



## Working Together to Provide Energy Solutions for Your School

*IES has always been a provider of Green solutions to the Primary Schools and private market. Offering Energy solutions and operational cost reeducations as one of its core markets. In order to take GREEN one step further IES teamed with IEC to bring green solutions and Solar Power generation to the schools market. IES is committed to protecting and preserving the environment, one school at a time. We create healthier and more resource-efficient school facilities with new construction, renovation, operations, and maintenance.*

*IES & IEC Corporation has teamed together to deliver successful comprehensive energy solutions to school districts. The team is comprised of a solar integrator, and an energy specialist. The relationship combines individual corporate resources and brings synergy to the process of going green.*



### Indoor Environmental Services (IES)

IES is a Facility Solutions company. Our team provides in-depth Facility Solutions to your project. From comprehensive lighting programs, HVAC replacements and retrofits, trash management systems and co-generation plants to water conservation and updated temperature controls systems, these solutions will produce savings on energy, maintenance and future capital improvement expenditures. The savings are then used to pay for the improvements. Our team of professionals provides customers the additional resources and latest technologies and methods to accomplish their district's operational goals and objectives. A custom comprehensive plan will be developed which optimizes your energy supply, energy use, operations and energy practices - before a solution is initiated.

### IEC Corporation (IEC)

IEC is a multi-discipline engineering, design, and consulting firm focused on providing quality engineering and professional services for commercial, municipal, and public agency clients. IEC's mission is to focus on reliable power technologies that can be deployed in a wide range of applications to achieve sustainability and generate significant and enduring improvement in our clients' performance. Our experts understand the technical aspects of renewable energy as well as the regulatory and political issues central to the industry. Our hands-on experience with both traditional power generation and renewable technologies allow us to provide our clients with a variety of potential solutions that integrate one or both types of power generation. The results are energy solutions that manage energy price risk, increase security and reliability, and improve

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## Working together *Continued from Page 1*

operational efficiency. Our experience and continued focus on clean, reliable, and cost-effective energy solutions gives our clients the competitive advantage needed to meet the power demands of tomorrow.

Our team utilizes the knowledge of our LEED certified engineers and personnel to perform a comprehensive district energy audit. This information identifies areas where performance enhancement and improvements can be made. Our recommendations will result in reduced energy consumption, will save money and will reduce the districts' energy footprint and impact on the environment. Successful implementation of these recommendations will be a big part in achieving CHPS certification.

Whatever your needs are, we will customize our services and level of involvement to produce the most efficient plan possible. Our services are comprehensive and include:

- > Building Information Modeling
- > Comprehensive facility strategies
- > Cost Control
- > Energy Saving Calculations
- > Engineering
- > Equipment Life Cycle Evaluation
- > Facility Energy analysis Audit
- > Local Utility Liaison
- > Planning and Needs Assessment

We will look at all aspects of your campus to determine the best path to a green environment, energy savings, and improving the comfort of your buildings and classrooms including:

- > Integrating photovoltaic solar systems
- > Comprehensive lighting programs
- > HVAC replacement and retrofits
- > Trash Management
- > Co-generation plants
- > Water Conservation
- > Temperature Control Systems

We create healthier and more resource-efficient school facilities with renovation, operations, and maintenance. A greener school means a lighter ecological footprint, a healthier and more productive place to learn, and good news for your bottom line. We can help you do your part to make a real difference.



Every student deserves a healthy and comfortable place to learn. Green schools reduce illness, improve learning, protect the environment and save money. Working together, we can ignite change and ensure that each student in California attends a green school. We can make a difference. Contact us to take the first step.

If you would like more information about our Energy Services and offerings please contact:

**Stan Butts**  
**Vice President**  
**916-240-8107**

### **IES Facility Solution Department projects have resulted in the following environmental emission savings of:**

- 27,750,000 lbs/yr of SO<sub>2</sub>
- 37,850,000 lbs/yr of NO<sub>x</sub>
- 25,233,000 lbs/yr of CO<sub>2</sub>

### **In its turn, this is an equivalent of:**

- 7,314 acres of trees planted (CO<sub>2</sub>)
- 3,574 cars removed from the road (CO<sub>2</sub>)
- 2,293,905 gallons of gasoline saved each year

## *IES gives back to the community*

IES employees volunteered their time over two weekends to install sheet metal and kitchen equipment for the **Ceres Community Project's** new home. Ken Petro the CEO of IES orchestrated the event through a host of office and field employees including; Josh Kohler, Dale Andrews, Ken Ruske, Eric Wahl, Tyrell Felton, Jeff Stock, Kyle Cavagna, TJ Sharp and Eric Ballenger. These volunteers worked to help turn an old vacant building into a beautiful community space and kitchen for the Ceres Project. IES is grateful and would like to thank all of the employees who gave their time. "We are always happy to give back to the community when we can" said CEO Ken Petro.

The Ceres Community Project works to restore locally grown, organic whole food to its place as the foundation of health for people, communities and the planet.

The Ceres Community Project provides 25,000 beautiful, delicious and nourishing free meals each year to individuals and families living with a life-threatening illness such as cancer. The program's chefs are hundreds of teens from more than eighteen local schools. The young chefs gain culinary and leadership skills, knowledge, and the inspiration to make cooking and eating whole foods a part of their life.

Their Integrated approach brings teens into the kitchen to learn about growing, preparing and eating healthy food through serving as the program's chefs. Each year, they prepare thousands of beautiful, delicious and organic meals for individuals and families facing cancer and other life threatening illnesses. The families receive vital nourishment along with the loving support of the community.

The site will include a 12,000 sq ft commercial kitchen, 650 sq ft community meeting and dining room, offices, a reception area and gardens right outside the door. IES provided and installed all new and modern stainless steel exhaust hoods and fans for the kitchen, design build HVAC space conditioning, a make-up air handling unit and all the necessary mechanical engineering. We are very happy to be part of an endeavor such as this.

For more information on the Ceres Community Project visit [www.ceresproject.org](http://www.ceresproject.org)



## Manage Smart. (Part 2 of a 3 Part Series)

By Michael Piper

### Looking to Cut Costs? Three Manageable Strategies to Lower Your Facility Budget.

**You really can lower your costs without compromising your business.**

*If you're like most businesses in America, you probably set a budget for your facility's operation each year based on the previous year and occasionally plan for large capital projects, without really measuring how it affects your profitability. Of course, budgeting for a facility's operating costs is absolutely necessary - but the method in which you make that budget has serious consequences to your bottom line. In fact, you may be spending a tremendous amount of money that could be otherwise spent on your core business or revenue-producing projects. So what follows are explanations and three manageable strategies that you can employ to create some extra dollars in your organization.*

#### **Measure your capital. Avoidance/Life-Cycle Costs.**

The American Society for Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE) publishes a list that states the average life expectancy of mechanical equipment used to condition the environment within your building. On it, you can find information that states typical life expectancy for the majority of HVAC equipment to be between 15 and 20 years, if maintained properly. Unfortunately, that means over the life of an average building, this equipment will have to be replaced at least once, and you should determine what your annualized cost is to pay for that replacement.

First, you need to find the total replacement cost of your HVAC system. If available, find the amount that you paid for the HVAC systems in your facility to be installed. Ask your HVAC expert or contractor to report on the physical state of your equipment and to make an educated guess as to how much longer it will last you and to provide a budget to replace it. With this information take your total replacement cost and divide it by the remaining years of useful life. This will give you an annualized cost, or deferred liability, that you need to save for when your equipment needs replacement.

When you determine your annual deferred liability, decide where this money will come from. Consider that saving this money now will avoid unexpected capital spending in the future. In addition, proactive planning of major energy consuming equipment allows you to purchase more efficient equipment. You must plan for the inevitable to avoid costly interruptions in your business.

**IES has LEED accredited professionals and is a member of USGBC. Contact Gregg Perry at 916-988-8808 or 707-571-7480 for more information.**

**In the Next Issue: Part 3  
Revise Your Maintenance Methods**



## Manage Green. *Smart Packaging*

**IES provides a complete package of services to handle all of your building and construction needs. As a reminder, the following is a list of facility solutions that IES can perform for your facilities. One of our representatives would be happy to meet with you to go over in more depth each of our offerings. You can also visit our website for additional information at [IES-HVAC.com](http://IES-HVAC.com)**

**Service:** IES Service technicians understand intricate systems and have unequalled knowledge and training. We can reduce repair costs by providing advance knowledge of needed repairs. This can extend the useful life cycle of your equipment and help to avoid catastrophic failures. A comprehensive maintenance solution from IES offers you peace of mind in operating your facility: Knowing you'll have critical operating information at your fingertips enabling you to budget, operate and maintain your facility equipment, processes and systems.

**Maintenance Programs:** IES positions its Service and Maintenance Programs capability as the cornerstone in its integrated business delivery platform. Our Service and Maintenance teams ensure that our customer's facilities are well maintained and mechanical systems operate at performance efficiency.

**Facility Solutions:** IES is able to aid in the rebuilding of your infrastructure while reducing your overall expenses. We have the ability to complete all aspects of any current or future modernization and/or new construction project. A custom comprehensive plan will be developed which optimizes your energy supply, energy use, operations and energy practices - before a solution is initiated.

**Design Build:** IES is the right contractor to provide quality design-build services beginning with our value engineering from the very inception of your project. Our proven method of design-build construction gets the job done right, in less time and money over traditional construction methods.

**Controls:** Indoor Environmental Services (IES) has a comprehensive Controls team with the ability to design, install, maintain and monitor all types of mechanical control systems. We provide custom fully-automated control systems for all types of facilities including very complex production facilities.

**Water Treatment:** Water purity and quality is dependent on functional, efficient treatment applications for the removal of contaminants. Truly effective solutions to meet the demands of individual processing environments are paramount. Indoor Environmental Services (IES) offers full service water treatment capabilities. Our in-house specialty staff can build this service into your preventative maintenance program or provide as a stand alone service.

**Construction:** IES provides a comprehensive consultative approach to all aspects of your construction project. From new construction, tenant improvements, plan-spec and design build, we take on single-source responsibility and accountability for the design and installation of your project from inception through completion.

**Sheet Metal:** IES has a reputation for delivering innovative approaches in sheet metal. Our expert and highly experienced team of professionals have the necessary specialized knowledge and skill in the use of newly emerging technology to deliver world class systems in sheet metal and facilities solutions.

**Piping:** Clearly a dominant and equally dynamic element of mechanical systems is piping. From sanitary and domestic water applications to process piping and chilled water systems, "piping" is an integral part of a mechanical system. Our piping expertise carries with it an extensive service background, providing boilers, chillers, cooling towers, and refrigeration systems including sheet metal installation.

**Special Projects:** In special projects we handle a wide variety and range of projects. Generally speaking special projects handles quick retrofit projects and projects that require a wide range of skills. We have highly skilled technicians in every discipline that are members of each team so that any and every issue can be quickly adapted and resolved.

**Engineering:** IES engineers develop practical solutions to project requirements. When our engineering team is involved from project conception, the design will be practical, cost effective, project timetable-responsive and constructed with the highest quality work and materials. IES engineers develop the most practical solutions to your project's requirements. In conjunction with design assistants, estimators, project managers and field personnel, IES engineers review project concepts; ensuring field construction issues are carefully considered in every design.

**Indoor Air Quality:** Beyond initial mechanical and green building design and commissioning, there is a growing need to validate ongoing performance for healthy environments and energy efficiency. IES meets that need with cost-effective Facility Solutions Programs. IES can resolve any comfort, purity or indoor air quality issues your buildings or facility may have.

## Airwaves **Building Owners at Risk**

OSHA implemented the “Enforcement Initiative” making use of the multi-employer citation to get the attention of the creating employer (building owner) and share the risk of poor safety habits with the contractor when it come to citations. The NFPA70E (national Fire & Protection agency) put out a standard more stringent than previous standards that added operational cost to both the contractor and building owner and the State of California past AB2774 that allows DOSH or Cal/OSHA to site the contractor and building owner with a serious citation under the loosely defined “Realistic Possibility” instead of “Substantial Probability”.

### The two NFPA 70E 2012 standards effecting building owners:

1. The standard requiring any creating employer that hires a contractor for work involving electrical exposures must conduct a documented safety meeting with the contractor to ensure that it understands the electrical/arc-flash safety requirements associated with the work. Section 110.1

Relationships with contractors (C). Failing to conduct a meeting ensuring your contractor’s employees have been trained, have the proper PPE (personal protective equipment) and use the correct signs and barricades can end up in a fine for both the creating employer and contractor.

a. Be sure to ask your contractors for copies of the employees Arc Flash Certification for your protection.

2. Anyone that owns or operates any facilities (fabrication shops, warehouses, offices, storage, etc.), are required to have an arch flash hazard assessment conducted, documented and equipment properly labeled. Section 130.5 (C). This holds the building owner accountable to provide the proper markings throughout the facilities that informs anyone approaching the equipment the Hazard Risk Category (HRC)

### CASE STUDY #1

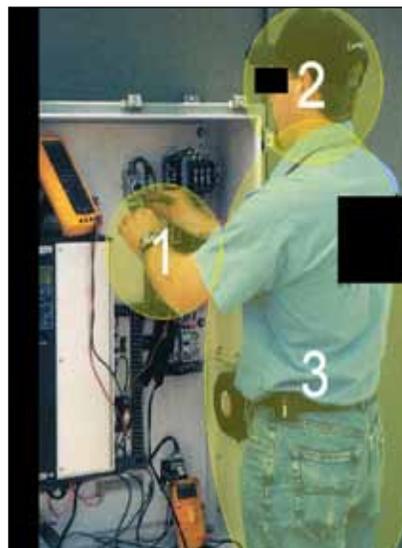
OSHA News Release: 11-798-BOS/BOS 2011-188

June 1, 2011 OSHA exercised its new enforcement initiative on a Hartford Financial (building owners) and Grubb & Ellis (contractor), citing them with serious violations of workplace safety standards for exposing workers to electrical hazards at the facility.

Grubb & Ellis failed to de-energize the electrical panels before having its employees perform installation work and grid upgrades.

The Hartford, as the creating and controlling employer, was issued one serious citation for requiring Grubb & Ellis employees to work on live panels \$7,000. Grubb & Ellis was issued six serious situations, for additional electrical and energy control hazards totaling \$34,000.

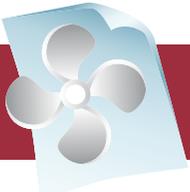
Indoor Environmental Services (IES) understands the need for us to work together. The building owner and property manager are at risk when we are working on their sites. IES is committed to sending our technicians to your facility properly trained, and with the proper safety equipment to perform the work safely.



### OSHA Penalties:

1. Lack of Rubber Electrician Gloves > \$3500
2. Lack of Arc-Rated Hard Hat, Faceshield, Balaclava, Safety Glasses and Earplugs > \$5000
3. Lack of Arc\_Rated Shirt and Pants > \$5000

**Total: \$13,500**



## Fan Mail



Mike Rubino  
Project Manager  
Indoor Environmental Services  
Sacramento, CA 95815

October 10, 2011

Dear Mike,

I want to thank you for your help and the cooperation of IES during the commissioning process for the new Grainger distribution center project in Patterson. The building management system is impressive, and the work of IES during installation, commissioning, and final testing will ensure optimum performance and maximize return on investment for the client for years to come.

While in Patterson, I worked with Aaron Alves on functional performance testing of the building systems and the BMS. I was impressed with his command over the system and his comprehensive knowledge of the interface between equipment and software. With Aaron's help, it was easy to verify equipment functionality and pinpoint any deficiencies. This saved time during the commissioning process and ultimately helped deliver a superior product to the client.

As the LEED commissioning authority for the project, I was relieved to work with someone so knowledgeable, and my job was facilitated by the diligence and competence of Aaron and the rest of the IES crew, including you and Kyle Rincon. I will certainly recommend IES for controls work in the future, and I look forward to working with you in the future.

Thanks again.

Sincerely,

Duke Graham  
Senior Associate  
Gaia Development, LLC



P 310.971.8172 | F 310.384.5566 | 4057 Glenview Avenue, Suite 5, Mariposa, CA 95335



Mike Rubino



Kyle Rincon



Aaron Alves



Subject: Workrite x Scott Labs - Team Thank You

To All,

I am way overdue to thank all those who made the impossible possible thru a lot of hard work and long hours to get both Scott Labs and Workrite into their new spaces on schedule. I cannot thank you and your crews enough for all your help and cooperation with me thru a very aggressive schedule and all the obstacles we overcame along the way. You are all Superstars in my opinion and without you this project would never been able to occupy the tenants on time. My sincerest thanks to all!

Thank you,

Doug Noren - Devcon Construction  
Project Superintendent  
LEED Green Associate  
dnoren@devcon-construction<mailto:dnoren@devcon-construction>  
Office: (707) 765-1580  
Cell: (707) 975-4381  
Thank you,



Dale Andrew



Ken Ruske



## ***Salted Caramel Pots de Crème***

### **Total Prep and Cooking Time:**

2 hours 25 minutes

### **Six Servings**

### **Ingredients**

- 2 cups sugar
- 1/2 cup water
- 1 medium vanilla bean, split, seeds scraped
- 2 cups milk
- 2 cups heavy cream
- 12 egg yolks
- Pinch salt
- 1 teaspoon vanilla extract
- Toffee pieces (or a broken Skor candy bar)

***“One of my favorite recipes that is simple to make and serve to finish off a nice dinner party. Serve with a late harvest Riesling. Your guest will truly enjoy this wonderful desert.”***

- In a heavy-bottomed saucepan, over medium heat, cook the sugar, water and vanilla bean until it turns a deep caramel color. Swirl pan to color evenly, do not stir.
- When caramel color, turn off the heat and slowly add milk and cream. Be careful, it will splatter. If caramel hardens, turn on the heat and stir until harden caramel dissolves and the mixture boils. Once it reaches a boil, remove from the heat.
- In a bowl, mix yolks, salt and vanilla extract. Slowly temper in caramel mixture, adding a small amount at a time, to prevent yolks from scrambling. Mix to combine, then strain through a fine mesh strainer.
- Fill 6 (4-ounce) ramekins with the creme mixture. Place them in a high-sided baking dish and fill baking dish 1/2 full with boiling water. Bake in a preheated 325 degree oven for about 25 minutes or until set. The middle should jiggle slightly. Remove, let cool and refrigerate.
- To serve top with whipped cream and a few toffee pieces.

## **IES CAPABILITIES**

**Construction • Installation • Energy Management System • Building Evaluations  
Design-Build • Engineering • Facility Solutions • Indoor Air Quality  
Industrial Refrigeration • Maintenance Programs • MSCA Certified  
Piping • Retro-commissioning • Retrofit Projects • HVAC Service • Turbocore  
Water Treatment • Temperature & Humidity Control • Smardt Chillers  
Industrial Ventilation • Energy Star Certification**