

September meeting wrap up

Water Re-Use – Why it is increasingly important, what are the new technologies and solutions and where are the potential business opportunities? - Robert (Bob) Harper, KB Energy Technology
KB Energy Technology helps dairy farmers create a viable solution to dealing with cow manure, improving economics of dairy operations, improving air quality and is creating opportunities for new “green” job creation in the Central Valley. KB Energy is working on breakthrough technology that converts lactating dairy cow manure into ethanol and methane. KB Energy’s low temperature, low pressure anaerobic digestion process; produces methane and ethanol, reduces green house gases emissions by 67%, reduces PM-10 & PM 2.5, eliminates e-coli and salmonella and creates carbon dioxide for industrial or agricultural uses. Visit www.kbenergyllc.com for more information.

Irrigation Technology; Past, Present and Future – Glenn Bowlin
Bowlin gave an overview of irrigation technology both past and present. Irrigation technology began over 5000 years ago and continues today in fact in just the last 50 years we have begun to think about saving water through efficient irrigation practices. A PowerPoint presentation listed and showed various types of irrigation devices including the first electronic controller, a Griswold Solar Wind, a 1969 Toro Hydraulic controller and a 2009 Toro Intellisense Controller. In addition to the above Glenn also showed slides of various types of agricultural irrigation including side roll irrigation, irrigation pumps, circa 1950’s side wheel and center pivot as well as a current center pivot. To view or learn more about these machines please visit www.irrigationmuseum.org.

Water Cluster Strategic Planning – Jen Paul
Jen Paul attended the last cluster members meeting and conducted a SWOT analysis for our water cluster. (SWOT = Strengths, Weaknesses, Opportunities and Threats). The SWOT was a launching pad for strategic planning to talk about the goals and objectives for the water cluster. The results of this discussion were typed and included in each person’s agenda package and can also be found at www.icwt.net. Paul asked the group to review the sheet and give feedback specifically on what other activities our water cluster can be doing to better serve the private sector.

Some of the cluster’s goals include increasing testing at the lab, continuing to expand careers in water technology, continuing Careers in Manufacturing Technology program and the supervisor training program, expanding joint effort marketing, increasing ICWT membership and expanding promotion of valley water technology. It was mentioned that increased political advocacy would be beneficial to our cluster. Jen suggested that any ideas or suggestions be e-mailed to Laura at lramos@csufresno.edu.



Vapor compression distillation and photovoltaic solar applications in agriculture irrigation are the topics of the December 17 meeting

Michael Sears from ForeverWater will provide us an understanding of energy efficient vapor compression distillation as well as its application and uses.

Michael Sears is VP of marketing and sales for ForeverWater. He brings over 35 years experience in the water purification industry. Present projects include cleaning up agricultural wastewater for reuse and cleaning the nasty “produced water” brought up when oil is pumped from underground.

Ning Ma will discuss photovoltaic solar application in agricultural irrigation in the second presentation. Dr. Ma will introduce the basis of PV technology, its current status and development in the future, followed by a focus addressing the PV solar applications in agriculture, such as solar water pumping, stand-alone solar power in rural areas, and solar power in viney. A few existing systems will be presented to illustrate the system configuration, components, and pros and cons of each design. Also, economic issues will be addressed such as investment, government incentives and return rate.

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Ning Ma, Ph.D., currently holds a position of project director of Solar Application and Integration in SUNGEN International Ltd. Prior to the current position, he was a senior system design engineer in Belectric, a subsidiary of Beck Energy, a leading solar EPC company in Europe, and a senior mechanical and structural engineer in OptiSolar for two years since 2007. Right after he obtained his Ph.D. degree in mechanical engineering, Dr. Ma joined Cyrus Solution Corp. to develop the new generation directional drilling system in 2006.

WATER CLUSTER MEETING*

Central Valley Business Incubator
1630 E. Shaw, Suite 163
Fresno, CA 93704
December 17, 2009

9 A.M. – 11 A.M.

Please RSVP to lramos@csufresno.edu or (559)278-2066

* Technical presentations are part of an ongoing effort to provide a venue for cluster members to learn about innovative ideas and products. They do not constitute product endorsement by either Water Cluster members or the International Center for Water Technology. If you are interested in presenting at an upcoming meeting, please contact Laura Ramos at lramos@csufresno.edu.

Newsletter creation and printing Funded by Fresno County Workforce Investment Board

Upcoming Irrigation Seminar series

WATERIGHT web-based irrigation January 14, 2010

WATERIGHT is a valuable water management tool growers can use to develop customized irrigation schedules that are efficient, seasonal and site-specific. This hands-on seminar will be held in a computer lab where growers will be able to use the web-based WATERIGHT program and learn more about how it can lead to potential water and energy savings.

WATERIGHT, which is available at no cost, was developed by CIIT with significant support from the US Bureau of Reclamation and the California Department of Water Resources. WATERIGHT is designed to be a multi-function, educational resource for irrigation water management and is driven by the California Irrigation Management Information System (CIMIS) that provides reference evapotranspiration data for specific areas. The irrigation schedules produced by WATERIGHT are estimates of plant/water requirements and are based on long-term, average weather patterns and average crop coefficient curves. WATERIGHT also contains a series of advisories and tutorials covering various topics including Energy Use for Irrigation; Non-Point Source Pollution, Water Budget and Graphical/Sensor-based Irrigation Scheduling, Planning Furrow, Sprinkler, or Micro Irrigations, and the difference between Irrigation Efficiency and Distribution Uniformity. For more information go to www.californiawater.org

Upcoming seminars:

March 10, 2010 Irrigation System Spring Cleaning and Maintenance
April 14, 2010 Water Sources: Wells and Surface Water

International Center for Water Technology to hold Water Technology Conference May 11-12, 2010

May 11-12, 2010 will be the dates for the second Water Technology Conference hosted by the International Center for Water Technology (ICWT) at California State University, Fresno.

Water, science and technology will again converge for a variety of technical seminars, networking opportunities, exhibits and tours. To be held at the Veterans Memorial Building in Clovis, California, the conference will focus on water technology innovations and science to help ensure water supplies for our future, especially here in the San Joaquin Valley. Agricultural, urban and municipal issues, challenges and potential solutions will be discussed.

“We are looking forward to again hosting this conference and bringing together researchers, water technology manufacturers, water users and policy makers and all of those stakeholders who can make a meaningful difference to how our Valley water is used today and tomorrow,” said David Zoldoske, ICWT Director. “We have been working on a variety of water issues with many different groups and look forward to sharing what has, is and can be done to provide a safe, reliable water supply to the residents of the San Joaquin Valley,” added Zoldoske.

The 2010 Water Technology Conference should be attended by anyone who is interested in water issues and the science and technology used to optimize a decreasing water supply in the San Joaquin Valley from Sacramento to Bakersfield and beyond. These interested parties include:

- Urban water purveyors
- Water districts
- Municipalities
- Growers
- Irrigation and water technology manufacturers
- Wastewater and recycling
- Engineering and environmental firms
- Students interested in careers in water
- Government and legislative staff

Visit www.icwt.net today and sign up to get the latest conference information and learn more about sponsorship and exhibitor opportunities.

The 80/20 Program provides employment wage assistance

The Federal Government, through the American Recovery and Reinvestment Act of 2009, is investing millions of dollars into Fresno County businesses with unprecedented labor subsidies aimed at revitalizing your company and mobilizing the workforce.

Fresno County businesses that meet certain criteria are eligible to be reimbursed up to 80% of wages for new, qualified* hires filling full-time positions! Also, this incentive will partially offset other related expenses which include:

- Work-related supplies and materials
- Training and supervision expenses
- Other related costs

The program is slated to end on September 30, 2010.

*Qualified Hires: Thousands of job-ready employment candidates who may have been affected by the current economic climate and are participating in a Fresno County Department of Employment and Temporary Assistance program.

Contact the EDC BEAR Action Network: 559-476.2511

The 80/20 Program is administered and funded by the Fresno County Department of Employment and Temporary Assistance.

For more information on the program and upcoming workshops, visit www.fresnoetastimulus.org.

CVBI event highlights importance of water technology

Establishing the Central Valley as a world leader in water and energy technology is the goal of the Central Valley Business Incubator (CVBI) and the Claude Laval Water and Energy Technology (WET) Incubator. The 2009 Central Valley Stock Exchange (CVSE) highlighted water technology represented by a local company with great growth potential, Cottonwood Creek.

Cottonwood Creek’s business is to remove the organic (BOD & COD) and mineral (TDS) pollutants from food processing waste and wash water. The technology employed by Cottonwood Creek is a proprietary aerobic fermentation technology that results in two distinct discharge streams: one stream has water discharge that meets water quality standards of governing authorities, while the second discharge is a dried solid material that is marketable as a feed or fertilizer.

At the CVSE event, Cottonwood Creek received \$21.1 million “CVBI bucks” from local attendees who acted as investors. The CVBI and WET incubate local companies in water technology

due to its positive economic development potential for the Central Valley.

“Both the CVBI board members and Travis Sheridan have been excellent resources for Cottonwood Creek. Our need is in the investing and financing arena, but everyone has been helpful in introducing us to various funding sources. Through the CVBI, we have been able to present Cottonwood Creek to a large number of individuals and businesses,” said Keith Kraemer, Managing Partner of Cottonwood Creek. “The CVSE was an event hosted by the CVBI that allowed us to present Cottonwood Creek to the community in hopes of finding local investments,” he said about this year’s Central Valley Stock Exchange.

For more information about the Central Valley Business Incubator and the Claude Laval WET Incubator (including resources for entrepreneurs such as Light Bulb Launch Workshop), please visit www.cvbi.org.

Expansion of the Career in Manufacturing Technology Program

ICWT is expanding the successful Careers in Manufacturing Technology (CIMT) program. Currently the program focuses on manufacturing and food processing. In 2010 it will be restructured to operate in all the components of State Center Community College, West Hills College, Fresno State and many others as well as encompasses careers in water treatment. The streamline of the program in these areas of expansion will remain constant in that its primary purpose will remain to provide students with the knowledge that careers in this industry are obtainable, as well as advantageous. The expanded program will continue to encourage enrollment in technical programs and act as a networking resource for internship opportunities.

If you have any questions or concerns regarding the expansion of CIMT, e-mail Laura Ramos at lramos@csufresno.edu or call 278-2066.



Fresno City College and Reedley College students taking a course on Employer Expectations.



Students taking a tour of the Fresno Surface Water Treatment Plant as part of their Internship experience.



Reedley College and Fresno City College students talking with potential employers at the annual Career Expo.

