

Investing in the Future through Energy Research & Development

By Dr. Michael E. Webber, The University of Texas at Austin

Our energy problem today is the convergence of three different challenges: concerns about environmental degradation (especially climate change) from our energy production and use; resource depletion; and the national security impacts of our energy trade. The stakes are high and the obstacles are significant. At the same time, we are in an era of economic malaise, which at first blush, makes the challenges that much more severe.

But, if we look to history going back to the Great Depression, we will see that economic downtimes are a great time to invest in new approaches to energy. And in the process, great fortunes will be made, and those energy pathways might enable decades of economic expansion.

It's forgotten by many that during the Great Depression, productive oilfields were brought online, pipelines were built, great dams were constructed, and electric light was brought to dark corners of the nation through the Rural Electrification Act. We can do the same thing, but this time, instead of fossil-fueled power plants taking energy from urban areas to rural locations, it might be the other way around: it might be rural areas generating renewable power to be shipped over long distances to urban load centers. And we'll make a lot of money and avoid millions of tons of carbon in the process.

Generally speaking, instead of plunging ahead with depletable energy choices, our goal should be to find sources of domestic renewable, secure, low-carbon energy that simultaneously meet our objectives for national security (that is, the energy is under our control and not prone to supply cutoffs), environmental compatibility, and abundance (for meeting our economic objectives).

And while there are many attractive energy options and shiny technologies to consider, what we really might

need is a change in attitude. In the process, we should reject tired thinking that gives us false energy choices. The classic example of this phenomenon is the refrain that we must choose between the environment and the economy, when surely we should choose both. And we already have great inventions that sit on shelves to apply to the problem, but they remain unused either because of

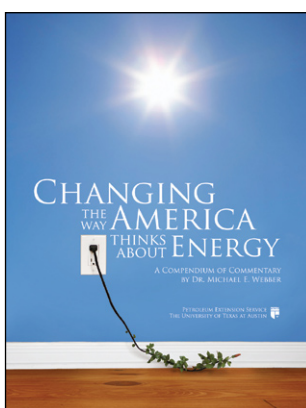
policy barriers, ignorance, or market failures. It's time to quit chasing far-off solutions that might work decades from now and instead, implement solutions that work today.

Here are some examples. Instead of leaving livestock manure in ponds to decompose, emitting the potent greenhouse gas methane in great volumes, we should turn that manure into biogas with anaerobic digesters (a proven technology) to generate electricity, offsetting the need for 1% of the nation's energy consumption and about 2% of our emissions.

Instead of throwing a fifth of our food away, which is our current practice, we should waste less food. The energy that is embedded in discarded food represents more than 1% of our total energy consumption. Cutting our food waste in half would save more energy than we're likely to get from expanded Outer Continental Shelf production one to two decades from now.

Both of these options can have a significant impact almost immediately. They do not require new inventions and are already demonstrated to work. All we need is a new attitude to get these solutions implemented. And doing so requires a new way of thinking.

Dr. Michael Webber, an Assistant Professor of Mechanical Engineering and Associate Director of the Center of International Energy and Environmental Policy at The University of Texas at Austin, has been featured in the Wall Street Journal and New York Times and on PBS, BBC, and other prominent media outlets. Webber's written commentaries and analysis have been published throughout the world.

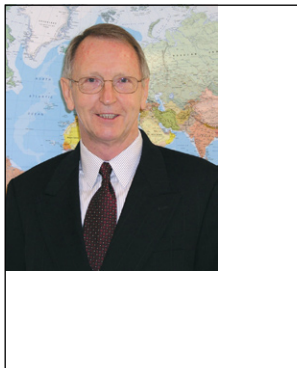


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PETEX PERSPECTIVES

From Director Greg McCormack



The oil and gas industry has been weathering a downturn, but training is an area that should not be forgotten. The adage ‘what goes down must go up’ remains valid, and for the oil and gas industry, you can be sure the spike is coming. The industry will once again face the

challenges of meeting ramped-up consumer demands and increased training needs to address the demands.

The importance of training both new and experienced personnel is paramount. As the industry makes its upturn, seasoned professionals will continue retiring and the industry will face a devastating shortage of skilled personnel. With next-generation workers entering the force and new technologies being implemented, training today for tomorrow’s needs is more important than ever.

Industry associations agree. The message at this year’s conferences is clear and consistent: continue your commitment to safety and training. Cutting corners can cost you, and today, companies definitely cannot afford such mistakes.

You can rely on PETEX to keep your organization on the right training track. As PETEX expands its offerings, we want to ensure that we are meeting your needs. Please do not hesitate to contact me or anyone at PETEX if we are missing any specific industry training needs.

PETEX is dedicated to providing quality training to industry standards and continues developing publications, courses, and digital instruction to meet your current needs. PETEX trains for results. Students learn from seasoned industry experts who guide them in applying new skills to their specific roles.

In this economy, you want results-oriented training to position your organization to respond when everyone else does. And PETEX has 65 years of proven results to assist you.

PETEX Voice of Training

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A Tribute to 30 Years with PETEX!

Debbie Caples, Manager of Graphics Services, celebrated 30 years with PETEX on Sept. 18, 2008. She manages all graphic design projects for print and online. During her 30 years of tenure, she has been involved in numerous projects that have been instrumental in the growth of PETEX. Her talent, hard work, dedication, and many contributions to PETEX are widely acknowledged and sincerely appreciated. *Congratulations!*





What's New

PETEX has new offerings designed just for you. From energy policy to distance learning on drilling principles, PETEX has the tools you need to “train up” today. It's easy to order materials and enroll in classes online.

Changing The Way America Thinks About Energy: A Compendium of Commentary

This new book showcases the author's viewpoints on energy policy and what it means to you. Dr. Michael Webber's unique perspectives offer candid insight into our global energy crisis and offers innovative, action-oriented solutions to our energy challenges.

(See cover story)

A Primer of Oilwell Drilling Correspondence Course

This new correspondence course addresses all the drilling processes discussed in the book, *A Primer of Oilwell Drilling, 7th Ed.*, in a format convenient for distance learners. Participants receive the book and a workbook study guide with questions. Satisfactory completion earns each participant three Continuing Education Units (CEUs), a Certificate of Completion, and a hardhat sticker.

To order or enroll, visit www.utexas.edu/ce/petex and click on Courses or Publications, or call 800.687.7052.

A Primer of Oilwell Drilling Training Module

This new training package gives everything needed to train groups within your organization. The module includes five workbooks with test questions and one instructor guide. The workbook reinforces material presented in the book, *A Primer of Oilwell Drilling, 7th Ed.*, to ensure comprehension of important concepts.

New Course: The Economics of the Petroleum Industry—Risk and Uncertainty

July 20-24, 2009

This timely new course is developed for professionals seeking a comprehensive understanding of the economic dynamics of this changing industry. Get the answers to these questions and more:

- What does the future hold?
- Who are the real players and what drives their strategies?
- Will we run out of crude oil?
- What other factors are impacting the price of oil?
- Where do alternative fuels fit into the energy mix, and more importantly, when will they play a significant role?

PETEX Rig School Reunion In London

Cheers to the attendees of the PETEX Rig School Reunion in London on March 26! It was a fun-filled night of networking and mingling among fellow course graduates. Thank you to all who attended!



(top l-r) **Simon Hems**, Ince & Co.; **Marc Godfrey**, Crawford & Company;
(bottom l-r) **Jamie Gardiner**, AMLIN;
Yvonne Chan, Aegis.

(l-r) **Sally Taylor**, Newman Martin and Buchan LLP; **Peter Kosewicz**, PETEX;
Casilda Thompson, Newman Martin and Buchan LLP.





SUMMER TRAINING

For the complete 2009-2010 schedule, visit www.utexas.edu/ce/petex

School	CEUs	Length	Dates	Tuition
Electrical Maintenance Fundamentals for Production Lease Operations	3.3	4 ½	July 6-10	\$1,465
Electrical Maintenance – Equipment and Application	3.3	4 ½	July 13-17	\$1,465
Introduction to Offshore Operations	3.3	4 ½	July 13-17	\$2,200
NEW! Economics of the Petroleum Industry	3.3	4 ½	July 20-24	\$2,500
Elementary Electronics for Nonelectrical Personnel	1.9	2 ½	July 21-23	\$1,250
Instruments and Controls	3.4	4 ½	August 3-7	\$1,575
Field Handling and Plant Processing of Natural Gas	7.1	9 ½	August 3-14	\$3,410
1st Week	3.8	5	August 3-7	\$1,800
2nd Week	3.3	4 ½	August 10-14	\$1,710
Introduction to Programmable Logic Controllers	1.9	2 ½	August 11-13	\$1,250
Supervisory Control and Data Acquisition Systems (SCADA)	1.9	2 ½	August 18-20	\$1,250
NEW! LNG: Basics of Liquefied Natural Gas	3.3	4 ½	August 24-28	\$1,710

Some courses have associated publications available by enrolling in the training class or by ordering from the 2009 *Petroleum Extension Service Catalog*; call 800.687.4132.

All courses are held at the PETEX Houston Training Center, 2700 W.W. Thorne Blvd., Houston, TX 77073.
Training dates are subject to change.

To enroll, visit www.utexas.edu/ce/petex or call 800.687.7052;
fax 281.443.8722; or email petexhtc@www.utexas.edu.

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