maintenance Costs Without Compromising Safety

Juan Carlos LaGuardia Merchán

Over the years in facilities management, one of the challenges I've encountered time and again is balancing the need for robust fire protection with the pressures of budget constraints. Fire protection systems are non-negotiable, they're the backbone of your facility's safety infrastructure. But how do you optimise the maintenance costs without cutting corners on safety? This is a delicate balance, and through years of trial, error, and continuous improvement, I've learned a few strategies that have proven effective in keeping costs in check while ensuring compliance and safety.

First and foremost, **understand the system** you're working with. One of the most common mistakes I've seen is a lack of in-depth knowledge about the fire protection system in place. Whether it's sprinklers, fire alarms, or suppression systems, understanding the specific components and their maintenance needs is crucial. Not all systems require the same level of upkeep, and customising your maintenance schedule to the specific system you have can significantly reduce unnecessary checks or replacements. In my experience, facilities that take the time to familiarise themselves with the intricacies of their system tend to save money in the long run.



Another key approach is **adopting a preventative maintenance strategy**. It may sound obvious, but it's surprising how many facilities still rely on reactive maintenance, only fixing issues when they arise. While this might seem cheaper in the short term, it usually ends up being far more costly. Equipment failures, emergency call-outs, and last-minute repairs often come with premium costs. Implementing a proactive maintenance schedule ensures that you catch potential issues before they escalate. For example, scheduling regular inspections and minor repairs of your fire protection system prevents small faults from snowballing into major, expensive problems.

A significant lesson I've learned over the years is the importance of **leveraging technology**. The advances in smart fire protection systems have been a game changer for facilities management. Many modern fire protection systems now come equipped with sensors and monitoring tools that can provide real-time data on the condition of your system. These systems allow you to track performance, spot trends, and identify areas of concern before they become critical. By using predictive analytics, you can optimise maintenance schedules, ensuring that you're not over-servicing or under-servicing your system. I've seen facilities dramatically cut costs by making data-driven decisions rather than relying on generic maintenance timelines.

Partnering with trusted service providers is another essential aspect. Over the years, I've learned that not all maintenance providers are created equal. Choosing a reliable, experienced service provider can make all the difference when it comes to cost efficiency. Many times, I've seen facilities overcharged for unnecessary work or materials simply because the service provider lacked transparency or wasn't familiar with the specific system in place. Building a relationship with a trusted provider who understands your system and your budgetary constraints allows for more honest conversations and tailored solutions, ultimately leading to cost savings.

I also encourage **consolidating maintenance contracts** where possible. In my experience, having multiple service providers for different components of your fire protection system often results in overlapping work and inflated costs. Consolidating these contracts into a single provider who can handle all aspects, fire alarms, extinguishers, and suppression systems, streamlines the process and reduces redundancy. Plus, it often leads to better-negotiated rates due to the volume of work you're consolidating under one contract.

Lastly, regular training of your in-house team is an invaluable investment. While many aspects of fire protection system maintenance require specialised skills, there are several routine checks and basic maintenance tasks that your in-house team can handle. Over the years, I've seen how training on tasks such as visual inspections of sprinklers, testing alarms, and monitoring system pressure can reduce dependency on external contractors for minor issues, thus lowering costs. It empowers your team while keeping expenses down.

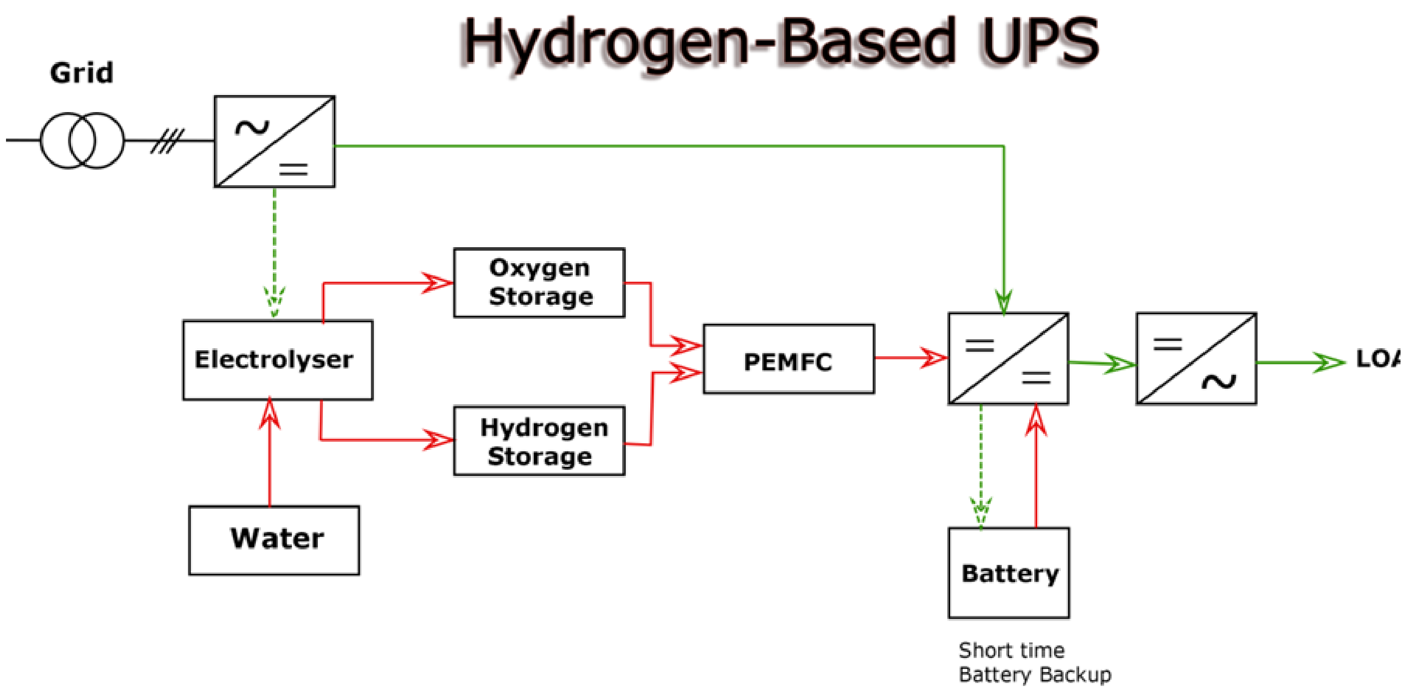
Optimising fire protection system maintenance costs is all about being proactive, informed, and strategic. By understanding your system, adopting preventative strategies, leveraging technology, working with trusted partners, consolidating contracts, and empowering your in-house team, you can strike that perfect balance between cost efficiency and safety.

Throughout my years in the field, I've seen these approaches save both money and headaches, all while keeping facilities compliant and secure.

Juan Carlos LaGuardia Merchan *is a Senior Mechanical Engineer and Facility Manager, Expert in Operational Excellence, Facilities Management, and Strategic Leadership, Proficient in Automation and Digitalization Initiatives*

Hydrogen-Based UPS for Tier 4 and Tier 5 Data Centers

By Moshen Abedi



A hydrogen-based UPS (Uninterruptible Power Supply) system integrates hydrogen fuel cells into traditional large-scale UPS infrastructure, supported by a short-duration battery backup, to deliver a clean and reliable hybrid power solution. During a power outage, the hydrogen UPS system activates within seconds, with the batteries seamlessly bridging the transition until the PEMFC (Proton Exchange Membrane Fuel Cell) takes over. Once grid power is restored, the system transitions back to standby mode, and the hydrogen storage is replenished for future use.

Here's a detailed breakdown of how it works:

1. Key Components

A hydrogen UPS system consists of the following components:

- **Hydrogen Storage Tanks**: Stores hydrogen gas in compressed, liquid, or solid-state form, ready for immediate use.
- **Fuel Cells (PEMFC)**: The core component that converts hydrogen into electricity through an electrochemical reaction.
- **Power Inverter System**: Regulates and convert the DC voltage output from the fuel cells to required load voltage and frequency.
- **Energy Management System**: Monitors the power demand, fuel cell status, and hydrogen supply, ensuring seamless operation.
- **Batteries for Short-Term Backup**: A small battery system provides instantaneous

power during the transition time (milliseconds) before the fuel cell activates.

- **Cooling System**: Removes heat generated during fuel cell operation.
- **Control and Safety Systems**: Monitors hydrogen flow and fuel cell operation, ensuring safe and efficient performance.

2. How a Hydrogen UPS System Works—Normal Operation (No Outage):

- The data center is powered by the primary energy source (e.g., grid or renewable power).

The hydrogen UPS system remains on standby, monitoring the power supply and maintaining readiness.

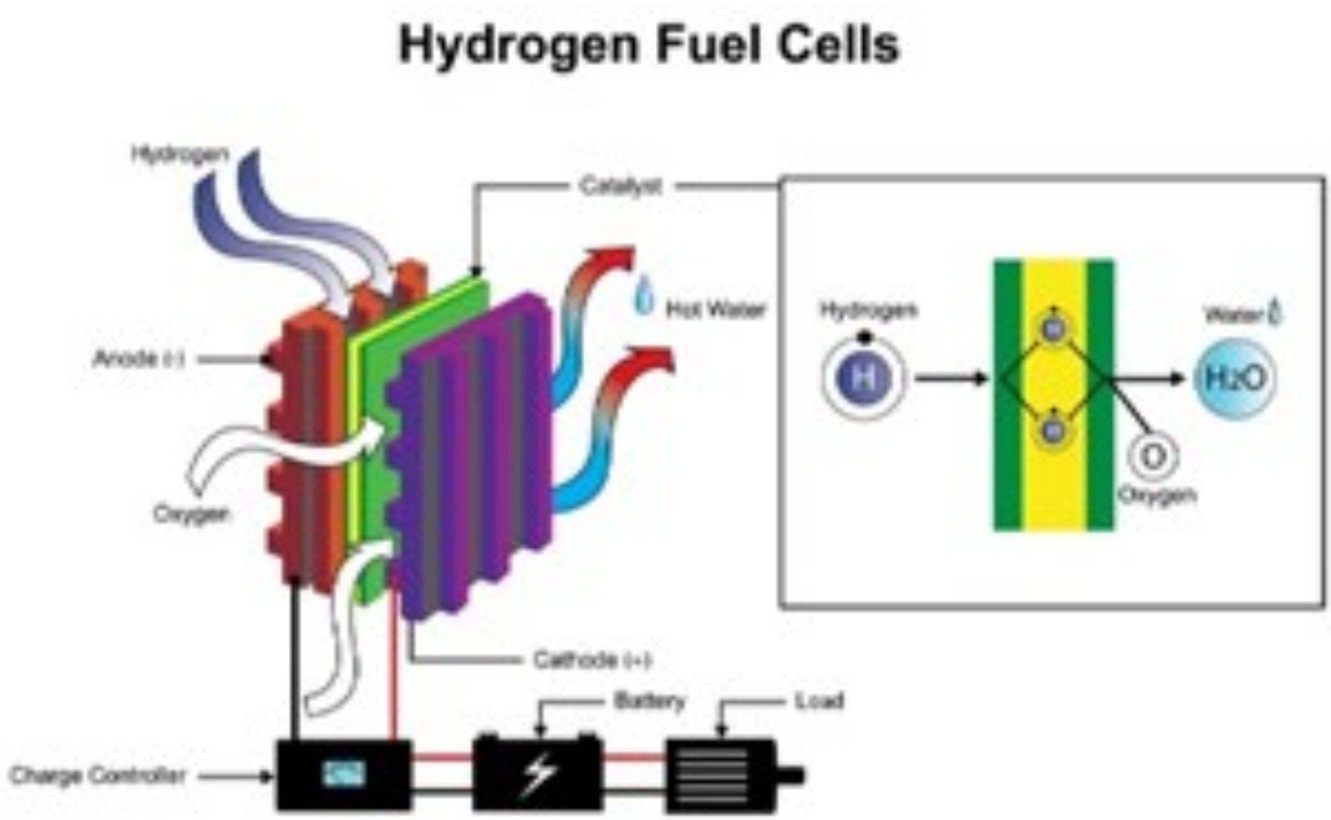
During a Power Outage:

- **Detection**: The UPS detects the loss of grid power and sends a signal to activate the hydrogen fuel cell system.
- **Immediate Power Supply**: If equipped, backup batteries kick in instantly to supply power during the transition time.
- **Fuel Cell Activation**: Hydrogen from storage tanks is fed into the fuel cells (PEMFC), which combine it with oxygen from the air. The electrochemical reaction generates direct current (DC) electricity.
- **Power Inverter**: The power Inverter system converts the DC output from the fuel cells into alternating current (AC), compatible with the data center's equipment.
- **Extended Operation**: The system continues to supply power as long as hydrogen is available, unlike batteries that have a limited discharge capacity.

Restoration:

- Once the primary power source is restored, the hydrogen system transitions back to standby mode.

If batteries are used, they recharge using



power from the fuel cells or the grid.

3. Benefits of Hydrogen in UPS Systems

- **Longer Backup Duration**: Hydrogen systems can provide power for hours or days, limited only by hydrogen storage capacity.
- **Zero Emissions**: Produces only water and heat as byproducts, meeting sustainability goals.
- **High Reliability**: Fuel cells have fewer moving parts, reducing maintenance requirements.
- **Scalable Power Output**: Easily scalable to meet the power demands of any data center size.
- **Renewable Integration**: Can use green hydrogen produced from renewable sources.

4. Hybrid Integration with Batteries

In some designs, hydrogen UPS systems are combined with batteries for enhanced performance:

- **Short-Term Backup**: Batteries handle power needs during the seconds required to start the fuel cells.
- **Long-Term Backup**: Fuel cells provide sustainable power for extended outages.

5. Key Considerations for Implementation

- **Infrastructure**: Requires hydrogen storage and delivery systems.
- **Safety**: Advanced safety protocols are necessary due to hydrogen's flammability.
- **Cost**: Higher upfront costs compared to traditional systems but decreasing with advancements.
- **Efficiency**: Efficiency depends on the hydrogen production method. Green hydrogen offers the most sustainable solution.

6. Modes of Integration

Primary UPS System:

Hydrogen fuel cells can completely replace conventional UPS systems, providing both power conditioning and backup functionality.

Hybrid Systems:

Hydrogen can be combined with traditional batteries:

- **Batteries for Short-Term Backup**: Handles instantaneous power needs during brief outages.
- **Hydrogen for Long-Term Backup**: Kicks in for extended outages, supplying power indefinitely as long as hydrogen is available.

Secondary Backup:

Hydrogen systems can act as a secondary backup to traditional diesel generators, providing an environmentally friendly option for extended outages.

Conclusion

Hydrogen-powered UPS systems are poised to transform data center backup power solutions, offering a sustainable, efficient, and reliable alternative to

conventional systems. As hydrogen technology evolves, its adoption in critical power infrastructure will likely grow, enabling cleaner and more resilient data centers.

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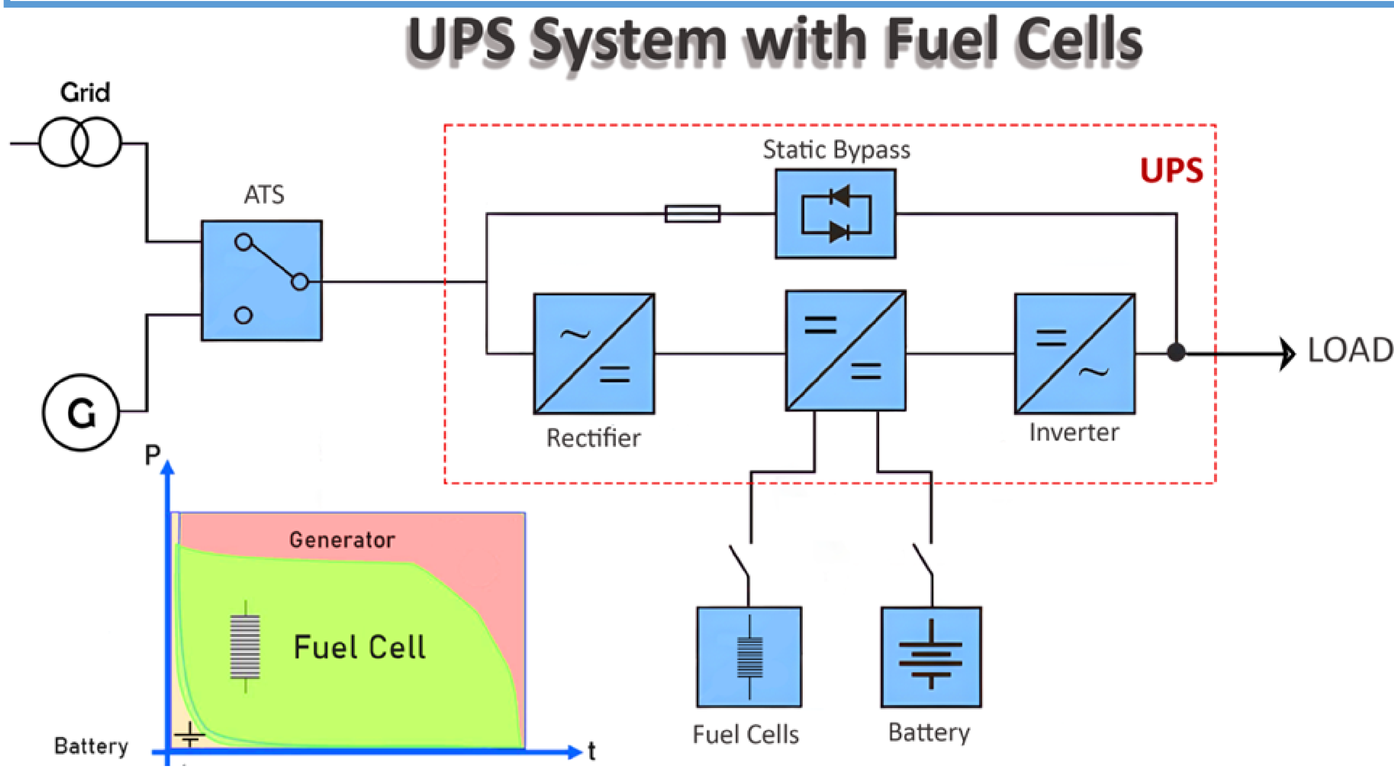
Integration of Fuel Cells with UPS Systems for Data Center Backup Power

Mohsen Abedi P.Eng, PSM.Eng



Integrating fuel cells with UPS systems for backup power in data centers offers a promising solution that blends sustainability, reliability, and efficiency. Fuel cell back-up power supply systems combine the advantages of battery and diesel solutions. Depending on the fuel, they operate with low or zero emissions like a battery but offer running times like diesel engines.

Here's a breakdown of the concept and its advantages:

How it Works:

1. **Fuel Cell Technology**: Fuel cells generate electricity through an electrochemical reaction, typically using hydrogen and oxygen, without combustion. Common types for this application include proton exchange membrane (PEM) and solid oxide fuel cells (SOFCs).

1. **Integration with UPS**: The UPS provides immediate backup power during a grid failure, ensuring continuity until the fuel cell system comes online. Once activated, the fuel cells supply steady power for extended periods, limited only by the fuel supply.

System Architecture: Fuel cells can be deployed centrally to serve multiple loads or decentralized to support specific server racks or zones. The system may also include batteries or flywheels for enhanced transient response.

Advantages:

Fuel cell technology can particularly leverage its technological strengths where high availability or stringent environmental requirements are required.

1. **Sustainability**: Hydrogen fuel cells produce water as a byproduct, making them environmentally friendly compared to diesel generators. Hydrogen can be produced using renewable energy sources like wind or solar.

2. Reliability: Fuel cells offer high availability with fewer moving parts, reducing the risk of mechanical failure. They are immune to many of the environmental challenges that impact generators, such as extreme weather or fuel quality issues.

3. Scalability: Fuel cells can be modular, allowing for scalability in capacity as the data center grows.

4. Regulatory Compliance: Fuel cells meet strict emission standards, which is increasingly crucial in regions with stringent environmental regulations.

5. **Efficiency**: Combined Heat and Power (CHP) configurations can use the waste heat for facility heating or cooling, boosting overall efficiency.

Challenges:

1. **Initial Cost**: Fuel cells require a higher upfront investment compared to traditional diesel generators.

2. **Hydrogen Infrastructure**: Establishing reliable hydrogen supply and storage systems can be complex and costly.

3. **Technological Maturity**: While fuel cell technology is advancing, long-term reliability in some large-scale deployments is still under scrutiny.

4. **Regulatory Hurdles**: Adapting existing building and safety codes for hydrogen systems can be time-consuming.

Applications and Use Cases:

1. **Green Data Centers**: Companies focusing on sustainability, like hyperscale's (Google, AWS, Microsoft), are ideal candidates for integrating fuel cells.

2. **Remote Locations**: Data centers in regions without robust utility infrastructure can benefit from a reliable on-site hydrogen-powered backup system.

3. **Critical Loads**: Industries with zero tolerance for downtime, like banking and healthcare, can leverage this hybrid approach for uninterrupted operations.

Conclusion:

Fuel cells integrated with UPS systems represent a future-forward solution for data centers aiming to reduce emissions while maintaining high reliability. With the global push towards net-zero carbon goals, this technology is poised for adoption, especially as hydrogen infrastructure and cost dynamics improve.

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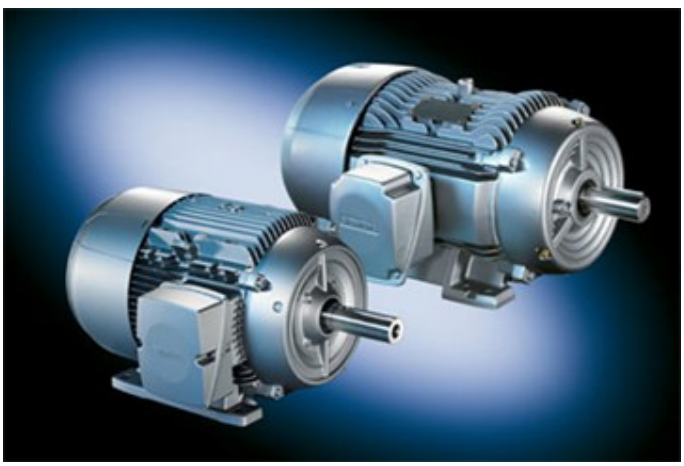
Meeting Motor Efficiency Requirements Part 1

by Henry Shir

Selecting the right motor and associated equipment for a project requires a close look at the options.

While designations such as energy-efficient and premium-efficient have been used in engineering specifications and motor catalogs for years, facility professionals are now required to specify energy-efficient motors by federal law. The Energy Policy Act (EPACT) mandates motor efficiency requirements for the types of motors facility professionals commonly specify.

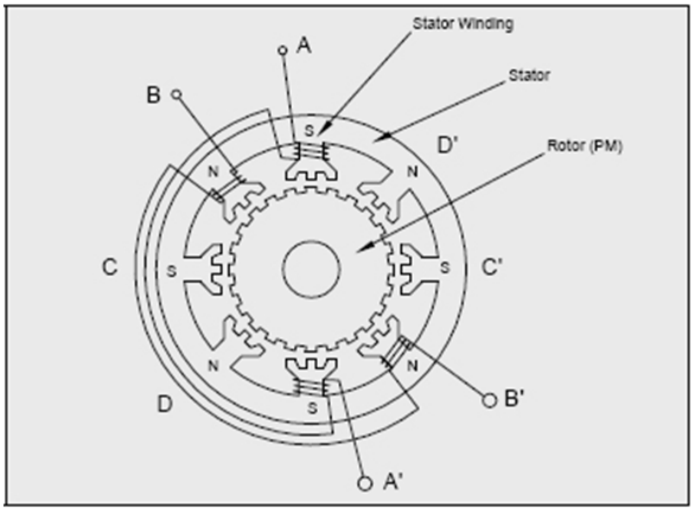


EPACT requires that induction motors used for HVAC applications meet the full-load efficiency requirements of NEMA standard MGI if the motors run at 3,600, 1,800 or 1,200 rpm for motors powered at 230/460 volts. The EPACT requirements cover both totally enclosed fan cooled (TEFC) and open drip proof (ODP) motors up to 200 hp. For HVAC applications, totally enclosed motors typically are found in cooling tower applications with ODP motors in the majority of other applications, such as air handling unit fans and pumps. For HVAC applications, most motors run at 1,800 rpm. Some pump motors are specified at 1,200 rpm, especially for cooling tower applications where minimum net positive suction head is a problem. Motors specified at 3,500 rpm are used for some boiler feed pumps, but normally should not be used in HVAC applications due to noise problems.

At 1,800 rpm, a 1 hp ODP motor needs to have a minimum efficiency of 82.5 percent, while at 200 hp the efficiency requirement is 95 percent. Motors with these efficiencies are available in the catalogs of most major motor manufacturers. All efficiency testing must be performed in accordance with IEEE Standard 112, Test Method B. Facility professionals requiring specific efficiencies for a particular motor should consult Table 12-10 in the NEMA standard mentioned above for the motor types and speeds that the standard covers.

Facility professionals should verify that new motors have the required nameplate with the NEMA efficiency stamped on it. Facility professionals should state in specifications that the motor have at least the minimum efficiency in the NEMA standard for its size and type, when tested in accordance with IEEE Standard 112, Test Method B. Specifiers should not merely state that energy-efficient or premium-efficient motors be provided, as these terms in themselves do not meet the requirements of the federal law. Shop drawings for all motor-powered equipment must be checked to ensure that minimum efficiencies are met.

Motors are typically not a separate shop drawing item but are included with the fan or pump being submitted. Typically, only the horsepower and voltage characteristics of the motor will be included in the submittal; the facility professional must request the efficiency data separately.



Smaller fractional horsepower motors — which are typically less efficient — are not covered by the federal standard. These motors can amount to a significant building load if enough are used. An example is an office building using series-type fan-powered terminal boxes with many small motors powering fans that run constantly during the occupied cycle. Even though these motors are not covered by the federal standard, facility professionals should still specify the most efficient motors available.

Even though energy efficiency is a prime consideration when specifying electric motors, other factors are important. Consider the type of motor to be used, motor speed — which may not be the same as the fan speed — the number of speeds the motor has, type of motor drive, overload capability, and coordination of motor requirements between the HVAC and electrical engineer.

Motor Type

Most motors used in HVAC systems are ODP, have ventilation openings and are installed in such a way as to keep water or other liquid from dripping into them vertically. This type of motor is not suitable for applications where the motor is exposed to significant amounts of water — for example, in a cooling tower. They are suitable, however, for most motor applications within a mechanical room.

Cooling tower fan motors are typically TEFC or totally enclosed air over with a fan rather than openings to provide cooling. These motors can survive the wet environment of a cooling tower. Special coatings are applied to the motor windings to aid in moisture protection. Some towers that use centrifugal fans have the motor located outside the wet airstream. These fan motors can be ODP.

Some environments — for instance, where combustible vapors are present or other hazardous conditions exist — require explosion-proof motors and other electrical components, such as junction boxes. Explosion-proof motors have enclosures that prevent the ignition of gases or vapors. They are more expensive and should be specified only if the authority having jurisdiction over the project determines their use is required. That authority may be the local fire chief, the owner's insurer or the architect. The electrical engineer usually investigates whether explosion-proof motors are required, as receptacles and lighting must be explosion-proof as well. The National Electrical Code articles 500 through 516 determines whether explosion-proof motors and equipment are required. These articles cover many different classifications of hazardous environments.

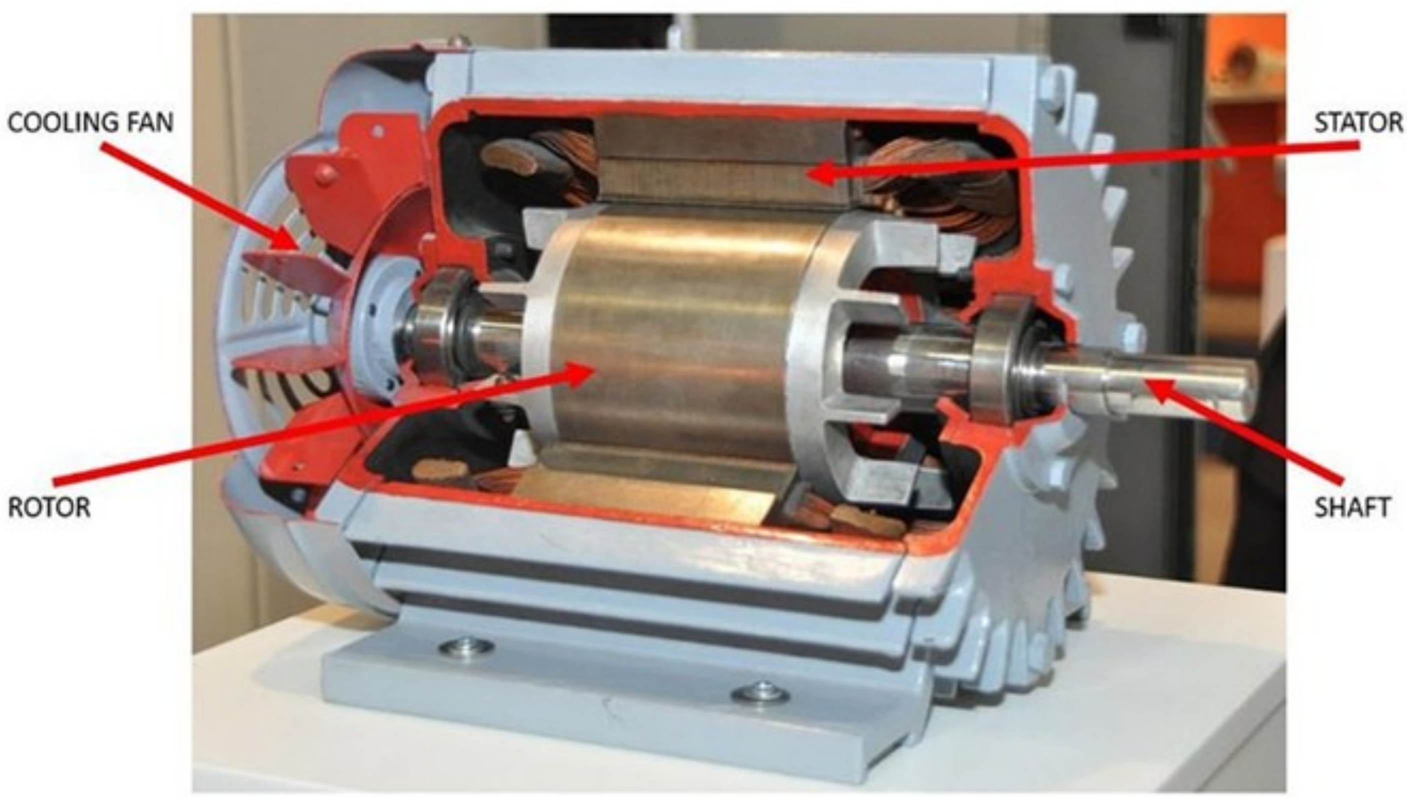
Motor Speed.

The great majority of motors uses in HVAC applications spin at 1,750 rpm; these are the same as the 1,800 rpm motors mentioned in the standard above with an allowance for slip. Motors spinning at 1,150 rpm are used occasionally for condenser water pumps serving cooling towers, where a very low net positive suction head pump is required, as in the case of towers located a significant distance from the pumps or towers located below the pumps. Motors spinning at 1,150 rpm are expensive and should not be specified unless required.

Motors spinning at 3,600, although commonly used for process applications, should rarely be used for HVAC applications because they can cause noise disturbances. An exception is some types of boiler feed pumps. Some small direct-drive motors for ceiling exhaust fans and fan coils have motors that spin at 1,050 or 1,550 rpm, the lower speed being preferable for acoustical reasons. Other rpms may occasionally be found in manufacturers' catalogs for various types of small direct drive fans.

Two-speed motors are commonly used in HVAC applications where occupied and unoccupied cycles are required for a fan, on fume-hood applications to save energy when a sash is lowered and as a means of capacity control for cooling towers. If the low speed cfm of a fan is to be one-half of the high speed cfm, then the low speed rpm of the motor must also be one-half of the high speed rpm. Many two-speed motors have a low speed that is 67 percent of the high speed, which, if specified, will not produce the desired results.

If a two-speed motor is specified, a two-speed starter also must be specified. Two-speed starters have two contractors and are close to double the cost of single-speed starters. As more facilities use variable frequency drives



(VFD) and their costs come down, two-speed motors will be used less. The energy savings for a VFD are significantly greater than for a two-speed motor, assuming the motor load can vary continuously downward. In some cases where only two-speed operation is desired, such as an occupied unoccupied cycle for a fan motor, a variable speed drive (VSD) is still purchased to allow for greater flexibility of adjustment.

Motor Drives

Motor drives consist of pulleys and belts and is not variable. HVAC fan motors have belt or direct fan drives. With a belt drive, a series of V-belts connecting the motor pulley and the fan pulley drive the fan. The motor pulley has an adjustable sheave that may be adjusted during the balancing procedure to obtain the proper airflow through the fan. This pulley may be replaced with a fixed sheave when the balancing procedure is complete. With a direct-drive fan, the fan wheel is connected directly to the motor without possibility of direct adjustment. Smaller direct-drive motors may have their speed adjusted with silicon-controlled rectifier speed controllers.

Belt-drive motors are generally preferred for fan applications due to the ability to adjust the drive. This is important, as the installed static pressure in the ductwork is often different from the engineer's original calculation. Sometimes, the fan does not perform according to its fan curve, and its speed must be adjusted in the field — although this is more unusual than static pressure variation. On small fans under 200 cfm, only direct-drive motors may be available. These should always be specified with speed controllers to make air flow adjustment possible.

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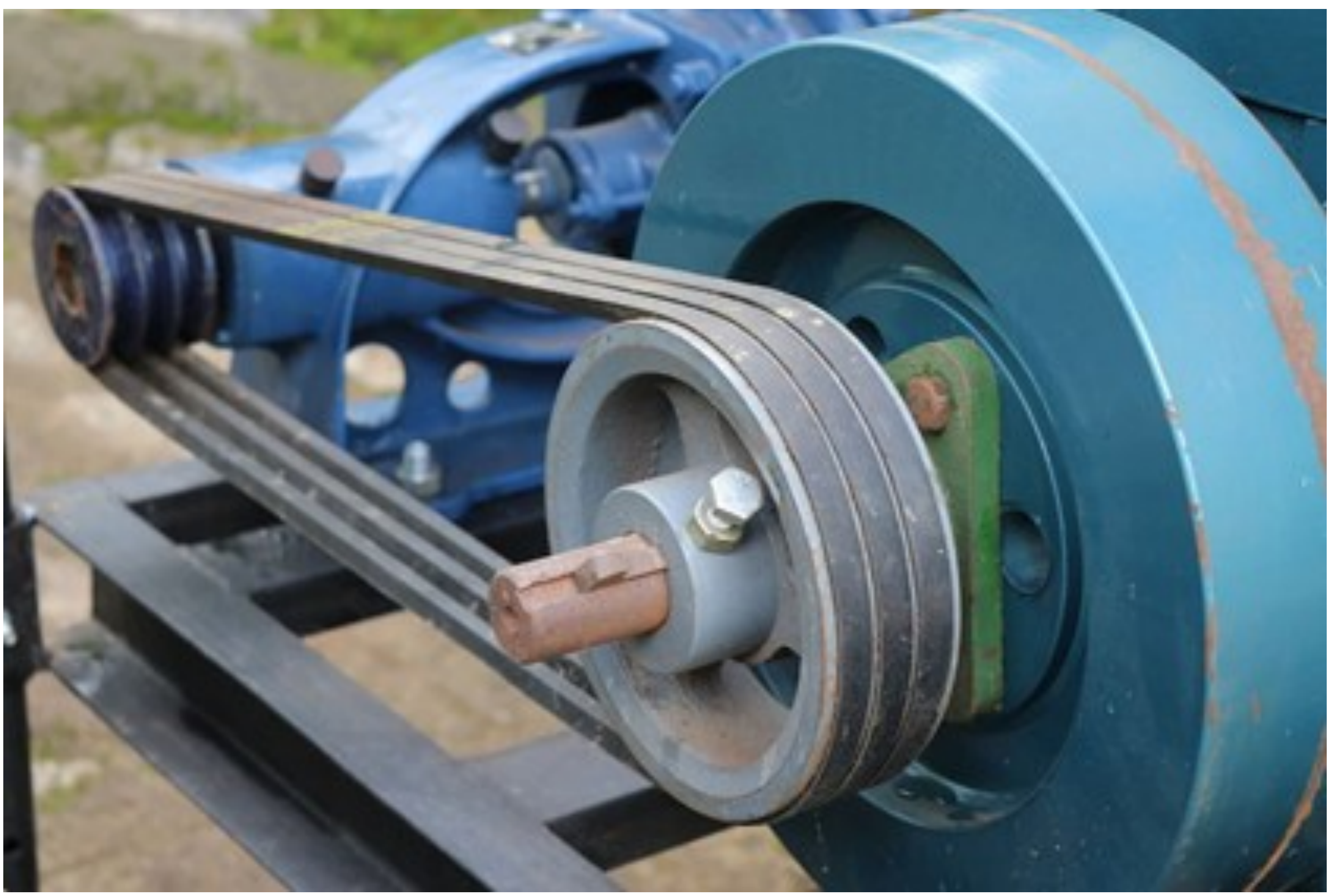


KenKen Puzzle

How to solve the Kenken puzzle:

(Answers on page 26)

- Fill in the numbers from 1 –6
- Do not repeat the number in any row or column
- The numbers in each heavily outlined set of squares, called cages, must combine (in any order) to produce the target number in the top corner using the mathematical operation indicated
- Cages with just one square should be filled in with the target number in the top corner
- A number can be repeated within a cage as long as it in the same or column

9				1				8
	4							5
	7	6	2					
	9	1					2	
		8	9			3		
2				3	8	1		
7							8	3
					7			
		2	3				4	

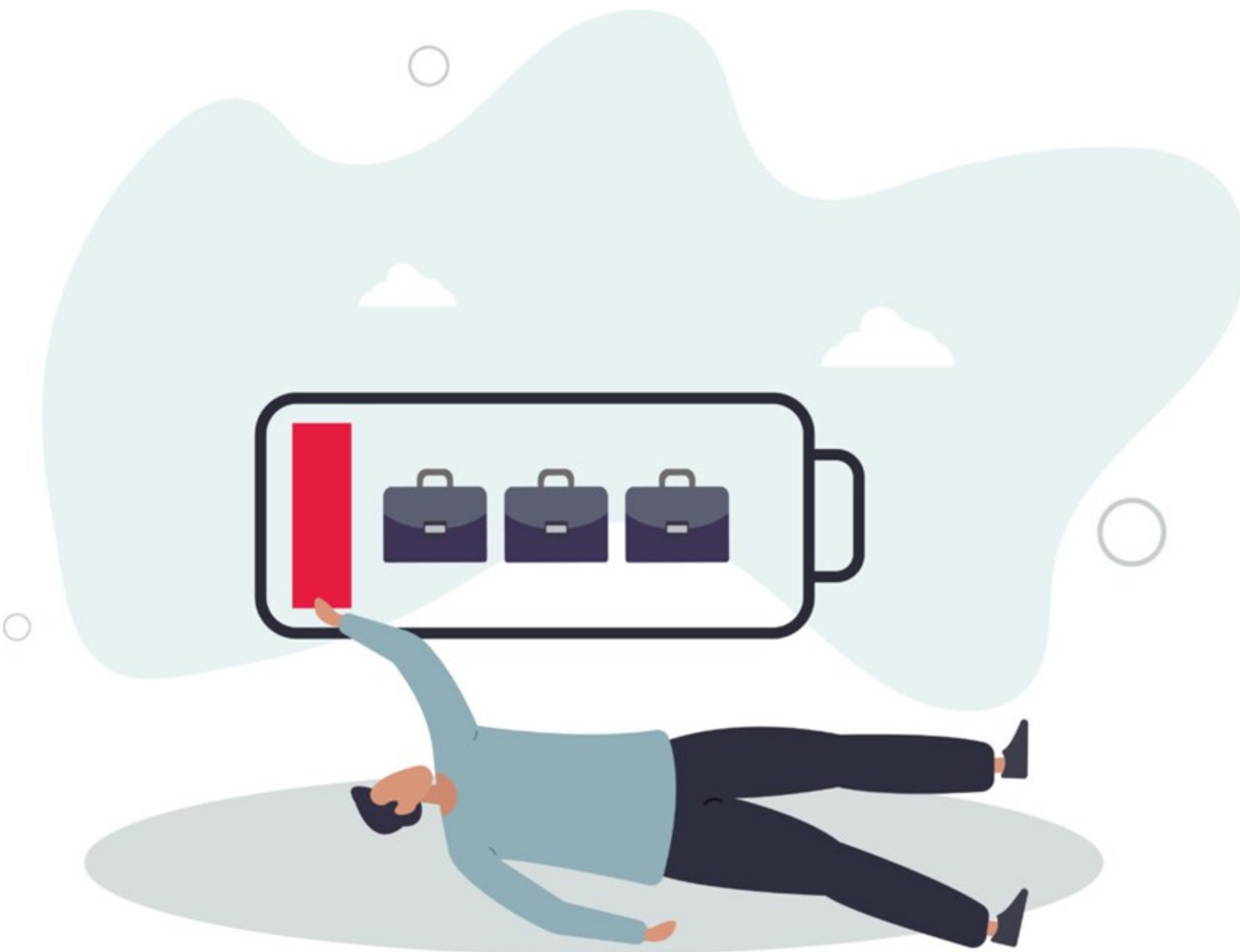
Why Workplace Mental Health Programs Often Miss Their Mark

By Bill Howatt

If you experience a minor cut on your leg, you apply a band-aid to protect the wound and help your body heal. In contrast, if you suffer a deep leg wound in an industrial accident, someone trained in first aid will apply pressure and slow the bleeding until a surgeon can repair any severed arteries to ensure healing.

This analogy illustrates a crucial point about workplace mental health and psychological health and safety. Many organizations deploy "band-aid" solutions, such as workshops or stress-management programs, which may provide temporary relief but often fail to address the underlying risks that can result in mental harm, injury and illness.

Just as superficial treatment won't fix a deep cut, surface-level interventions won't



effectively eliminate the root causes of psychological distress – whether they be workplace culture, lack of support or unmanageable workloads. Without identifying and tackling core issues, mental harm risk increases. Employers must shift their focus from quick fixes to comprehensive strategies that ensure lasting psychological safety for everyone in the workplace.

Insights for designing psychological health and safety interventions

The most crucial coaching tip I offer to employers is that addressing symptoms without a deep understanding of the underlying environment leaves many mental health programs failing to create a meaningful impact.

Take, for instance, Company A, where leaders struggle to build trust and rapport with their teams. Complaints arise about leaders being short-tempered and uncaring. In response, the company provides leadership training, believing that equipping leaders with new tools will solve the problem. After attending an intensive two-day, off-site training program, the leaders return energized yet find themselves back in a challenging environment.

Imagine these leaders returning to a workplace operating at 80 per cent capacity due to staff shortages, with tired employees, rising turnover and senior leadership pushing for ambitious targets. Unsurprisingly, the newly acquired skills from the training do little to improve employee morale or relationships. Nor do these skills help leaders who are stressed and at risk of burnout.

This scenario underscores the danger of treating symptoms – upset employees and ineffective leadership – without investigating their root causes. In this case, the problems extend beyond leadership skills. They include factors such as employee and leader burnout, staffing issues and unrealistic performance expectations supported by limited resources. The problems include lack of understanding why capacity is down to 80 per cent, employees going on disability leave or quitting, and vacancies remaining unfilled.

Cultivating psychological safety requires a thorough root cause analysis to understand what psychosocial factors are charging and draining employees' batteries to the point of being psychosocial hazards that create harm.

Understanding the systemic drains on a workforce – inadequate staffing levels and high workload pressures – allows the employer to implement solutions addressing these core issues. Only then can they create a supportive environment where leadership training can produce lasting results and positively transform the employee experience.

Coaching insights for uncovering the truth behind effective workplace mental health programs

Leaders must move beyond activities and information dissemination to add value and make a meaningful impact. There are no shortcuts to fostering a mentally healthy workplace. However, when intentional actions are applied consistently within a structured Plan-Do-Check-Act framework, organizations can cultivate the habits, culture, and energy needed to protect and promote mental health.

Random acts of wellness and superficial "check-the-box" initiatives cost companies millions of dollars globally while contributing little to improving workplace mental health. To reverse this trend, decision-makers must commit to uncovering the truths and facts that underpin a psychologically safe work environment. By prioritizing efforts and planning strategically, organizations can create sustainable practices that address symptoms and nurture a robust mental wellness culture for all employees.

Adopt a systemic approach to workplace psychological safety

The first crucial step in enhancing psychological safety is analyzing the workplace through a systems lens. Review available data from the past 24 to 36 months to identify trends impacting employee mental health. Understanding that employers and employees share accountability is essential. Collaboration and open dialogue foster a culture that promotes and protects mental health.

Consider three key clusters that influence workplace dynamics: how work is organized, the quality of interpersonal interactions, and whether employees have the necessary resources and environment to perform at their best. Each cluster encompasses staffing levels, a safe and respectful culture, leadership styles, environmental conditions, recognition programs and work demand. These factors can drain or charge workplace energy.

To effectively identify what is draining or charging your workplace system, actively engage key stakeholders and seek their input. Employing an intersectional lens ensures the data collected reflects the workforce's diverse perspectives. Data collection methods can include qualitative approaches such as interviews and focus groups and quantitative tools like workplace risk assessments and pulse surveys.

The objective is to gather comprehensive data that accurately depicts the symptom load and identifies likely root causes based on factual insights. By taking a systemic approach rather than opting for quick fixes or band-aid solutions, organizations can create a healthier, more supportive work environment that enhances psychological safety for all employees.

Focus on redesigning the environment to address root causes

During the planning phase of the Plan-Do-Check -Act cycle, ensure that proposed interventions prioritize creating a workplace environment that reduces drains on mental health. This involves identifying and implementing controls to eliminate risks and promote mental well-being.

Redesigning the work environment can involve several key areas, including re-evaluating recruitment practices, adjusting staffing levels, modifying overtime policies and clarifying work demand expectations. These changes can directly influence employee experiences and reduce stressors contributing to mental harm.

Decision-makers must consider the cost of inaction. Understanding the potential consequences of maintaining the status quo highlights the urgency of addressing current trends and reinforces the value of making proactive changes.

Employers should adopt a systemic approach to implementing strategies to enhance the employee experience. They must define what aspects of the work environment they can control, such as staffing and policy adjustments, and recognize employees' responsibilities of developing resilience and fostering respectful interactions with peers. By addressing the environment and individual behaviours, organizations can tackle the root causes of mental health drains more effectively, leading to healthier workplaces where everyone thrives.

Dr. Bill Howatt is the Ottawa-based president of Howatt HR Consulting.

Manufacturer fined $60,000 after worker injured by unshielded saw blade

By OHS Canada

Compliance & Enforcement

A manufacturing company has been fined $60,000 after a worker was critically injured by an unshielded saw blade.

The company, which is based in Hensall, Ont., and manufactures and assembles park model and house trailers, pleaded guilty to failing to ensure the saw was equipped with its shield and a riving knife as required by section 24 of Ontario Regulation 851/90. As such, the company breached its duties as an employer under section 25(1)(c) of the *Occupational Health and Safety Act.*

What happened

On April 20, 2023, a worker was cutting a piece of melamine using a table saw. The protective shield that goes over the saw blade, preventing inadvertent contact with the blade, was missing when the worker was critically injured. Following the incident, and an investigation by the Ministry of Labour, Immigration, Training and Skills Development, the company installed the protective shield on the saw, as well as a riving knife.

In addition to the $60,000 fine, the court imposed a 25 per cent victim fine surcharge as required by the *Provincial Offenses Act*. The surcharge is credited to a special provincial government fund to assist victims of crime.

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The 5th Class power Engineering Course will begin on Thursday February 23, 2023 and will take place every Tuesday and Thursday evenings from 5-8pm
The course will be held online only using Zoom.
The fee for enrollment will cover the cost of the 150 hour course, textbooks, and BOMA certificate upon completion
please note this does not include the ABSA exam
The total cost including GST is $2,199.75
Questions? Email Lloyd Suchet at lloyd.suchet@boma.ca for more details.

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TEST YOUR OPERATOR IQ ANSWERS

Answers: 1) c 2) b 3) b 4) a 5) b

Kenken Puzzle Answer

9	2	5	7	1	4	6	3	8
1	4	3	8	6	9	2	7	5
8	7	6	2	5	3	4	1	9
3	9	1	5	7	6	8	2	4
4	6	8	9	2	1	3	5	7
2	5	7	4	3	8	1	9	6
7	1	9	6	4	2	5	8	3
5	3	4	1	8	7	9	6	2
6	8	2	3	9	5	7	4	1

JOIN US:
TUESDAY DECEMBER 10, 2024 AT 5PM FOR OUR IN-PERSON MONTHLY MEETING

Title: Self Improvement for Building Operation Professionals

Presenters: Valerica Firan

Location: Danish Canadian Club, 727 11 Ave SW, Calgary, AB T2R 0E3

Bio: Valerica is a Class 5 Building Operator who completed the BOMA Building Operators Formation Courses four years ago. For over three years, he has been an ABSA-certified Building Engineer, bringing a wealth of knowledge and expertise to his role. With proven operational experience spanning several years, he has successfully managed Calgary properties such as the 190-unit Vista View in Dalhousie and the 369-unit Eleven Building in the Beltline.

During this time, Valerica has overseen routine inspections, preventive maintenance, and the operation of essential systems, including HVAC, plumbing, life safety systems, hydronic, and electrical systems. He has also played a key role in diagnosing issues and coordinating with contractors for specialized repairs. Known for his ability to handle multiple responsibilities under pressure, Valerica continually stays up-to-date with evolving technologies and regulations.

As a building superintendent, Valerica has earned the admiration of owners, tenants, contractors, and colleagues for his professionalism, stability, and timely assistance. His dedication to excellence and customer service is a hallmark of his work ethic.

Beyond his technical expertise, Valerica brings a wealth of international experience in exceptional customer service and the 5-star hospitality industry. His "Spirit to Serve" philosophy, combined with a passion for embracing change, standardization, training, and collaboration, defines his approach. He has worked closely with industry leaders in HoReCa, manufacturing, machining, welding, fabrication, plumbing, fire safety, first aid, and defense, developing a versatile and dynamic skill set.

Returning to the team, Valerica is committed to fostering growth, collaboration, and excellence. His belief that "developing others is developing ourselves" inspires his work. With a focus on sharing values and experiences, he looks forward to making the coming year one of collective success and development.

BOA Building Operators Association of Canada

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We look forward to seeing you in-person for our meeting at the Danish Canadian Club (727 11 Ave SW) on Tuesday December 10, 2024 @ 5pm

Please visit the Building Operators Association of Canada YouTube Channel to watch the Speakers.

BOA Building Operators Association of Canada