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CAROCP Market Watch

A Trends & Forecasting Report

“CAROCP is Mission Driven - Market Smart!”

The Emerging “Green-Collar” Work Force

Energy and Utilities Sector

Advocates for green, renewable energy sources say that training is the key to making sure that the industry, which is poised for a future boom, has enough skilled workers to turn it into an economic engine. Market-place trends for the renewable energy industry are largely influenced by a tangled mesh of political, economic, environmental, and technological factors. Politically, industry experts agree that lucrative tax breaks, like the ones oil companies already receive, are needed to sustain and increase growth in renewable energy sources and industries. Currently there is a movement to restructure the power industry with the intention of providing customers with the opportunity to choose their

power provider by decreasing regulation of and introducing competition among utilities. Restructuring is primarily occurring on a state-by-state basis.

Many companies that sell energy produced from renewable sources view the move toward utility restructuring as a great opportunity. In fact, in California, the concept of restructuring has given rise to the glimmerings of new industry-green power marketing.

A wide variety of professions are available in the renewable energy industry. This fact can make it challenging to find the right professional niche, but it also provides opportunities for individuals with many different types of back-

grounds and levels of education and training.

Some jobs-such as those in communications, community outreach, sales/marketing, and business support (e.g., corporate planning and finance, accounting, human resources, law, and information technology)-can be found in almost every renewable energy field. Other jobs are specific to individual renewable energy technologies: wind, solar, bio-energy, geothermal, and hydropower.

In the short term, wind energy is our best bet for domestic job creation in the alternative energy industry *Continued on page 4*

Home Sweet Home - Disney Style

Building Trades; Engineering & Design; Hospitality, Tourism & Recreation; Information Technology; Manufacturing & Product Development Sectors

In the 1960’s, millions of Disneyland visitors lined up to catch a glimpse of the Disneyland’s “House of the Future,” a pod-shaped, all-plastic dwelling teeming with mind-blowing gadgets such as hands-free phones, wall-sized televisions, plastic chairs, and electric razors and toothbrushes.

Now Disney is set to open a new abode in Tomorrowland. The 5,000-square-foot home,

scheduled to open in May, will look like a normal suburban home outside, but inside it will feature hardware, software and touch-screen systems that could simplify everyday living.

Much of the project will showcase a network that makes the house “smart” and follows family members from room to room - even adjusting artwork to preset *Continued on page 4*

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Judging Beyond Tests, Beyond Grades

All Sectors

Forget transcripts, multiple-choice tests or institutional scores. Business leaders want faculty assessment of internships, senior projects or community-based work.

A survey of 301 business leaders nationwide suggests that colleges find ways to assess a student's ability to apply college learning to real-world settings. In the survey report, business leaders said that 63% of graduates are not prepared for the global economy.

"Too many policymakers and educational leaders are focused on the tests rather than on what is really important: whether students are learning what they need to know," says Robert Jones, president of Education & Workforce Policy, a consulting firm based in Alexandria, Va.

The survey findings suggest that colleges and universities look for new ways to demonstrate student success and that they look at such issues such as global knowledge, self-direction and intercultural competence, not just at critical thinking and communication skills.

Among survey details:

- 57% said half or fewer of today's college graduates have the full set of skills and knowledge necessary to advance in today's workplace. Although most say graduates are reasonably well-prepared in a variety of areas, they are not exceptionally strong in any.

- 40% said a faculty supervisor's assessment of a student's internship in a real-world setting would be "very useful."

- 14% said a score showing how an applicant's college compares with others in advancing students' critical-thinking skills would be "very useful."

- 13% said college transcripts are "very useful."

Only 6% said an applicant's score on a multiple-choice test of general content knowledge would be "very useful."

Associated Press. 19 February 2008.

Stem Cell Therapy for Pets Dogged by Pain

Agriculture & Natural Resources; Health Science & Medical Technology Sectors

Maggie the German shepherd had become increasingly disabled and pain-racked with each passing year, despite the best efforts of owner Francine Hammer. A crooked front wrist was just the beginning. Eventually, arthritis ravaged every joint. "We tried everything" to relieve the pain and maintain her mobility, Hammer says. But by age 11, Maggie was creaky, didn't want to get up, couldn't go for walks." She kept her head low because of pain and wasn't very interested in food.

Last fall, Hammer took Maggie to a veterinarian who is among about 250 vets trained in a cutting-edge therapy using stem cells extracted from a dog's own fat. The process has generated excitement in veterinary circles. Nearly 300 dogs have had the procedure and 85% of those have experienced slight to very substantial improvement.

Within days of Maggie's procedure, she felt better; today, "she's a different dog," Hammer says. "She's able to walk, is pretty fast on her feet, and she wags her tail, something she hasn't been able to do for years."

The procedure, which runs \$2,000 to \$2,500, involves surgically removing about 2 tablespoons of fat from the dog and shipping it to Vet-Stem. The company isolates the stem cells, and returns them in syringes to the veterinarian who then injects the animal.

Stem cells from fat and bone marrow have been investigated for both human and animal applications in recent years. It's known that stem cells are regenerative, take up residence around injured tissue and have anti-inflammatory properties, but much of how they work and why is unknown. The approach doesn't require Food and Drug Administration approval because minimally manipulated cells are extracted and re-injected into the same animal. Because animals receive their own cells, there's no rejection.

Although it's unclear how long the positive effects will last, whether follow-up injections will improve results or which animals are unlikely to benefit, veterinarians are optimistic. *Continued on page 4*

ROCP IS THE HEART OF CTE

Men Buy, Women Shop

Marketing, Sales and Service Sectors

We've all heard that "men are from Mars" and "women are from Venus", but how does that play out in the retail setting? According to recent research from the Wharton School of the University of Pennsylvania, men and women are very different shoppers. Men tend to be more utilitarian when they hit the malls and shopping centers. They are on a mission, it's a get in, get what's needed, and get out quickly mentality. This is why men are sometimes referred to as "replacement" shoppers. Women, on the other hand, generally like to look around, and experience the shopping. They will frequently talk to the sales associates or strike up conversations with other women they've never met before in order to give or get an opinion. Women will tend to walk around, smell per-

fume, touch clothes, dab on cosmetics. It is not uncommon for women to seek attention and/or direction. Paula Courtney, who was involved in the research study, says "the differences are as primitive as hunter vs. gatherer." Men and women are on different sides of the aisles and are as different as Target and Tiffany when they shop. "Men are very task oriented, while women are very much more about the relationship and the engagement and the interaction with the people at the stores," Courtney reports.

The study also reported that women tend to run into more difficulties when they shop, with their number one issue being not able to find help when they need it. One in three women indicated that they were so irritated by the issue that they would never return to the store again.

Men's biggest headache was parking. One in three said that they hated not finding a parking space close to the entrance, but very few said that they would desert the store forever because of it.

Customer service was another factor addressed in the study. Twenty percent of women and twenty-two percent of men reported that they were ignored or snubbed by sales clerks, because the clerk was distracted with a personal issue or conversation. While the frequency of the problem was consistently reported by both sexes, the women overwhelmingly indicated that they would never return to the store again, while only twenty-two percent of the men considered it a lifelong negative mark.

Waters, Jennifer. "Different Sides of the Aisle." *MarketWatch*. 14 December 2007.

"McGraw-Hill now offers over 800 digital products, most with audio..."

MP3 Technology Isn't Just for Music Anymore

Education, Child Development, and Family Services; Information Technology Sectors

Let's face it, if you can't beat them, join them. Many of us are digital immigrants whereas the kids that we teach today are digital natives. Today's youth are plugged in to something all the time. Just look around, kids are wearing headphones to and from school, between classes and to the chagrin of many, in class. From a poll conducted in 2006, it was estimated that over 50 % of teens owned an MP3 player, and that number is most certainly higher today. "Students are more mobile today. Their expectation of

being able to get digital content is certainly much higher than it has been in the past" said Scott Criswell, product manager of online delivery systems for the higher education unit of McGraw-Hill. As a result, McGraw-Hill now offers over 800 digital products, most with audio, which is a growth of 50% from just 4 years ago. McGraw-Hill is one of the three biggest textbook publishers and expects its digital line of products to continue growing as the concept of digital delivery gains momentum. MP3 players are

being used to listen to downloaded books and textbook study guides, and they are being used as language labs on-the-go.

Grade schoolers are starting to do their reading with earphones too. Playaways, a type of flashplayer pre-loaded with an audio book, are on the market and gaining popularity. Belinda Jacks, who oversees 38 school libraries in the Dallas suburb of Grand Prairie, noted that "contrary to some parents' concerns, listening to books encourages reading. It *Continued on page 4*

Trends & Forecasting

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expands on reading out loud to kids, which studies show boosts literacy." She says that the Playaways have become "shockingly" popular. The audio book industry is one of the fastest-growing segments of publishing according to marketing experts.

Audio books are easier to carry around in MP3 form, especially since a typical 300-page book might take up 12 CDs, but only a tiny portion of an MP3 player's memory. MP3 technology can be an answer for those concerned with the weight of textbooks in a student's back pack too. So the next time you see kids plugged in, don't just assume that they are listening to the latest top 40 hits, they could be doing their homework.

Read, Madlen. Associated Press. 6 February 2007.

"Green-Collar"

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sector. Most jobs at wind plants are in turbine installation and maintenance. Installers with a two-year degree can come in earning \$40,000 or more. With the support of the California Wind Energy Collaborative, a community college level wind turbine training program is being developed. California contributes approximately a third of the wind power generated in the United States. Other states with growing wind technology needs are Texas, Iowa, Colorado, and Washington.

In California, the demand for technicians specializing in solar power is also strong. Solar power companies hire a wide array of technicians, engineers and installers. This variety reflects the technological diversity of the industry, which ranges from solar heating and passive solar architecture, to the design of photovoltaic cells that convert the sun's radiant energy into electricity.

In California, electric energy from renewable resources is expected to increase by 150% in the next five years. This increase is largely driven by California's politics on renewable resources according to the California Wind Energy Collaborative. The

ultimate goal is to have 33% of energy from renewable sources by 2020 in California. Twenty-five others states have also set mandatory renewable energy goals.

U.S. Department of Energy. "Careers in Renewable Energy." Energy Efficient and Renewable Energy. 21 February 2008.

<<http://www.careervoyages.gov>>

(The California Wind Collaborative, conference, February 8, 2008).

Stem Cell Therapy

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"Everything I've heard so far has been very positive," says Brenda Salinardi, a veterinarian at Oregon State University. She used the procedure on a dog with severe arthritis, who is now "doing very well." Veterinarian Tim

Disney Style

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personal preferences. The home will feature new uses for devices that many visitors may already own, as well as technologies that are still five or 10 years down the road.

Lights and thermostats will automatically adjust when people walk into a room. When a resident clicks a TV remote in the home's two bedrooms, living room, kitchen, dining room, study or back yard, lights will dim, music will shut off and the shades will draw as the network realizes a movie is about to start.

The system will allow residents to transfer digital photos, videos and music among televisions and computers in different rooms at the click of a button.

Other applications still in development could include touch-screen technology built into appliances, furniture and countertops. In the kitchen, for example, touch pad software on the countertop would be able to identify groceries and produce recipes and meal suggestions. Mirrors and closets could identify clothes and suggest matching outfits, complementary colors or track what apparel is at the cleaners or in the wash.

When it comes to aesthetics, designers decided to stray from the original Jetsons-style House of the Future -- an all-plastic cross design with four wing-shaped bays that appeared to float. The house was so tough that wrecking balls bounced off it when Disney ripped it down in 1967. The new home will be made of wood and steel and finished in muted browns and beiges.

Associated Press. 13 February 2008.

McCarthy says the procedure "is probably the most exciting development I've seen in 25 years."

Vet-Stem is investigating a handful of additional dog and cat ailments and diseases that might benefit from stem cell therapy.

Associated Press. 19 February 2008.