

The Probe

ISA—The Instrumentation, Systems, and Automation Society



Western Carolinas Section, Greenville, South Carolina

Serving Instrumentation Professionals in the Carolinas since 1952

April 2001

President's Corner

By Richard D. Secoolish

Until January 2001, the Western Carolina Section of ISA had not had a regular monthly meeting for over a year. There were no officers and the section is in danger of having its charter revoked. A meeting was arranged by District 2 VP Ken Delucca and was held in January with the intention of regaining interest and filling the slate of officers. Mission accomplished.

I am proud to announce that our local section, Western Carolina, is back! We have held two board meetings and have structured the near future of the section. It has been decided that a quarterly meeting rather than monthly is preferred because of the burden on our member's free time.

Our first meeting will be on April 23, 2001 at The Marriott off Pelham Road and I85. The topic for our first meeting will be Power Generation. Please see the write up in this newsletter for more details. We want as much feed back at this meeting from our members as possible to help form our plans for the future of this section.

Please plan to attend and invite anyone you feel might be interested. We are in a rededication stage of growth. We hope you want to grow with us.

Internet demands more, better power sources

By Angela Sanders

(Reprinted with permission from Intech Online March 22, 2001)

Raleigh, N.C. - As the digital economy continues to expand, one global challenge is fueling the power needs created by bigger and faster computers and the data centers that direct the information traffic they generate.

"The Internet is one of the most power-hungry applications in the world today." said Invensys Energy Systems president Doug Milner Wednesday during a keynote speech at the NC Technology Showcase 2001 in Raleigh, N.C.

April Meeting

Date: Monday, April 23, 2001

Time: 6:00PM Social; 6:30PM Dinner; 7:00PM-8:00PM Presentation.

Location: The Marriott (off Pellam Road and I85)

Speaker: Mr. Lou Green of SC Electric Co-Operatives

The presentation will be about the current state of electric generation in South Carolina, the California power situation, de-regulation of the industry, the current steps being taken, or the steps that could be taken to avoid a California-like trap for South Carolina.

A Meal will be provided at no cost to attendees

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Data centers and the Internet are increasing demand for more power from reliable, uninterrupted sources. According to Milner, the U.S. power supply is already stretched to its limit. He said there is currently 99.9% availability, meaning that the typical user experiences nine hours of down time per year. In addition, the power needed to drive Intel's bigger and faster CPUs doubles every 36 months.

Invensys, a global provider of secure power systems, technology, and services, offers backup supply systems such as standby batteries for networks, broadband power systems for cable lines, and flywheels that use momentum to generate power during outages.

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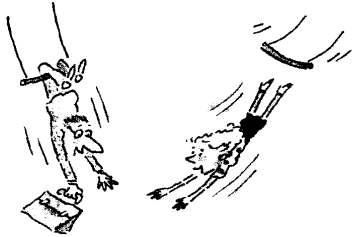
Continued from Page 1

In addition, Milner pointed out other technologies that will help reduce downtime to 3 to 30 minutes per year. These include fuel cells, gas turbines, micro turbines, flywheels, and energy storage.

Gas turbines and fuel cells are two recent applications. Gas turbines—huge jet engines used primarily in commercial applications—provide a powerful, clean and effective fuel source, however its applications are limited and expensive.

Fuel cells, which are still in the early stages of development and still costly, are adaptable for both commercial and residential applications. They are efficient and will become an affordable, easy-to-use and maintain power source in the next four to five years, Milner said. A fuel cell unit roughly two to three times the size of a residential air conditioning unit can fuel a single family house. Fuel cells, which combine hydrogen and oxygen to form electricity and water, may "allow us to become totally independent from power companies," Milner asserted.

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Excerpt from:
Balancing Our Energy Needs

By Bill Coley
President, Duke Power
Wachovia Executive Lecture Series
N.C. State University
Raleigh, NC - Feb. 15, 2001

(Full Text at <http://www.duke-energy.com/decorp/content/NewsCenter/deip11.asp?RBU=1>)

... We're beginning to hear of a new Energy Crisis - and we're getting a glimpse of it right now. Maybe you didn't notice it here, but in California, power is in short supply. Customers are seeing their bills double from the year before. Utilities that were operating under a rate freeze, were having to buy expensive power and sell it to their customers for less than they bought it. Many of those companies soon found themselves staring at bankruptcy. And that was before the state began rotating blackouts to curb demand.

The best thing I can tell you here today ... is that I don't see that happening in North Carolina. But that's not to say that we can relax here in North Carolina - or any state in the Southeast.

The reasons for this energy market earthquake in California gets at the very heart of the issue I raise with you today: the issue of balance - doing what it takes to meet our growing energy needs.

You may find this hard to believe -- for the past 10 years, there were no new major power plants built in California. In-state suppliers generated what they could, and then the delivery system imported electricity from suppliers outside of California the extra they needed. The first rumble came when accelerating growth in demand outstripped even those extra supplies - helped along by a number of dry seasons that hampered hydroelectric output.

This was driven by California's growing economy, which itself was a phenomenon of high-tech demand. The rest is a lesson from Business 101 -- rising demand, less supply --- and the price of the product goes up. The system gets out of balance.

There are a lot of parties right now blaming each other about the power shortages in California. Many are pointing the finger at deregulation - opening up the power markets to competition. Although I have some reservations on how deregulation was handled in California, that is not the problem. The real blame is that the state watched energy demand rise, but didn't plan to meet that demand - and may have actually thwarted moves to increase supplies to meet that growing demand. . .

... However, one question that might be asked is "Could this possibility happen anywhere else?" Well, over the past eight years, energy usage in the United States has

risen 23 percent while new energy capacity has only risen 6 percent. If you had to pick another hot spot - it might be the Northeast area of the U.S. this summer. . .

... But all these factors - conservation, new technology and a shifting balance - must reckon with the same reality: growth in demand will continue. Each year, Duke Power adds about 60,000 new customers, or new households each year. If you consider that each household has 3-plus people, that's like adding a city of 180,000 each year. Some of you may come from towns smaller than 180,000, so that may give you a sense of what I'm talking about. Duke Power has to plan to meet the needs of those new customers every year.

I'm not smart enough to stand here today and give you a complete plan to solve our energy needs for the future. I can't stand here and say that coal, or nuclear or natural gas will be the silver bullet that solves all of our energy problems. I can't do it --- because I know that there is no single solution to our energy needs.

But there is an underlying principle that I know will serve us well: balance - it will be a mix of natural gas, coal and nuclear that meets our energy needs in the future. It will be a mix of conservation and generation. It will be a mix of new technology and market-driven innovations that will carry us forward. And it will balance energy needs, environmental concerns and economic realities.

We can't depend on another state or another country to produce the energy we need in North Carolina. We need to take control of our energy future.

I hope some of you will join me in the energy industry in the future - maybe some of you will join me at Duke Power. But that theme of balance should be with you in whatever field you select. Whether it is balance in your family life or balance in your stock portfolio - we live in a world where today's answers don't always address tomorrow's questions.

If we put too much stock in one cure, one procedure, one method of producing electricity - we run the risk of having one change throw us off balance. And no matter what industry you are in, when the lights go out - everything stops.

Balance sounds like such an easy answer, a simple answer - but it is one we can easily forget. My hope is that my industry seeks to restore balance in meeting the energy needs of this country. I also hope that balance finds its way to your life, too.

Thank you

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Western Carolinas Section
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