TRANSACTIONS

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IN THIS ISSUE

IDEAS WANTED!

We want to hear your ideas, feedback, and suggestions for this newsletter.

Email us at:

info@gdsassociates.com

Delivering EMPOWERING Websites

Like cars and computers, websites generate similar consumer frustration as a result of a short useful life. Many factors contribute to this frustration, be it the development of newer technologies, new top-down corporate visions, product branding alteration campaigns, and perhaps most commonly - boredom as a result of content stagnancy.

Content stagnancy, also referred to as "stale content" is a major problem for websites today. In political campaigns, candidate intentions are often judged by how often their websites are updated. The same model can be said to exist as an important image and marketing consideration for a business. Old content drives away potential customers or contacts - and updated fresh content preserves visitor interest. Proof of this should not need to go much further than your own website visiting experience. The old saying "don't judge a book by its cover," well, websites are not only judged by their covers, but they are judged by their published (updated) dates. Web surfers turn to the web as they expect it to contain the latest and greatest information about whatever it might be that they're after. If a potential client or customer is met with a website that disappoints that inherent expectation, they are unlikely to stick around. Given the reality that a web presence is now a vital strategic marketing tool for any serious company, website content stagnancy is quite simply an unacceptable business practice. You wouldn't run a TV or newspaper advertisement that featured sale dates from last year - people would laugh and wonder why you wasted their time and your own money placing the ad. A website, while economically more forgiving, is no less forgiving when it comes to consumer perceptions.

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Complicating Factors

All of this can be complicated by the fact that most businesses do not have an internal web development staff member who can constantly be tweaking and keeping the website up-to-date. Furthermore, web development typically requires a specialty skill set with a fairly complex knowledge of programming and a variety of other technological barriers. It is because of this that most businesses turn to a web development company or individual to design and often maintain their website - an undoubtedly costly endeavor.

What's the Alternative to this "Costly Endeavor?"

There is, however, a solution that alleviates the need to hire an internal web development employee, or pay costly outsourced developers to update your websites content. The solution comes from designing the website initially to allow for it to be updated from a web-based administration tool. The design of this tool needs to be simple enough so that anyone with the most basic knowledge of a

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computer and an Internet browser, can update all relevant content on the website from anywhere in the world with an Internet connection.

What do Light Bulbs & Websites have in Common?

Given that my work at GDS primarily focuses on energy efficiency, my experience has illuminated the complexity of explaining to purchasing departments and key decision-makers the nature of payback scenarios - and trust me when I say that this pitch is no different than justifying to someone why they should rip out a perfectly good working light bulb and replace it with a more efficient one. The payback can only begin once you establish the fact that you've got the wrong equipment in place - and that equipment needs to be ripped out, and replaced with more efficient, less costly equipment. This website model slips comfortably into this analogy. The up-front cost of deploying a website designed in a way that allows for less-costly administrative folks to maintain it in the future is a more costly endeavor initially than designing a stagnant site that will need costly developer-intensive updates down the road. The reasons for this are quite simple. It takes more thought and initial work to develop a web-product of this caliber. But the lifetime of the site will be greatly extended by this approach - and more importantly, the long-term costs of this approach are dramatically less than the standard developer-centric model now widely being employed by small to mid-size companies. Those are the two key factors to bear in mind.

Goodbye Costly Developers?

Well, let's not go that far. Developers are human too and there's a good chance that they will need to be brought on to fix a feature that may not be working as intended or as well as one might like. Additionally, from my personal design experience, once a system like this is setup - clients often begin to ask for more and more features to extend the functionality of their already powerful backend management tool. The excitement over at last gaining control over one's own website is nearly universal. From a practical perspective, you may want to start out having your developers design your site to allow you to manage all the text-only content. Then from there, you may want to extend that capability on to generating your own custom reports, or create your own image galleries from a point and click interface - and on and on. Every case is unique, and that's the way it ought to be. The sky truly is the limit. So, while many would like to see the websites run themselves, there will always be a need for a developer. The important thing to remember is to make your developers empower not just the website, but YOU, through the deployment of a well thought out design strategy.

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For more information on this subject, please contact Ryan Capers at 603-656-0336 or ryan.capers@gdsassociates.com

GDS ASSOCIATES MANAGEMENT UPDATES

GDS Associates celebrated its 21st Anniversary in February 2007. With this milestone, the GDS Board of Directors completed a process initiated several years ago to address an inevitable requirement of long-term success, that being the transition of key management positions within the firm. GDS is now pleased to announce several changes in key management roles within the firm.

First, **Dick Spellman** was elected to the position of President of GDS effective January 2007. During his many years at GDS, Dick has contributed significantly to the firm's growth and success and his proven leadership skills will benefit GDS greatly. As part of this planned management transition, **Bob Gross** stepped down as President, but will continue to work full-time at GDS, devoting most of his time to his existing consulting practice. Bob served as GDS' President for over 20 years, and over that time period GDS grew from a firm with less than twenty employees to a firm with over 100 employees by March 2007.

Dick Spellman

Steve Daniel has also stepped down as Executive Vice President and a GDS Board member in order to devote more time to his GDS consulting practice.

Steve Shurbutt will assume the position of Executive Vice President, giving up his position as Vice President and Assistant Treasurer to assume his new management role.

Steve Shurbutt

Rob Smith

Rob Smith was elected to the GDS Board of Directors to fill the seat left vacant by Steve Daniel and was also elected to be a GDS Vice President.

David Brian was elected to fill the position of Vice President and Assistant Treasurer, formally held by Steve Shurbutt.

David Brian

GDS is very pleased with the growth it has experienced over the past 21 years. We remain committed to the firm's mission statement and key core values and look forward to providing quality services to our clients for many years to come.

"To help our clients succeed by anticipating and understanding their needs and by efficiently delivering quality services with confidence and integrity."

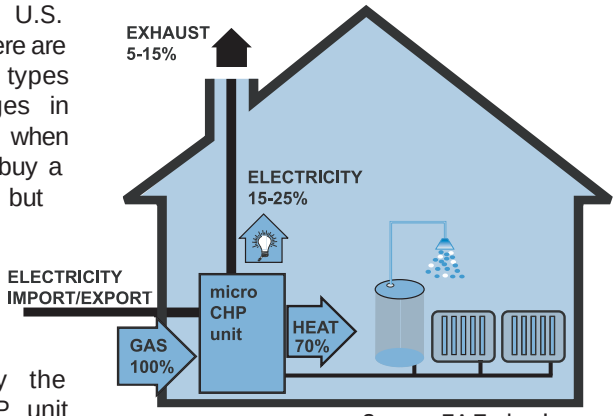
GDS Mission Statement

Residential Combined Heat and Power - The MCHP

There is an increasing urgency for affordable, reliable, and practical means to reduce energy consumption and environmental impact in the residential and small commercial market. Considerable strides have been made in the energy efficiency of home appliances and lighting and in the performance of windows, insulation, and weatherization techniques.

Alternative forms of energy are also emerging in the residential market; however, they are not always cost effective or feasible options for existing homes. **The Micro Combined Heat and Power system (MCHP)** offers another option for energy savings through an existing infrastructure that is applicable in most residential homes, and has a relatively short term return on investment.

What Is It? A micro combined heat and power (CHP) system simultaneously produces useful heat and power for a residence. Micro CHP units range in capacity from about 1 kW to 6 kW and are about the size of a major appliance. The system is located somewhere on the property - in the basement, hanging from a wall, underneath the sink, or outside. This system offers noteworthy opportunities to boost the profitability of an energy company's supply business as well as providing significant environmental benefits. With CHP's being popular in Europe and Japan after thousands of installations, some manufacturers are starting to reach out to the U.S. market. There are numerous types of packages in the market when looking to buy a micro CHP, but the most effective way to apply the technology is to buy the micro CHP unit along with a natural gas-fueled warm air furnace or boiler for supplemental space heating.



Source: EA Technology

How Does it Work? As illustrated above, the CHP engine consumes natural gas to supply electricity and heat for the residence. A total of around 70 - 80% of the gross energy value of the gas is converted into heat, chiefly in the form of hot water which is used for space heating and domestic hot water. Between 10-25% is converted into electricity, and the remainder (5-15%) is lost in flue gases. Whereas in a conventional gas central heating boiler converts 80% of the energy into heat and the remaining 20% is lost in the flue gases.[1]

Why Buy a Micro CHP? The system generates electricity while providing heat to the home. Any electricity that is not immediately used in the home will be applied as a credit against future power use. This system is called net-metering and the benefit of net metering for micro CHP owners are currently available in about 10 states and is continuing to expand. Along with gaining credits toward power usage, homeowners will also significantly reduce their monthly electric bill during the heating season. Environmental benefits are also yielded with a micro CHP installation. One U.S. manufacturer, Climate Energy, is expected to yield a 30% reduction in harmful carbon dioxide emissions as compared with conventional heating appliances and grid supplied electricity with it's system.

For more information on each technology see "The Micro-CHP Technologies Roadmap" developed by the U.S. Office of Energy Efficiency and Renewable Energy (EERE). Found at www.eere.energy.gov

Results and Conclusions of a Benefit/Cost Test. The development of a benefit-cost ratio for the system done by GDS took into account some actual data derived from test sites in Massachusetts included standard assumptions used in evaluating high efficiency furnaces. The base case was an 80 percent AFUE furnace, and it was assumed that the MCHP system would act as a replacement unit and not an early retirement system. The useful life of the system as suggested by the manufacturer was estimated at 15 years, 5 years less than most high efficiency furnaces. The incremental cost, kW production per hour, and annual run hours were also provided by the manufacturer. The analysis of annual estimated savings in gas (mmbtu) combined with the annual estimated savings in electricity (KWh) resulted in a benefit-cost ratio (BCR) of 2.54. A BCR over 2.0 for gas equipment is a very encouraging indication of energy savings.

Main Assumptions

Useful Life	15 years
Annual Run Time	4,500 hours
Incremental Cost	$6,500
Annual kWh Production	1.2* 4,500 hours = 5,400 kWh
Annual btu Output (mmbut)	13,840*4,500 hours = 62.28 mmbtu

Results

mmbtu Savings from Basecase to Furnace w/ MCHP	71.6 mmbtu
kWh Savings from Basecase to HE Furnace w/ MCHP	5502.0 kWh

Conclusion The MCHP is a technology that provides a bridge to the gap between conventional appliances and renewable energy alternatives for small commercial and residential customers. The cost effectiveness of the MCHP is more practical than most renewable options, and the infrastructure exists through the conventional heating equipment market to bring the MCHP system into the marketplace through heating contractors and distributors. The U.S. MCHP market will surely expand with continued adoption and development of the technology.

For more information on this subject, please contact Amber Roberts at 770-425-8100 or amber.roberts@gdsassociates.com

[1] Gas usage and figure from Wisconsin Power Control website.

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info@gdsassociates.com

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and we'll make sure they start receiving the next issue.

GDS Associates, Inc.
Engineers and Consultants

Mission Statement:

To help our clients succeed by anticipating and understanding their needs, and by efficiently delivering quality services with confidence and integrity.

GDS Associates, Inc. is a multi-service consulting and engineering firm formed in 1986 and now employs a staff of over 100 in five locations across the U.S. Our broad range of expertise focuses on clients associated with, or affected by, electric, gas, and water utilities. In addition, we offer information technology, market research, and statistical services to a diverse client base. The size and depth of our firm permits us to offer clients multiple sources of assistance, ensuring complete, competent, and timely service. Some of the consulting areas in which GDS has specialized skills are:

1. Power Supply Planning Services
2. Financial Analysis and Rate Services
3. Generation Services
4. Regulatory and Restructuring Services
5. Transmission Services
6. Renewable Energy Resources, Dist. Generation, & CHP
7. Energy Efficiency and Demand-Side Mgmt. Services
8. Risk Management Services
9. Electric Planning and Design Services (Hi-Line Engineering)
10. Environmental Management Services (GreenLine Environmental)
11. Deregulation and Retail Energy Procurement Services
12. Utility Privatization Services
13. Water and Wastewater Utility Consulting Services
14. Natural Gas Consulting Services
15. Statistics and Market Research Services
16. Information Technology Services

GDS consultants are recognized leaders in their respective fields, dedicated to their clients, innovative in their approach to meeting unique challenges, and known for consistently being available when needed. GDS strives to develop long-term client relationships. Our goal is to be a wise investment in consulting services for our clients.

Hi-Line Engineering, a GDS Company, specializes in providing safe, reliable, and efficient planning and design for electric cooperatives, investor owned utilities, municipal electric systems, and the military in all types of terrain and all three NESC loading districts. Hi-Line's areas of expertise include:

1. Overhead Distribution Line Design and Staking
2. Underground Distribution System Design
3. Inspection and Inventory
4. Contract Administration
5. System Planning and Analysis
6. Right-of-Way Vegetation Management
7. GIS/GPS Mapping and Inventory
8. Training Services
9. Specialized Design Services

Hi-Line uses the latest technology to increase efficiency and accuracy. Our commitment to client satisfaction and diversity of expertise ensures that we provide the highest quality of service.

GreenLine Environmental, a GDS Company, provides environmental services specially geared to the electric utility industry. GreenLine's staff is composed of registered foresters and ISA certified arborists. Our experience in both power line design and operation complement our expertise in vegetation management on right-of-ways. GreenLine offers the following services to utilities, municipals, developers, industry, and the military:

1. Right-of-Way Vegetation Management
2. GIS/GPS Mapping and Inventory
3. Environmental Assessments
4. Urban Forestry Consulting

Our goal is to use our technology and experience to provide efficient long-term control of trees and brush in harmony with the biological ecosystem.

GDS Associates, Inc.
Engineers and Consultants

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