

Commonwealth Energy System *weekly* **Highlights**

Topics

- Electric industry changes
- Yucca mountain testing continues
- New EPA rules for motorboats
- New Lithium-Polymer batteries

Informing you about our energy industry.

week in review...

November 2, 1994

Team Spirit



Nearly 275 COM/Electric employees representing every district give a big "thumbs up" while being photographed for an advertisement that will appear in upcoming regional subscription issues of *Time*, *Newsweek*, *US News and World Report*, and *Sports Illustrated*. This is part of a series of ads that started in October to tell customers about the work COM/Electric does to serve the community.

Commonwealth Energy System Earnings Up

Earnings per common share for the three months ended September 30, 1994 were \$.57 per share as compared with \$.52 per share for the same period a year ago. Earnings for the twelve months ended September 30, 1994 were \$4.89 per common share as compared with \$4.34 for the same period a year ago.

This improvement reflects increases in firm gas unit sales and retail electric unit sales, new base rates for Cambridge Electric Light Company which became effective in June 1993 and cost savings from a range of system-wide cost containment measures.

1996 Is Expected to Be a Watershed Year for the U.S. Electric Industry

Cambridge Energy Research Associates (CERA) says that the various changes that the electric power industry will go through in the next two years will shape the future utility environment. Open access transmission, new independent power producers, changes in demand-side management programs, new air quality regulations, the premature shut-down of nuclear plants, and the management of risks related to long-term natural gas contracts are some of the major issues that will determine the fate of the electric utility industry. Competition will be fierce, says CERA, and could be difficult for regulated utilities. However, regulated companies that weather the changes could emerge more powerful and efficient as well. CERA notes that the loss of economies of scale that applied to utility plants has allowed independents to prosper, and is driving today's changes in power markets. The electric supply industry, similarly, is being transformed by recent regulatory changes. Pennsylvania's Public Utility Commission is investigating competition and its effects on utilities. The investigation, carried out by the Bureau of Conservation, Economics and Energy Planning, will focus on pricing, wheeling, stranded investment, reliability, and the Public Utilities Regulatory Policy Act.

— *Power Engineering* 10/94

Gas Heat A/C System Blows for Chicago-Area Homes

Chicago residents are among the first homeowners to try the "Triathlon," a new technology in gas heat pumps and air conditioning. The system, researched and developed by York International Corp. and the Gas Research Institute, uses a microprocessor to control and modulate operation of an exterior and an interior unit to meet a home's specific requirements. As a result, York claims,

the home will have more uniform temperatures, and will lose the on-off cycling that characterizes electric units. Most homes cooled by electric air conditioning systems experience hot and cold cycles between preset ranges. The Triathlon, however, simply slows or accelerates as it adjusts the indoor environment. Not only does the new technology offer increased comfort, it also provides greater savings over the life of the system. Homeowners using Triathlon can expect to save as much as 50 percent in operating costs compared to conventional gas furnaces, according to Judy Reuter, building account executive at Northern Illinois Gas. The natural-gas fueled air conditioner also has a significant summertime advantage compared to electric units.

— *Air Conditioning, Heating and Refrigeration News* 10/17/94

Test Tunnel Resumes With Yucca Mucker

Despite warnings from a Nevada geologist, a \$13 million boring machine known as the "Yucca Mucker" began drilling into the proposed nuclear waste storage site in Yucca Mountain on Friday. The 840-ton machine is expected to cut through 75 feet of rock per day, digging a 25-foot diameter exploratory tunnel. Scientists plan to use the tunnel to decide if the mountain is a suitable repository for 77,000 tons of highly radioactive waste for at least 10,000 years. Geologist Carl Johnson said the boring will taint test results intended to map gas pathways through the mountain. Nuclear Regulatory Commissioner Robert Bernero wrote to officials with the Yucca Mountain Project on October 13 to inform them that NRC "would object to any further work on the tunnel if it determines the work could adversely affect characterization of the site," reports the LAS VEGAS REVIEW-JOURNAL. Scientists believe the five-mile tunnel will be completed in two years.

— *Las Vegas Review-Journal* 10/29/94

NJ Assembly to Consider Bid to Suspend Sale of Oxyfuels

An Assembly resolution opposing a federal requirement that New Jersey motorists burn oxygenated fuels in the winter heads to a vote today, reports the JOURNAL OF COMMERCE. Testifying before an assembly committee last week, the group Oxy-Busters argued that New Jersey should ban the sale of all oxygenated fuels, especially those containing the additive MTBE, "because people are being sickened." Oxy-Busters Pres. Barry Grossman said his organization has collected 5,000 signatures supporting a ban. "I have older people who are afraid to get into their cars. I have students whose headaches are so severe they can't concentrate," said Grossman. But makers of MTBE said no proof exists that gasoline additives cause health problems. "The federal oxyfuels program has helped dozens of areas with carbon-monoxide pollution problems," said Arco Chemical Co. engineer Arthur Zadrozny. "The kinds of symptoms reported have been reported for years with exposure to conventional gasoline," said Arco consultant Jack Snyder.

— *Journal Of Commerce* 10/31/94

Motorboat Makers Told To Clear The Air

The U.S. EPA is expected to announce new standards for "pollutant-belching motorboats" today that will force manufacturers to reduce emissions of smog-forming pollutants by 75% over eight years, starting in 1998. The rules would affect 300,000 new boats built each year as well as 12 million registered boats across the nation. According to the EPA, "outboards emit as many hydrocarbons in an hour as a car does in 2,500 miles." The stricter rules may increase prices for boat buyers but higher standards will likely improve fuel efficiency by as much as 35% according to experts. The rules will probably cause manufactur-

ers to phase out two-stroke outboard motors less than 15 horsepower and replace them with heavier, more costly four-stroke models. In engines over 20 hp, emissions will likely be cut using "more sophisticated ignition and fuel injection" methods. USA TODAY reports that off-road engines "account for about 10% of hydrocarbon emissions.

— *USA Today* 10/31/94

Battery Makers Are Betting On Lithium-Polymer Cells

Battery researchers are hoping a new kind of battery can transform batteries from the "weak spot" in consumer products such as cellular phones and electric cars to a viable and inexpensive power source. Lithium-polymer batteries "offer obvious advantages," reports the NEW YORK TIMES, since they are several times lighter than conventional lead-acid batteries and are assembled in flexible sheets that are "sometimes less than a fiftieth of an inch thick." Because the battery is made of solid material "it cannot leak, corrode parts or give off dangerous gases." The United States Battery Consortium, a group that includes car manufacturers, chemical companies and the federal government, is funding the research of two independent teams working to find commercial uses for the new technology, but several teams are working privately. To date, all researchers are using polymer sheets "roughly the thickness of plastic food wrap, sandwiched between a lithium alloy anode, which attracts positively charged ions, and an oxide cathode, which attracts negatively charged ions," reports the TIMES. Hope Technologies of Willow Grove, Pennsylvania plans to build an 825-pound, 6.4 cubic foot battery for use in electric vehicles that will give the car a range of approximately 375 miles. The company maintains such a battery will have a life of 110,000 miles and would use 200 watt-hours per mile.

— *New York Times* 10/30/94

Reaching Out



COM/Gas employees Carole Rouche, left, and Florence Enman hand out information at the Mount Auburn Hospital Safety and Health fair on October 26th. Carole and Florence gave out information and brochures on subjects such as hypothermia, carbon monoxide poisoning, general safety, elder information and the Gatekeeper program to hospital employees and patients.

COM/Energy Stock and Vanguard Accounts

Item	12/31/92	12/31/93	9/30/94	10/28/94	% Change YTD
CES	\$42 ³ / ₈	\$46 ¹ / ₄	\$38 ⁵ / ₈	\$37 ⁷ / ₈	-18.1
MMR-P	3.2%	3.0%	4.5%	4.8%	N/A
STCorp	\$10.87	\$10.90	\$10.46	\$10.42	-4.4
IdxExt	\$17.35*	\$19.43*	\$19.39	\$19.50	+0.4
IntlGr	\$9.41*	\$13.51*	\$13.97	\$14.18	+5.0
Welltn	\$19.16	\$20.40	\$19.97	\$20.00	-2.0
WindsII	\$15.91	\$17.04	\$16.00	\$17.34	+1.8

*Fund only available to Commonwealth Energy System employees since 10/1/93
Price on 10/1/93 of IdxExt was \$19.58 and IntlGr was \$12.11

Please contact Eric de Lacoste, extension 4246, or Lynne Flanagan, extension 2397, with any comments or suggestions



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