

University of Delaware Energy Institute Conference
11:50 a.m., Friday, Sept. 19, 2008
Clayton Hall

Thank you, Secretary Bodman, and to all our speakers and guests who have joined us today for this very special event.

With this conference, we formally open the University of Delaware Energy Institute.

Two of the most important issues we face as we advance through the 21st century are energy and the environment.

These two issues are very much intertwined, and the solutions to them both will be very much multi-disciplinary.

Energy is of enormous importance to our economy and to our society.

We need energy to heat our homes, to power our cars, and to keep our factories, and our cities — and even our universities — running.

The question is — what kinds of energy should we rely on?

Thomas Friedman, the well-respected writer for The New York Times, notes in a recent column that coal, oil and other such fossil fuels are 19th century technology.

We all have felt the sharp pain of rising oil prices each time we have pulled into a gas station. On a national scale, U.S. oil imports now exceed one billion dollars per day. Yes, that is correct — **one billion** dollars per **day**.

Worldwide, it is projected that energy demand will double by the middle of the century and triple by the end of the century.

Adding to the urgency of the situation are the environmental impacts associated with the use of many of our fossil fuels, with the threat of climate change as a menacing backdrop.

What we need now, Friedman says, is something new. What we need is a 21st century technology — renewable energy.

I think it is clear that today we are in search of energy solutions that are renewable, sustainable and clean.

As the University of Delaware undertook its strategic planning process last year -- engaging community leaders, alumni, faculty, staff and students -- it became clear that there is a shared concern for the environment across all these constituent groups.

One of the six milestones in the resulting Path to Prominence is The Initiative for the Planet. This initiative has among its goals that the University of Delaware will lead path-breaking environmental research, that it will become "The Green University," that it will develop and demonstrate alternative energy technologies and that it will integrate environmental programs within the curriculum.

Not mere words, the initiative includes specific action steps.

In April, we announced the University's commitment to become carbon-neutral and we launched a sustainability web page.

That same month, I signed two agreements on sustainability -- the American College and University Presidents Climate Commitment and The Talloires Declaration by the Association of University Leaders for a Sustainable Future.

As a University committed to providing leadership in sustainability, we have begun a number of programs large and small.

Work is under way to determine the University's current carbon footprint, and to help us better plan for a carbon-neutral future. We are promoting conservation through PhillyCarShare, and we are encouraging recycling through a single-stream recycling program across campus. That program extends to football game day, with special receptacles stationed near the areas frequented by Blue Hen tailgaters at Delaware Stadium.

Recently, you may have seen on the news that Dining Services has gone trayless. Studies have shown that this saves water and energy, and cuts down on food waste.

In July, the University hosted a solar hydrogen workshop.

And, of course, we are opening the University of Delaware Energy Institute with this inaugural conference.

We believe that the University of Delaware is uniquely positioned to serve as a national and international resource for research, technology, education and policy on energy and on the environment.

The University of Delaware Energy Institute will serve as a focal point for a wide variety of efforts in these areas.

The issue is immensely complex. Even if our consumption of fossil fuel holds the line and energy from renewable sources increases to meet the anticipated rise in demand over the next several decades, atmospheric carbon dioxide concentrations will continue to rise, doubling from their current historic high levels by the end of the century.

It is becoming increasingly clear that there is no one solution to our energy needs, no “silver bullet.”

Rather, the issue must be tackled from a range of different approaches -- energy efficiency, sustainability, new and advanced technologies, and innovative policies.

For the past four decades, the University of Delaware has been conducting leading-edge research in many of these areas.

Our faculty have been hard at work in such fields as: catalysts for fuel production, solar research, lightweight composites for fuel-efficient vehicles, energy efficiency and conservation, energy and environmental policy, fuel cell science and technology and energy storage.

We have a number of centers across a number of colleges and departments that have achieved prominence, including the Center for Energy and Environmental Policy, the Center for Fuel Cell Research, the Institute of Energy Conversion, the Center for Catalytic Science and Technology, and the Solar Power Program.

We have just established the Center for Carbon-Free Power Integration, which will explore connection and storage issues related to wind and other intermittent energy sources. We are exploring the formation of a Center for Advanced Magnetics – a topic of great importance in building more energy efficient devices.

Each of these Centers is an important part of the University of Delaware’s efforts to advance energy science, technology, and policy, but just as there is no “silver bullet” for our national energy needs, no one discipline, no one technology can do the job alone.

By connecting research efforts on specific energy technologies through this new Energy Institute, we will be able to recognize and address cross-cutting challenges in alternative energy, to move nimbly to pursue new advances, and to provide students with a comprehensive education for the future.

Just how broad are our energy activities? Even the examples that I have already mentioned only cover a part of the picture.

UD is home to other centers and programs with activities in the energy field, including the internationally renowned Center for Composite Materials, the Department of Energy Industrial Assessment Center and the National Science Foundation IGERT program in sustainable energy from solar hydrogen.

University of Delaware researchers are deeply involved in issues surrounding wind power, and were featured earlier this week in a Sunday New York Times Magazine story. Due in part to their leadership in the field, Delaware's coast may become home to a new offshore wind project.

The University was a pioneer in photovoltaics, and is the home of the Institute of Energy Conversion and to a research team that played a lead role in a multi-million dollar solar energy research grant from the Defense Advanced Research Projects Agency. The Institute of Energy Conversion was founded in 1972 and is a Department of Energy University Center of Excellence for photovoltaics research and education.

We are heavily engaged in hydrogen fuel cell power, with a shuttle bus making regular runs as it transports students around campus. Because of the high profile of this program, the University was a featured stop in the Hydrogen Road Tour '08, in which vehicles by a number of manufacturers motored from Maine to California to publicize hydrogen power. The road tour was sponsored by the Department of Energy, the Department of Transportation and the California Fuel Cell Partnership.

University scientists are interested in electric vehicles, and the V2G technology that will enable drivers of electric vehicles to return power to the nation's power grid.

We at the University are extremely proud of efforts in the area of energy policy, for which two professors – John Byrne and Fritz Nelson – made important contributions to the Intergovernmental Panel on Climate Change, which received the 2007 Nobel Peace Prize.

John, in fact, is leading efforts to determine the University's carbon footprint and to help us better plan for the future.

The purpose of this new University of Delaware Energy Institute is to create and integrate new solutions to challenges in energy sufficiency and sustainability.

The Energy Institute will develop the science undergirding advances in emerging energy technologies, and will advance their development and deployment.

It will leverage our strengths in partnerships with industry and government, developing and coordinating efforts on campus and off.

The Energy Institute will take a leadership role in major grant proposals, and will provide seed grants to launch innovative energy projects.

A key focus will be to foster academic programs that will provide students with a comprehensive understanding of existing and emerging fields through formal coursework and opportunities to participate in frontline research.

I would like to offer a special thanks to Mark Barteau, senior vice provost for research and strategic initiatives, who has taken a leadership role in launching the Energy Institute. Mark is a renowned chemical engineer in his own right, and he played an important role in development of the Path to Prominence from which this institute grew.

And with this conference as its first major event, it is clear that the University of Delaware Energy Institute is off to a very good start.

As part of this very special event marking the beginning of the Energy Institute, I am pleased to announce the creation of a new endowed chair in the field of Energy at the University of Delaware. This chair will be funded through the generous gift of the Unidel Foundation Incorporated to support the strategic initiative in energy called forth by our plan, the Path to Prominence. Our objective is to recruit a distinguished Energy scholar to the University of Delaware, who will help to lead research and education programs in the UD Energy Institute and in the colleges in which he or she holds appointments.

We seek an individual who will have a University-wide impact on our strategic energy initiative, with no assumptions about home department or academic field.

We are extremely grateful to the Unidel Foundation for its ongoing support for the University of Delaware, and for making this new Chair possible.

In closing, let me say that one of my favorite public servants is the late John W. Gardner, who was president of the Carnegie Corporation, served as Secretary of Health, Education and Welfare during the Johnson Administration, and who founded Common Cause.

Gardner once said, "We are continually faced with a series of great opportunities brilliantly disguised as insoluble problems."

Such is the case today. We are faced with great challenges in energy and the environment, but we must not throw up our hands in defeat.

We must redouble our efforts to find solutions. We must seize the opportunities to make our world a better place.

Thank you.