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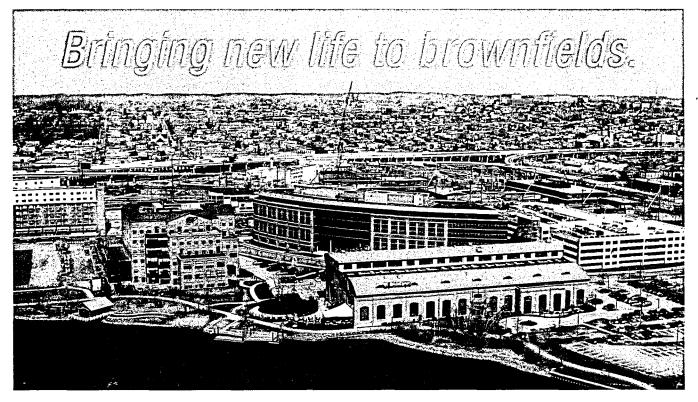
A PUBLICATION OF THE DELAWARE BAR FOUNDATION VOLUME 27 
NUMBER \$3.00 
SUMMER 2009

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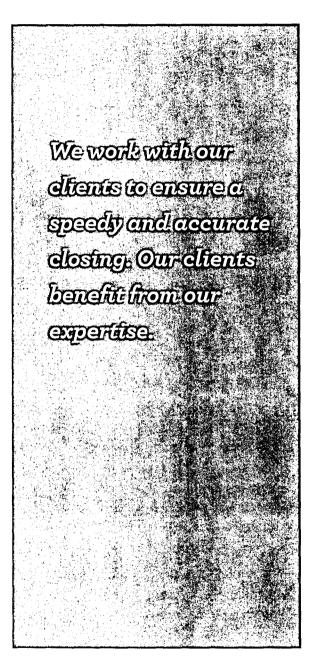
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#### TRIBUTE TO HARVEY RUBENSTEIN Thomas L. Ambro

"I have no doubt that Mr. Rubenstein will cross home plate safely, but he has already won the game of life. He has been a positive influence in all of his endeavors and, fortunately for everyone, he's just Rounding Third."

> - Justice Randy J. Holland Supreme Court of the State of Delaware

The above quote concludes Justice Randy Holland's introduction to Harvey Rubenstein's 2004 memoir. Rounding Third. I recommend with conviction that memoir to your reading, for in telling

us about himself, Harvey teaches - about Delaware, of professionalism, and, above all, about love, loss, and how to live after that loss.

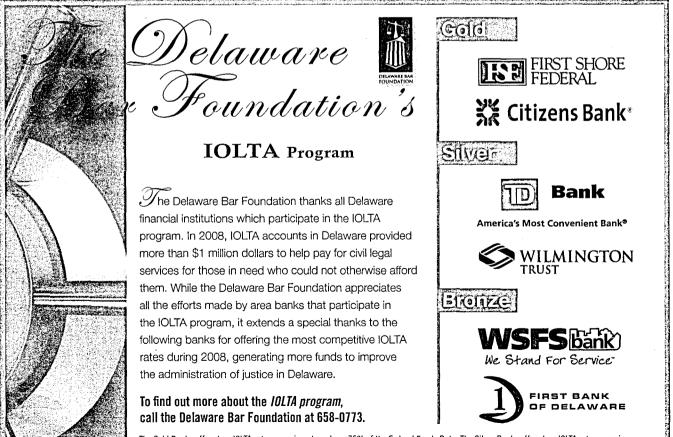
At the end of June 2009, Harvey is leaving the Board of the Delaware Bar Foundation, where he has served 22 years, the last eight as its President. Though he did not need to do so, Harvey regularly attended Board of Editors' meetings of this magazine, which is published by the Bar Foundation. I know of no other President of the Bar Foundation to have done so.

Are we at Delaware Lawyer the only beneficiary of Harvey's work on the Bar Foundation? Hardly, for that would not be Harvey. He led the effort to establish its endowment fund, the creation of its website (delawarebarfoundation.org), and a line item in Delaware's state budget that funds legal services for indigent clients.

Of course, the Bar Foundation is but one aspect of Harvey's accomplishments. They include (in addition to being an author): law clerk to former District Judge Paul Leahy (see the tribute to Judge Leahy by former Justice Joseph T. Walsh in Delaware Lawyer's Spring 2009 issue); solo practitioner for more than 35 years; past President of the Delaware State Bar Association; member of the American Bar Association's House of Del-

egates; past President of the St. Thomas More Society's chapter in Delaware (unusual, you might think, for a Jewish guy from Philadelphia, but not surprising if you know Harvey); founder and first Editor-In-Chief of the Delaware Law Review; Vice Chair of the Delaware Constitutional Revision Commission; member of the Delaware Heritage Commission; the recipient of many awards, including the American Bar Association's Solo Practitioner of the Year, the First State Distinguished Service Award, and the Msgr. Paul J. Taggart Award of the St. Thomas More Society; and, perhaps his greatest accomplishment, the father of three daughters, all lawyers.

To know Harvey Rubenstein is to know a life in full. For our sakes, Harvey's life remains full at age 78. As Justice Holland wrote, "fortunately for everyone, he is just Rounding Third."



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#### EDITOR'S NOTE

Robert W. Whetzel

Sustainable energy. Climate change. Green economy. These topics are a focus of the news, political debate and public discussion, and significant shifts in environmental policy are ongoing. In this issue, we examine how these issues are impacting our State and shaping the future of Delaware.

For decades, scientists have debated the existence and causes of global warming and climate change. More recently, the debate has shifted from a discussion of *whether* there is a problem to consideration of *how* to solve it. Already, the focus on climate change and renewable resources is altering the way that energy is generated, distributed and used in Delaware and elsewhere.

As new programs and policies are implemented, businesses and consumers will be profoundly affected. Solar panels are beginning to appear on commercial and residential buildings, and windmills may be coming soon. These changes create new challenges and opportunities for lawyers, with the implementation of a "carbon economy," development of renewable energy resources and projects, and shifts in economic, tax and regulatory policy.

Our first article serves as a primer on the "green" movement, written by Paul Hughes, a local commentator on "green" issues. Next, we review a series of energy, environmental and economic initiatives at the state level. Governor Markell has announced a "climate prosperity" agenda, and two senior administration officials — DNREC Secretary Collin O'Mara and DEDO Director Alan Levin — address the "green economy" initiatives and the balance between environmental regulation and economic development.

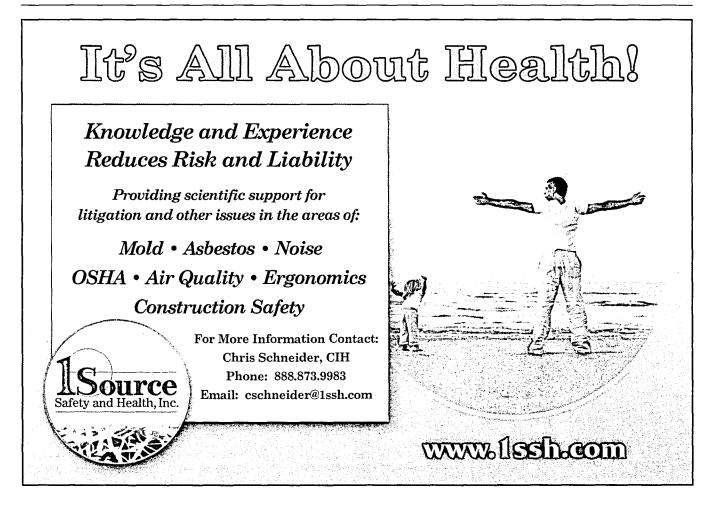
Developing a "green economy" is closely linked to energy policy. Our next author, Phil Cherry of the Delaware Energy Office, reviews the energy policy initiatives that are underway in Delaware. Among these initiatives is the creation of a "sustainable energy utility," an innovative concept for energy efficiency, conservation and renewable generation.

Dr. John Byrne, Director of the University of Delaware Center for Energy and Environmental Policy and the architect of the sustainable energy utility, and co-author Dr. Cecilia Martinez, provide a revealing discussion of its promise for a sustainable energy future.

Finally, David Rosenstein, general counsel for Conectiv Energy, examines some of the complex regulatory issues that confront energy generators in the world of deregulation. Suffice it to say that deregulation has done little to simplify energy generation.

We are fortunate to have a talented and thoughtful collection of scientists, lawyers and policymakers working in this area and contributing to this issue. The stakes for all of us — as professionals, regulators and individuals — are enormous.

Robert W. Whetzel



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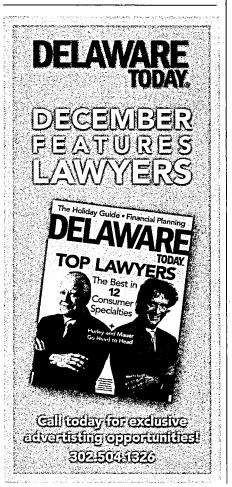
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#### CONTRIBUTORS

#### Dr. John Byrne

is Director of the Center for Energy and Environmental Policy (CEEP) and Distinguished Professor of Energy and Climate Policy at the University of Delaware. He has contributed to Working Group III of the United Nationssponsored Intergovernmental Panel on Climate Change (IPCC) since 1992 and shares the 2007 Nobel Peace Prize. Dr. Byrne received his doctoral degree from the University of Delaware in 1980.

#### Philip J. Cherry

is the Policy Director for the Delaware Department of Natural Resources and Environmental Control (DNREC). He has more than 25 years of experience in DNREC serving in staff and management positions focusing on pollution prevention, recycling, waste management, air quality, land use, energy and coastal zone act permitting. He has extensive experience working in legislative affairs and currently manages DNREC's Energy and Climate programs.

#### Paul E. Hughes

graduated with Honors from the University of Delaware Master of Public Administration Program. He is President of Green Fox Energy Group, writer/co-host of "The Great Green Home Show" on 1450AM radio, Wilmington, director/producer of "Great Green Expo" at Riverfront Convention Center, and is involved in countless socially responsible projects. He designs, lectures, teaches, and consults for individuals, businesses and training schools in the areas of green technology implementation, marketing, sales and business planning/ administration.

#### Alan B. Levin

is Director of the Delaware Economic Development Office. He is responsible for the state's business and economic strategies, focusing, among other areas, on the technology, life science and venture capital business sectors. Mr. Levin served as President & CEO of Happy Harry's, the nation's 10th largest drugstore chain until the Walgreen Company acquired it in 2006. Mr. Levin is a graduate of Tulane University and the Delaware Law School of Widener University. A member of the Delaware Bar, he served in the Delaware Department of Justice as Deputy Attorney General and as Executive

Assistant and Counsel to U.S. Senator William V. Roth, Jr.

#### Collin O'Mara

is Secretary of the Delaware Department of Natural Resources and Environmental Control. He is responsible for leading Governor Markell's efforts to create a thriving green economy and sustainable natural environment. A native of Syracuse, N.Y., he served as the Clean Tech Strategist for the City of San Jose, Calif., and directed a division of Syracuse City government where he modernized services and led the SyraStat accountability project. Mr. O'Mara was a Marshall Scholar at the University of Oxford, a University Fellow at the Maxwell School of Citizenship and Public Affairs, a Presidential Scholar at Dartmouth College and is LEED AP certified.

#### Dr. Cecilia Martinez

is a Senior Policy Fellow at the University of Delaware's Center for Energy and Environmental Policy (CEEP), where she contributes to the CEEP's environmental justice, energy sustainability, and global environments portfolios. She is also the Director of the Center for Earth, Energy and Democracy at the Institute for Agriculture and Trade Policy (Minnesota). Dr. Martinez received her doctoral degree from the University of Delaware in 1990.

#### I. David Rosenstein

is Vice President and General Counsel of Conectiv Energy, which is Pepco Holding, Inc.'s merchant generation and wholesale marketing affiliate headquartered in Newark, Del. Mr. Rosenstein joined Conectiv in 1999, and managed the legal requirements for acquiring the company's first merchant generation assets, commencing its participation in the wholesale power markets. Previously, he was Vice President with Lundberg, Marshall and Associates, Ltd., an engineering firm that provides consulting services to governmental and large industrial utility customers. Prior to joining Lundberg, Marshall, Mr. Rosenstein was a partner in the Washington, D.C., office of Dykema Gossett. He received his law degree and his bachelor's degree in mechanical engineering from the University of Cincinnati.



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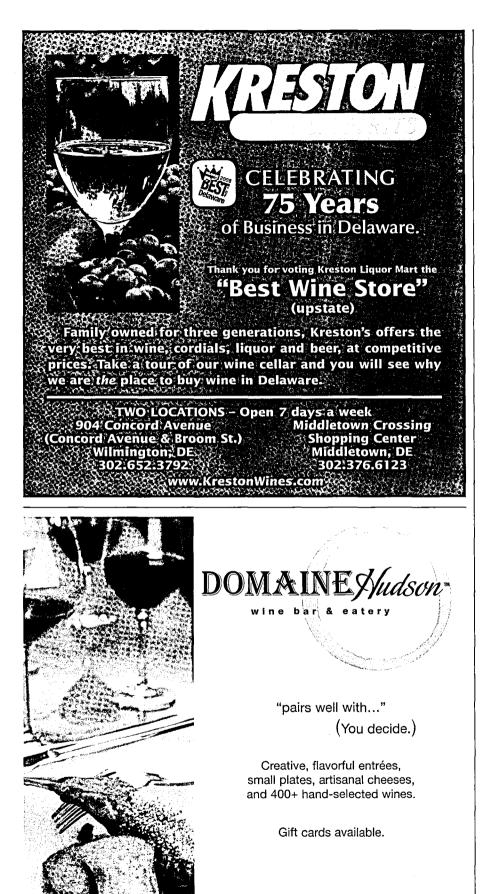
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A publication of Delaware Bar Foundation Volume 27. Number 2

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Media Two, Inc. /Today Media, Inc. 3301 Lancaster Pike, Suite 5C Wilmington, DE 19805

Chairman / Robert Martinelli President/Editor / Jonathan Witty

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#### FEATURE Paul E. Hughes

# A Primer di Ba

"Green" could be the most over-used word in the culture. But what does it really mean?

"Green" is everywhere these days ... except your wallet. Open the *News Journal* or almost any magazine and you can expect to find at least one article about green concepts. So, what exactly is this green revolution all about?

n this article, I attempt to provide a simple, not too boring, straightforward overview of "green" concepts ... and to avoid use of the generic word "green" when referring to energy efficiency, reduced carbon output, biodegradable, recycled, low environmental impact, renewable or sustainable.

Simply stated, "green" means creating a product or delivering a service in the most economic and environmentally friendly manner. There are many levels of being green and as of yet, except for nature's own organic creations, most products and services could be made even more efficient, economical and renewable than they are today. Buying products and services that are offered in a more thoughtful and holistic context is almost always more economical. The idea works and is being embraced because consumers see that it's good for them and good for the planet.

Recycled products are investments rather than consumer liabilities because they use less energy, are more efficient and last longer. This is organic capitalism and the path to a more efficient, less costly and better future.

#### Red, White, Blue and Oh So Green

President Obama envisions a complete transformation within the next 10 years where America will no longer depend on foreign oil, our food sources will be secured, and our buildings and factories will cease to be pollutantspewing, inefficient energy hogs.

**r** 1

There will be a workforce transformation where former steel plant workers will be paid to manufacture solar panels and turbines, former autoworkers will be retrained to assemble clean-runningelectric cars and buses, and buildings will be retro-fitted to be energy efficient. Legions of additional workers will be trained to rebuild and maintain this new "green" America.

The new administration wants us to embrace the vision ... and the Federal and State governments will even provide money to do so through the new stimulus plan.

The stimulus plan includes several major initiatives. A great deal of the money ear-marked for the environment is intended to do several things at once: stimulate the economy, prepare our infrastructure for the next economy build-out, create jobs, reduce carbon footprint (impacting global warming), and in the long run create tax base savings and investments.

Early money will go to rebuilding our sorely neglected infrastructure: roadways, transportation, buildings and homes. The theory is that we need a good foundation for the future and it's hard to rebuild our new economy when our infrastructure is old and failing.

All right then ... let's take a closer look at this carbon footprint thing. The largest end uses of primary energy in *residential buildings* in 2005 were: space heating at 32%, air-conditioning or space cooling at 13%, water heating 13% and lighting 12%.

The largest end uses of primary energy in *commercial* buildings in 2005 (office managers take note!) were: lighting at 27%, space heating at 15%, space cooling at 14% and water heating at 7%. These four end uses account for <u>63% of</u>

#### primary energy consumption.1

More than 40% of the carbon that is polluting our atmosphere and creating global warming comes from heating our homes, buildings and factories.<sup>2</sup> The new Federal administration has reacted to this information fairly quickly. So what does this mean to the end consumer? Let's take a look.

#### Save Money, Save the Planet

There are all sorts of federal tax credits and rebates for insulating and weatherizing residential homes. This year and next year there is a 30% federal consumer tax rebate capped at \$1,500 for both years combined for insulation, weatherization, high-efficiency windows, well-insulated doors, furnace upgrades and other energy-saving home improvements.<sup>3</sup>

In the interests of time and space, I'm going to highlight a few of the top return on investment (ROI) upgrades and renovations that qualify for federal (and in some cases state) tax return assistance. Did you hear that? That's money back in your pocket! Now remember, these programs provide tax credits and rebates, and in some cases an ROI which is quite substantial.

Energy audits are a logical starting point to improve home energy efficiency.<sup>4</sup> An auditor will assess the effectiveness of the thermal envelope, which is the barrier around your home created by properly insulated crawlspace, walls, windows, ceilings and attic.<sup>5</sup> Diagnostic tests assess energy use and pinpoint areas where you are losing hot/cold air.

The auditor will recommend remedies, prioritize your budget and even calculate the ROI for each improvement. Auditors can provide instruction on how to program new equipment, assist with rebate and tax credit information, and guide you in many other ways.

At the top of the list of rebate-qualifying, money-saving, environmentally friendly upgrades is a programmable thermostat. They don't cost much and often pay for themselves within four to six months. Before making any purchases, be sure to visit www.greenand save.com and www.energystar.gov to see if your purchase will also earn you a rebate and to review ROI stats.

Just want a few quick and easy fixes? Change your light bulbs to fluorescent (CFL) to save money and spare the atmosphere from billions of tons of carbon over time.<sup>6</sup> Also, wrap that hot water heater in an insulated blanket, check duct work to ensure it is properly insulated, and install dimmer switches and sensors.

Water conservation will become crucial in the near future. Low flow shower heads, faucets and toilets are great ways to reduce your water bill and your water heating bill. Because 60% of the water used by households is used outside of the house, roof water harvesting systems such as rain barrels and cisterns connected to down spouts will become more common and will be a great aid in water conservation in the future.

The number one energy and cost-reducing strategy that we can and should put in place immediately is **conservation**. We have grown accustomed to having cheap power and using it without thought (certainly without thought to the long-term environmental cost).

Our primary budget gobblers, in terms of appliances, are the freezer, dryer, refrigerator, washer and dishwasher. As soon as possible, these should be changed over to high-efficiency *Energy Star*<sup>®</sup> products. Later this year, rebate money may be available through the Delaware Energy Office for replacing these older appliances with higher-efficiency ones.

Old refrigerators and freezers consume four to five times as much as the new high-energy efficiency units.<sup>7</sup> If you must use the dryer, throw a dry towel in with each load. This will reduce energy consumption by 20% to 30%. When you use your dishwasher, not using the drying cycle can save as much as 60% of the energy.<sup>8</sup>

#### Investing in the Future

Next, let's take a look at some of the energy independent technology on the market and the rebates that are available. Both solar electric and solar thermal (hot water) qualify for a 50% rebate from the State of Delaware (at present, up to \$31,500 for Delmarva Power customers and up to \$15,000 for municipal or co-op customers).

These projects also qualify for a Federal tax credit of 30% of the remainder. This means that if you invested in a solar system that cost \$30,000, you would qualify for a \$15,000 state rebate plus a \$5,000 federal credit. This leaves an initial investment in the technology of \$10,000 out of pocket. However, the savings don't stop there.

In Delaware, and in other states, you can sell the excess electricity that you generate. Renewable energy credits (RECs), also known as green certificates, green tags or tradable renewable certificates, represent quantifiable measures of the power produced from renewable energy projects. You can amass RECs and sell them to utilities that need credits to meet renewable portfolio standards. This process can be viewed as a form of taxing which transfers funds from carbon-producing electricity utilities and invests them in renewable and sustainable energy technologies.<sup>9</sup>

Solar energy is arguably the best investment on the planet right now: A \$10,000 investment in solar electricity will net about five credits a year (one credit is currently selling for about \$300). That's a 15% return in the first year. One caveat: Some of the solar companies aggregate their renewable energy credits and sell them for you at little or no cost. Other companies may take as much as 20% to handle the sales.

When analyzing the value of a solar investment, also look at the payoff rate.

The average investor/electric consumer will end up paying an equal amount in electric bills as they will for the out-ofpocket cost to install solar. Using today's kilowatt cost per hour, the payoff rate is about four to five years for commercial and about five to six years for residential. When the purchase is paid off, you are getting free electricity.

When you factor the payoff into the investment analysis, the ROI jumps into the 25% to 28% range. Residual benefits are equity in your house and energy independence for the future. Further down the road, as gas and oil grow more scarce, vehicles will more likely be electric and hopefully some of us will be using solar power to charge those cars — driving for free after the payoff period.

For businesses and commercial entities, solar thermal and solar electric are great investments. For those who have apartment buildings, imagine the savings you realize by having tenants pay off the cost of your new solar electric system over the next five years and then pay *you* monthly for electricity.

You can even give it to them at a slightly lower price than the utility, which makes them happy, and also puts a new stream of revenue in your pocket for which you have paid virtually nothing. Your apartments will never be empty again!

Before ending, let me note that offices leave big carbon footprints. Significant expense reductions and environmental improvements are available by switching to recycled paper, re-fillable printer cartridges, installing powersaver strips, and using energy-efficient appliances. For more detailed tips, take a look at the ABA Law Office Challenge.<sup>10</sup>

I think I succeeded in not generically labeling everything "green" and being specific as to what the real issues are and how to address them. When you are ready to go "green," State resources, and especially the Delaware Energy Office, are great places to find contractor referrals and rebate and tax information.<sup>11</sup>  $\blacklozenge$ 

#### FOOTNOTES

1. Elena Foshay, *The New Apollo Program Fact Sheet* (Nov. 24, 2008) at http:// apolloalliance.org/data-points-nap/ data-points-the-new-apollo-program-factsheet/. Apollo Alliance is a coalition of labor, business, environmental, and community leaders working to catalyze a clean energy revolution.

2. Lester R. Brown, *Plan B 3.0: Mobilizing to Save Civilization* (2008). Free download and data compilation available at www.earth-policy.org/Books/ PB3/index.htm. *See* also http://wwwl.eere. energy.gov/consumer/tips/heating\_ cooling.html for additional stats on effect of heating and cooling on the environment.

3. See www.dsireusa.org for requirements for each product and allowances for the federal tax breaks.

4. See Home Efficiency Checkup FAQs at http://www.greenandsave.com/home checkup/faq#1, which estimates that 40% of a home's utility costs come from heating and air conditioning.

5. The largest portion of your typical utility bill is heating and cooling. 2007 Energy Data Book, Table 4.2.1, 2005 energy cost data. Further detail at http://www.energysavers. gov/your\_home/energy\_audits/index. cfm/mytopic=11160 and http://wwwl. eere.energy.gov/consumer/tips/heating\_ cooling.html Always contract with qualified energy auditors who are certified by a government-sponsored training organization that will use the latest in equipment to ensure your safety, health and energy efficiency.

6. Brown, supra "Banning the Bulb" at pp. 215-17.

7. Id., "Energy Efficient Appliances" at p. 218.

8. See http://wwwl.eere.energy.gov/ consumer/tips/laundry.html and http:// www.energysavers.gov for more tips on saving money/energy at home.

9. More detailed discussion available at http://apps3.eere.energy.gov/greenpower/markets/certificates/shtml?page=0

10. See www.abanet.org/environ/climate challenge/overview.shtml

11. More information available at www. dnrec.delaware.gov/energy/

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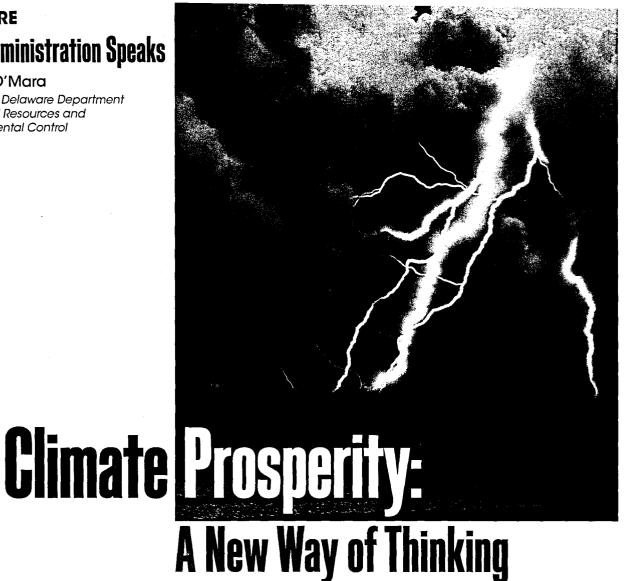
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#### TRANSPORTATION AVAILABLE

## FEATURE The Administration Speaks

#### Collin O'Mara

Secretary, Delaware Department of Natural Resources and Environmental Control



## Forging a responsible environmental policy can offer big economic benefits.

Delaware stands on the brink of a fundamental policy shift in which environmental health and welfare will be placed at the center of the public debate. Traditionally, many discussions and policy decisions around economic development, environmental protection, transportation, public health, housing, agriculture and land use have been conducted in isolation without fully evaluating the cumulative impacts.

hrough a new lens of climate prosperity, the Markell Administration is working to integrate these typically disjointed policy efforts to produce better short- and long-term outcomes for the State.

The concept of climate prosperity is built upon a belief that climate change simultaneously represents the greatest challenge and the greatest opportunity of this century. By increasing the use of renewable natural resources and adopting more sustainable practices, we can

confront this challenge while becoming more prosperous at the same time.

The impetus for action is clear without significant global effort to reduce greenhouse gas emissions and end dependence upon fossil fuels, the Earth will experience significant sea level rise, extreme weather events, desertification, fresh water scarcity and extinction of numerous species.

Changes to our climate will likely affect Delaware to a greater extent than other states, with sea level rise threatening a large percentage of coastal land, fundamentally altering the agricultural and tourism industries in the State.

r f

While the long-term impacts on the State could be devastating without a global response, taking early action locally may create a first-mover advantage for Delaware which will spur innovation and economic opportunity while creating a more sustainable local environment.

While some have argued that we cannot afford to act because of the global economic recession, we agree with Sir Nicholas Stern who argues that the costs of inaction will vastly exceed the costs of acting today.<sup>1</sup> By fully embracing this vision, we will accelerate our economic recovery, create thousands of new jobs, generate new domestic wealth, improve the trade deficit, and enhance our longterm economic and environmental sustainability.

So how do we advance this vision?

The first step is strong environmental protection. We cannot create the green economy of tomorrow without cleaning up the polluting industries of yesterday and today. We will ensure that companies are in compliance with existing regulations and clean up historically contaminated sites.

We will expand our monitoring efforts to receive greater and more accurate scientific data that will allow us to take swift and appropriate action while helping us understand the magnitude of the link between pollution and public health.

We will also support efforts to turn the contaminated sites of long-abandoned industries into vibrant and thriving sites for economic activity.

The second step is challenging our assumptions about the costs of various policy decisions by quantifying the harmful impacts of externalities such as environmental pollution and healthcare costs and incorporating them into our decisionmaking.

When we incorporate all costs and compare apples to apples, there are strong economic reasons for making decisions that preserve the long-term integrity of our environment. For example, Governor Jack Markell recently directed DNREC to intervene in the energy resource planning process underway with the Public Service Commission to ensure that health-care costs and other environmental externalities are captured in the proceedings.

While this type of thinking is not new (Peter May and Ronaldo Serôa da Motta articulated this approach in *Pricing the Planet*, and leading professors have been advocating for the value of "ecological services" for the past several years),<sup>2</sup> Delaware is quickly becoming one of the first states in the nation to integrate this paradigm into policymaking.

Consideration of externalities does not just apply to energy policy, but will also guide our thinking in many environmental areas, such as recycling and land conservation. The currently depressed value of recycled materials has raised questions about the economic feasibility of statewide recycling. This argument fails to capture the long-term costs of continuing the status quo.

Few arguments against recycling incorporate the costs associated with filling existing landfills, identifying and purchasing suitable new landfill sites, and capturing the harmful methane emissions from organic waste as it decomposes.

A similar argument for land conservation that captures the true benefits of the ecological services that open space provides — such as watershed management, water purification, wildlife habitat, local food production, and air quality and carbon sequestration in trees and soils — will reflect a monetary value that outweighs the benefits from sprawling development, especially when infrastructure demands are considered.

Third, we must pursue an aggressive agenda that sets the stage for climate prosperity in Delaware. Our climate prosperity strategy will aim to achieve three outcomes: Green Savings, Green Opportunities and Green Talent. Green Savings represents the ability of households and businesses to reduce their costs by using resources, such as energy and water, more efficiently.

As individuals work to save money, innovative companies and entrepreneurs have the ability to seize the Green Opportunities created in the economy by the transition to renewable energy, clean transportation and more sustainable building practices.

Finally, Green Talent represents the well-paying employment opportunities that will arise from the innovation, production, installation and usage of new technologies, and adoption of new practices, as we transition to a low-carbon economy.

By focusing on these three areas, our Climate Prosperity strategy will help create a functioning marketplace for green products that reduce energy and water consumption, adopt renewable energy and reduce vehicle miles traveled.

Through an array of programs and policies, we will provide incentives to residents and companies to adopt lowemission, sustainable practices as a way to improve their short- and long-term financial bottom line. We will then connect this demand for goods with a supply of products and services from local companies and local workers to create a flourishing green economy.

As with much of climate change policy, significant early effort will focus upon energy generation and consumption. Delaware has the opportunity to pursue a clean energy future by first focusing on energy conservation and efficiency and then harnessing the power of local wind, solar and geothermal resources.

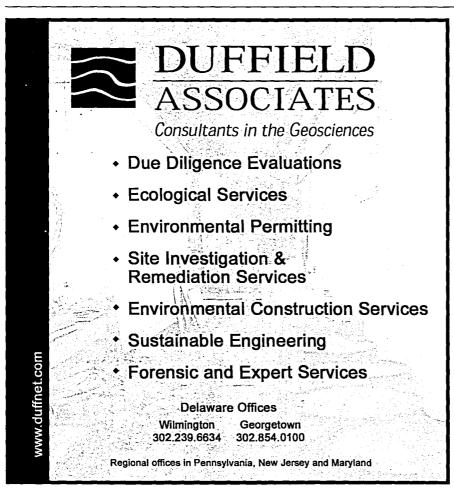
The greatest initial return on our investment for Green Savings will be from using energy more intelligently and reducing consumption. For this reason, Governor Markell has proposed an aggressive program around conservation and efficiency during his recent address to a joint session of the General Assembly. Right now, many low-income families and fixed-income senior citizens are spending more than 20% of their income on energy costs. Reducing these costs through efficiency investments that pay for themselves within a few months will have the effect of increasing disposable income, providing more money to save or spend on family needs or in communities (a concept referred to as the green dividend).

The State's energy efficiency agenda will include policies to increase the demand for energy efficiency as well as to increase the supply of programs that residents, businesses and public institutions can access to benefit from green savings in their day-to-day operations.

Policies such as the proposed Energy Efficiency Resource Standard will help reduce per capita energy usage by 15% by 2015. Further, we will utilize the innovative Sustainable Energy Utility and resources from the American Recovery and Reinvestment Act to launch one of the largest energy efficiency campaigns in the nation.

Through this combination of both demand-side and supply-side policies, we will create a market for goods and services that will connect consumers with companies and service providers. Approaching our energy efficiency program in this way will help maximize the economic and environmental benefits of this effort as measured in reduced greenhouse gas emissions, savings for end users, jobs created for energy efficiency specialists, and new opportunities for energy efficiency service companies.

As we embark upon developing and implementing a comprehensive statewide Climate Action Plan, we will take a similar market-based approach to accelerate the adoption of renewable energy, advanced clean transportation, green building practices, recycling, water conservation and reuse, habitat protec-



tion and land conservation, and landuse decisionmaking — all of which are critical to the transition to a low-carbon economy.

Each part of the Climate Action Plan will call out opportunities for savings, job creation and new innovations by local companies. By adopting this approach to solving the climate crisis, we will also create a more sustainable and vibrant economy.

The ongoing efforts to address climate change present an unparalleled opportunity to enhance Delaware's natural environment, strengthen our domestic economy and enhance our national security. While Delaware cannot solve global challenges alone, we can demonstrate real leadership and develop innovative policies that others will emulate worldwide.

Delaware is well positioned to seize a national leadership position in the emerging green economy, due to its economic diversity, talented and flexible work force, strong academic resources and unique combination of assets. The combination of executive leadership, academic expertise, civic activism, private sector innovation, and natural resources provides the critical mass necessary to demonstrate that being environmentally responsible can spur economic opportunity and also improve the fiscal health of State government.

By integrating our decisionmaking across disciplines and ensuring that we use natural resources more efficiently, incorporating health impacts of various activities, adopting more sustainable practices and transitioning to clean energy and a green economy, we will create a more sustainable environment and more resilient economy in Delaware for generations to come. ◆

#### FOOTNOTES

1. Nicholas Stern, Stern Review Report on the Economics of Climate Change. London: HM Treasury (2006).

2. Peter H. May and Ronaldo Serôa da Motta (eds.), *Pricing the Planet*. New York: Columbia University Press (1996).

## **FEATURE** The Administration Speaks

Alan B. Levin Director, Delaware Economic Development Office



Smart state strategies will foster both environmental protection and robust growth.

Most discussions regarding clean energy and environmental sustainability quickly turn to states that have long been considered leaders in environmental policies. States, for example, like California. These conversations are best viewed as opportunities - not to address where Delaware has been with regard to environmental policy, but to highlight where we are heading.

he winds of change are blowing in Delaware, and they carry with them clear, economically viable, green environmentally sound energy policies. Policies that will change the way Delaware meets its energy needs and drive our State into the center of any energy conversation.

Delaware finds itself at the intersection of environmental protection and economic development. To begin, we need to clean up the polluting industries of the past in order to build the economy of the future. Delaware

companies that operate with permit or regulatory violations will be required to adhere to State law or cease operation.

These industries will also face additional monitoring, as the State is gathering better scientific data to allow us to fully understand the magnitude of the link between pollution and health outcomes. With that said, we must also foster growth and new investment by our existing industries.

The Delaware Climate Prosperity Plan, recently announced by Governor Jack Markell, encompasses Green Savings, Green Opportunities and Green Talent, and illustrates that we can confront climate change while becoming more prosperous. How? By using fewer natural resources.

Expanded recycling programs will eliminate the need for additional landfill sites, and land conservation efforts will allow for enhanced watershed management and water purification, wildlife habitats, local food production, and air quality and carbon sequestration. Delawareans will see these programs roll out soon, and the State will quickly reap intrinsic and economic value from them.

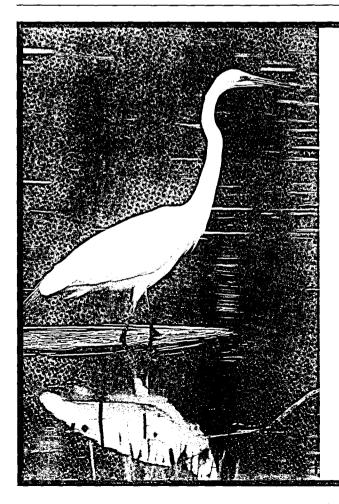
Importantly, a green Delaware will not come at the expense of growth.

Examining and revising the rules and regulations that bind business does not mean rolling back protections on the environment. In fact, it means just the opposite. Delaware continues to grow, one business at a time. And the businesses the State attracts are those prepared to take advantage of climate prosperity. Green technologies lie at the top of most lists highlighting the high-growth industries of today. Delaware is well poised to foster the growth of the green energy industry and reap the rewards of environmentally friendly business within its borders.

Delaware has long been a source for innovation and technological growth. The State ranks first among the nation in industry investment in research and development, and has the fourthhighest concentration of scientists and engineers in the United States. Delaware supports technological innovation, and it promises to provide an environment where research and development of clean energy technologies thrive.

That's a fact perfectly illustrated by New Castle-based AutoPort Inc. The State recently awarded AutoPort a workforce-training grant, which will allow it to begin converting gasoline vehicles to electric vehicles in Delaware. These efforts, which will create long-term jobs in the State, are a first step toward establishing an electric vehicle industry in Delaware and a key step in Governor Markell's climate prosperity initiative. AutoPort — and Delaware — are clearly adapting to a new energy economy.

The goal of the climate prosperity initiative is to create a functioning marketplace for green products that reduce energy and water consumption, adopt renewable energy, and



edicated to conducting business with respect and care for the next generation.



A New Generation of Energy

reduce vehicle miles traveled. A variety of programs and policies will incentivize residents and companies to adopt low-emission, sustainable practices as a way to improve their short- and long-term financial bottom line. The increased demand for environmentally friendly goods will then be met with a supply of products and services from local companies and local workers.

Delaware residents and business are also encouraged to take advantage of the "Green Dividend." The concept illustrates that sustainable land use and smart growth policies have an extremely positive impact on the vibrancy of an economy and environmental sustainability.

For example, when people take public transit or simply drive less, they reduce their emissions and environmental footprint while saving money

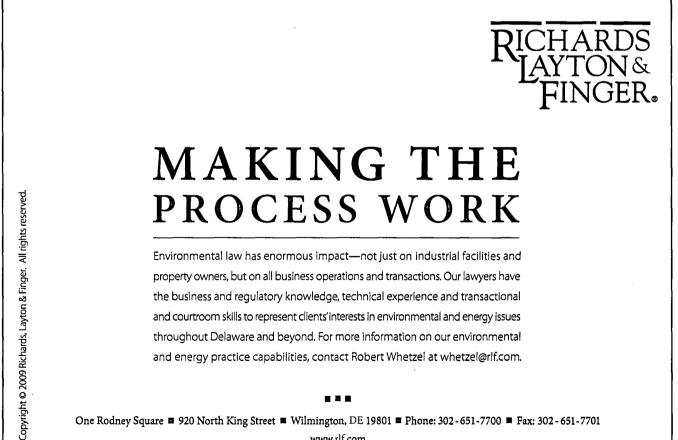
on gas and vehicle maintenance. Saved dollars are then spent in the community. And residents commuting less spend more time with their families, exercising, enjoying other leisure activities, or increasing their work productivity.

Delaware can successfully fight the health and global warming impacts of fossil fuel use. The Governor has committed to pursue programs that reduce carbon dioxide emissions; conserve land and energy; promote green building practices; reduce waste; protect wildlife; enhance air, water, and soil quality; and foster advanced transportation efforts. In addition, the First State will be among the first to be largely powered by renewable technologies.

Federal funding will help Delaware adopt those clean, renewable energy

technologies. The State will receive close to \$38 million to increase Delaware's energy efficiency. These funds, which are part of the federal government's economic recovery package, will be allotted to the Department of Health and Social Services for weatherization and DNREC for its state energy programs. These recovery funds will create and protect Delaware jobs and will help Delawareans make their homes and businesses more energy efficient.

Climate prosperity programs unveiled during the coming months will be designed to support the environment and grow the economy at the same time. Yes, that concept is possible. And yes, it will get people talking about an environmentally sustainable Delaware.



# Energy Policy in the First State:

Delaware is perfectly positioned to be a leader in the new, clean-energy economy.



Delaware has the opportunity to become a national leader in the transition to a clean energy economy. Fossil fuels, principally coal and oil, are coming under increasing scrutiny as a source of energy for several reasons.

ur reliance on oil, principally as a transportation fuel, has led to an exportation of U.S. wealth to unfriendly parts of the world and an insecure reliance on others to meet our energy needs. The issue of "peak oil" also looms large in the longer term, as we deplete the world's reserves of cheap oil.

With coal, we have an abundance of supply for generations to come; however, the carbon content of the fuel and its poor historical environmental performance make dependence on coal as a fuel of the future problematic.

Alternatively, natural gas offers a cleaner alternative for both electricity generation and transportation, and may

serve as a bridge to a new energy future, but it does not represent the carbonfree solution needed for the long term, or relieve us from having to import and transport gas supplies to meet growing demand.

What we need is a commitment to new energy policies, energy conservation and efficiency, renewable fuels and new technologies — solutions that will not only ensure a secure energy future but will also serve as a platform for new economic growth.

Such a commitment to a greener economy will put us in a prime position to profit in the decades to come and help us remain the world's leader in technological innovation. Delaware is well positioned to take advantage of this new attitude toward energy. We have new leadership in State government to spark innovation and investment, and an active and engaged public who see real value in sustainable energy.

We have customers eager to find solutions for cutting energy costs after suffering staggering electricity cost increases in 2006 and exorbitant gasoline prices in 2008. We have a new Energy Plan from the Governor's Energy Advisory Council and a growing sense of urgency concerning climate change and energy governance.

In addition, we have a new service delivery mechanism in Delaware's Sustainable Energy Utility (SEU) that promises a myriad of energy efficiency and renewable energy services throughout Delaware.

The task now is to capitalize on our positioning and take Delaware's energy policies to a higher level, and to leverage those improvements to yield economic prosperity.

Critical issues in achieving that goal will include calculating the true costs of the energy we use, focusing on Delaware's strengths in renewable energy technologies, maximizing our efficient use of energy, ensuring adequate energy infrastructure, and aligning the many players in Delaware's energy arena into a cohesive team with a common vision.

#### **Internalizing Externalities**

Electric utility regulation is a complex undertaking, and the impact of energy generation and use on our health, wealth and well-being is enormous. Planning for our energy future and selection from among the myriad of potential energy choices involve a wide variety of stakeholders, often with very different ideas about the factors that are relevant and the choices to be made.

In Delaware, the energy-planning process takes place under the auspices of the Delaware Public Service Commission (PSC), which is currently conducting the Integrated Resource Plan (IRP) process, as required by the Electric Utility Retail Customer Supply Act of 2006 (EURCSA). EURCSA has already prompted significant debate over new power sources for Delaware, as reflected by the recent review and approval of the Bluewater Wind offshore wind project.<sup>1</sup>

But now comes another debate, that of deciding what considerations and externalities should be included in the IRP process — and by extension addressed by Delmarva Power & Light Company (DP&L) in planning documents required under EURCSA.

The issues of, and indeed the words, "climate change" and "public health" do not appear in EURCSA, and yet those issues were two of the driving forces behind the ultimate selection of Bluewater Wind to supply needed power to Delaware. Members of the public spoke loudly and clearly in those proceedings, presenting a strong case for why clean, renewable energy from wind power was a superior response to climate change and the negative health and environmental impacts traditionally associated with fossil fuels.

The foundation of environmental regulatory programs in Delaware and nationally is the protection of public health and the cleanliness of our surroundings. Smokestack emissions are regulated because they have the potential to cause illness, cancer and death, or irreparable harm to our environment.

Discharges to water bodies are regulated because society places a value on clean drinking water, and because of water-borne diseases attributable to those discharges.

Land uses are regulated to ensure that the soil and groundwater do not contain harmful substances that may cause serious illness or disastrous economic consequences. The linkage between our environment, our health and our economy is an intimate one, and one that should be ever present in the actions of government agencies. At the direction of Governor Jack Markell, DNREC has taken an active role in the IRP process to ensure that health and climate impacts associated with meeting our energy demands are expressly accounted for, and that the costs associated with these impacts are considered in planning our energy future.

The linkages between power plant emissions, health impacts and climate change are theoretically and scientifically strong. The problem comes in applying those linkages to utility power purchases, which may or may not result in actual emission impacts here in Delaware. The regional nature of our power markets, coupled with a "path of least resistance" theory of electron mobility, makes direct linkages between Delaware power purchases and health and climate externalities challenging.

Regardless, developing an integrated resource plan, and requiring our utility to explicitly and pro-actively consider these externalities — even if the solutions are insufficient and imperfect will advance all of our thinking, and may yield improvements we had otherwise not considered.

## Where the Wind Blows ... and the Sun Shines

As a State, Delaware has traditionally been thought of as energy poor. We have no coal resources, no oil or gas resources, no watercourses capable of utility scale hydropower, and limited onshore wind resources.

However, advancements in offshore wind, solar and geothermal technology, some of which are being developed in Delaware, have the potential to harness our State's natural energy resources and redefine our energy future.

For example, studies done at the University of Delaware<sup>2</sup> indicate an offshore wind resource capable of meeting Delaware's entire energy needs for electricity, transportation and all domestic uses, while still having substantial power to export to other states. Similarly, Delaware's solar resources are actually quite good — so long as you don't compare us to California, Arizona or the tropics.<sup>3</sup> To put things into perspective, Delaware has a more robust solar resource than Germany, which currently receives more than 40% of its power from solar energy.

At present, Delaware has adopted a Renewable Portfolio Standard (RPS) of 20% by 2019 — meaning that energy providers in Delaware must have at least 20% of their power furnished from renewable energy sources, like wind, solar, hydro and other traditional renewable sources.<sup>4</sup>

Compared to the other 29 states with a mandatory RPS, Delaware's standard is fairly aggressive, although no longer near the top as it was when it was increased from 10% in July 2007. The volatility of oil, natural gas and coal prices over the past several years and the clear recognition of the problems associated with a fossil-fuel-based economy — both for national and climate security reasons — have sparked tremendous growth in the renewable energy sector.

Delaware is in an excellent position with respect to achieving the 20% RPS.

Over the past year, Delmarva Power has shown increasing enthusiasm about renewable energy and has signed multiple contracts for wind power, which, if they all come to fruition, will achieve our RPS standard well ahead of schedule.

There remains room for optimism about Bluewater Wind's future and the prospects for offshore wind projects in Delaware. The Power Purchase Agreement (PPA) between Bluewater and Delmarva was a hard-fought victory and represents the best chance for an offshore wind farm anywhere on the East Coast. While the struggling economy, poor credit markets and the troubles of Bluewater's parent company present challenges that must be overcome to construct the project, the wind resource in the mid-Atlantic continues to blow strong and the economic and environmental realities of offshore wind remain promising.

An interesting component to Delaware's RPS is the "Solar Carve Out." Under this provision of the law, 2% of the total 20% RPS must be met with solar photovoltaic (PV) resources — either at a utility scale or through distributed generation facilities on homeowner rooftops or commercial establishments used to meet their own energy needs.

When Delaware emerged from rate caps in 2006 (caps were put in place during deregulation in 1999 to spark retail competition) there was an enormous increase in interest in solar PV systems. That increase was fueled by an enthusiasm for clean energy and ratepayers seeking insulation from rising and volatile electric rates.

The Delaware Green Energy Program, created to provide rebates to residents who install solar or other renewable energy systems, has since been swamped with requests for rebates. The program has facilitated the installation of more than 2 megawatts (MW) of clean, renewable energy — however, the growing demand for rebates exceeds the funding of the program, creating a waiting list through 2011.

Historically, the Green Energy Program has offered a 50% rebate of installed system costs for qualifying PV systems, subject to maximum rebate levels. Newly revised and vastly expanded federal tax credits, and the phenomenal increase in citizen interest in renewable energy, have combined to overwhelm the Green Energy Fund.<sup>5</sup>

FACILITY (UNITS)	UNIT TYPES	GENERATION (MW)	START-UP YEAR	FUEL TYPE
NRG Indian River (4)	Steam Turbines	82, 82, 177, 442	1957, 1959, 1970, 1980	Coal
Conectiv Edge Moor (3)	Steam Turbines	75, 177, 446	1954, 1966, 1973	Coal ( 446 Residual Oil)
Conectiv Hay Road (8)	6 Combined Cycle (CC) gas (2 Waste Heat)	658, (220)	1989, 1990, 2001	Pipeline Natural Gas/ waste heat
Conectiv Christiana (2)	Combustion Turbine (CT)	29, 29	1973, 1973	No. 2 Oil
Dover - McKee Run (1)	Steam Turbine	114	1975	Residual Oil
Dover - Van Sant (1)	СТ	45	1991	Diesel Oil
DEMEC - Smyrna (1)	СТ	45	2002	Natural Gas
NRG Dover (2)	СТ	45, 45	2001, 2001	Natural Gas
Valero Refinery (6)	Steam Turbines CTs	27, 27, 75, 10, 92, 92	1956, 1961, 2000	Natural gas, syngas, refinery fuel gas, and low-sulfur diesel fuel

Table 1. Electricity Generating Facilities in DE Greater Than 25MW

The new federal credit resulted in system owners receiving 80% of the cost of these systems — incentives well in excess of those in neighboring states, well in excess of the level of subsidy necessary to incent investment, and well in excess of the 50% subsidy envisioned in the original program. At the same time, the backlog of Delawareans waiting years for their rebates was growing.

Given the changing federal tax circumstances, DNREC adjusted the state rebate in April of this year to reflect these new federal dollars and lowered the state rebate percentage to 25% for project applications received after May 1, 2009.<sup>6</sup> The proposed 25% state rebate (equivalent to \$2.00/watt) is currently the highest subsidy for these type systems anywhere in the mid-Atlantic area — including Maryland (\$1.25/watt), New Jersey (\$1.75/watt), and Virginia (<\$1.00/watt) — and perhaps anywhere in the country.

The new rules moving forward will continue to provide valuable and meaningful incentives for solar and wind technologies, and will allow us to spread the relatively small Green Energy Fund to more Delawareans who wish to enjoy — and prosper from — clean energy.

#### Watts and Wires

Electricity serving Delawareans comes from both local, in-state generation sources and from imports from our regional electric grid operated by PJM. In 2006, Delaware had a generating capacity of approximately 3,000 megawatts (MW). Facilities with a generating capacity of greater than 25MW and subject to the Regional Greenhouse Gas Initiative (RGGI) are shown in Table 1.

In 2006, Delaware imported approximately 38% of the electricity consumed in the state.<sup>7</sup> Figure 1 shows the relative percentages of fuels used to generate electricity in-state. As can be seen, renewable energy sources do not presently contribute any significant portion to Delaware's overall portfolio of sources. That should change with time, as noted above.

However, because Delaware imports a large portion of its electrical needs, the fuel mix for electricity <u>consumed</u> in Delaware looks very different from that <u>produced</u> in Delaware. This is also due to the bidding and purchasing processes used in Delaware to obtain power for residential, commercial and industrial uses from throughout the regional transmission area. Figure 2 portrays the best estimate of fuel mix for power consumed in Delaware.

The disparity between Delaware's energy production and use, combined with the functioning of the PJM regional power system and power markets, leads to the importance of the electric power transmission system in meeting Delaware's electrical energy needs.

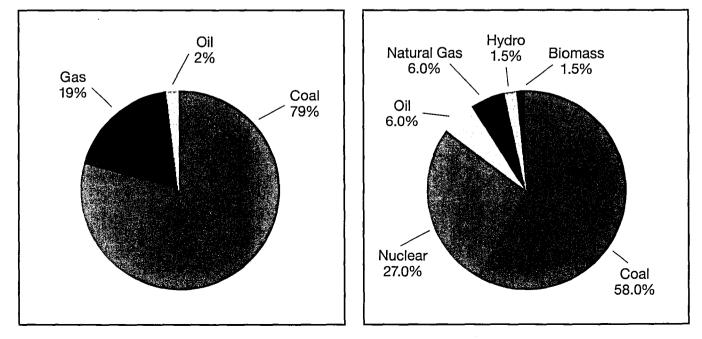
An issue facing Delaware in the near term is the question of additional transmission capabilities, particularly the Mid Atlantic Power Pathway (MAPP) project. The MAPP project has already generated a fair bit of conversation in Delaware, and more discussions are likely into the future.

One issue to be wrestled with is the increased energy and reliability of service the line will bring to the power grid in Delaware (and regionally) versus the prospect that the line merely enables the importation of electricity from "dirty" energy sources like coal plants in the western portion of the PJM region coal plants whose emissions blow our way under prevailing wind patterns and negatively impact our air quality.

However, the conflict is not nearly as straightforward as one might think.







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> There will undoubtedly be benefits from a stronger transmission grid in Delaware, and many argue that a better grid may enable the eventual exportation of Delaware offshore wind power to the west — a good thing. In addition, power from the west side of the PJM grid is less expensive (ignoring for the moment why) and the MAPP transmission line itself is indifferent to the energy source feeding it electrons.

> The difficulties in the debate over MAPP might best be addressed through the IRP process discussed above, to ensure that the power purchased for use in Delaware carries with it the true cost of that power — including the health and climate consequences associated with the otherwise cheaper energy sources.

> One other aspect of the project that should be mentioned is the siting of new or expanded transmission right-ofways that will be needed, especially new acquisitions planned for north of the C&D Canal and crossing the Delaware River to connect with the Salem/Hope Creek stations. These new lines may be crossing sensitive natural areas and impacting public and private properties, issues not easily dealt with but critical to the full-scale deployment of the project. Expect to hear more on these issues in the future.

#### Teamwork

Every state is unique in its energy profile, and there is no single initiative or governance structure that will yield superior results in every instance. Success over the next several years will require cooperation among Delaware's state officials, private-sector interests and the public to achieve the promise of a clean energy economy.

On the State side is the Public Service Commission, state agencies such as DNREC, DelDOT and the Office of Management and Budget, the new Sustainable Energy Utility, the Delaware Energy Office, and the Public Advocate. In addition, there is the Governor's Energy Advisory Council, charged with periodically preparing a state Energy Plan; and the Governor's Cabinet Committee on Energy, charged with considering energy issues within State government.

Outside government, and equally important, are the utilities that transmit and distribute power, the merchant energy companies that generate power, and dozens of other players. Delmarva Power, Chesapeake Utilities, the Delaware Electric Cooperative, the Delaware Municipal Electric Corporation and many local municipal utilities are heavily impacted by energy policy.

The generators of electrical power, such as Conectiv and NRG, and the dozens of oil and propane companies operating in Delaware are also key players.

Academic institutions, such as the University of Delaware and other institutions of higher education conducting research into alternative energy technologies, will play an important role in shaping our energy future.

Finally, and perhaps most importantly, there are the citizens and consumers of energy. Conservation, a critical component of any energy solution, begins with the consumer of power. Citizen advocacy is also critical — had it not been for so many citizen-activists, the offshore wind project might not have been approved, and the recently concluded energy planning process would have been far less robust and inclusive.

In conclusion, Delaware has the opportunity to become a national leader in advancing a clean energy future. To achieve this vision, the State must confront significant challenges in energy policy — in ensuring that we account for all impacts from energy generation and use, in expanding our base of renewable energy sources, in ensuring a reliable and cost-effective supply of energy, and in working as a team in achieving our goals.

We all know what a great place Delaware is and that we can accomplish things larger states can only dream of. In order to achieve a clean, cost-effective, sustainable energy future, we must have a clear vision, be willing to work collaboratively and trust in one another and our common goals. ◆

#### FOOTNOTES

1. The Bluewater Wind project is a story in and of itself. EURCSA set in motion a unique and complex process which brought together a large cast of players not normally found in PSC proceedings. The process ended with the first Power Purchase Agreement for offshore wind in the United States, which was approved by DNREC, the Controller General's Office, the Office of Management and Budget, the PSC and the General Assembly.

2. Amardeep Dhanju, Phillip Whitaker and Sandra Burton, Assessment of Delaware Offshore Wind Power (Sept. 2005), available at: http://www.ocean.udel.edu/WindPower/ docs/BurDhanWhit05-MAST667-FI-NAL.pdf

3. Renewable energy resource data available from the National Renewable Energy Laboratory at http://www.nrel.gov/rredc/

4. 26 Del C. Chapter 1, subchapter III-A.

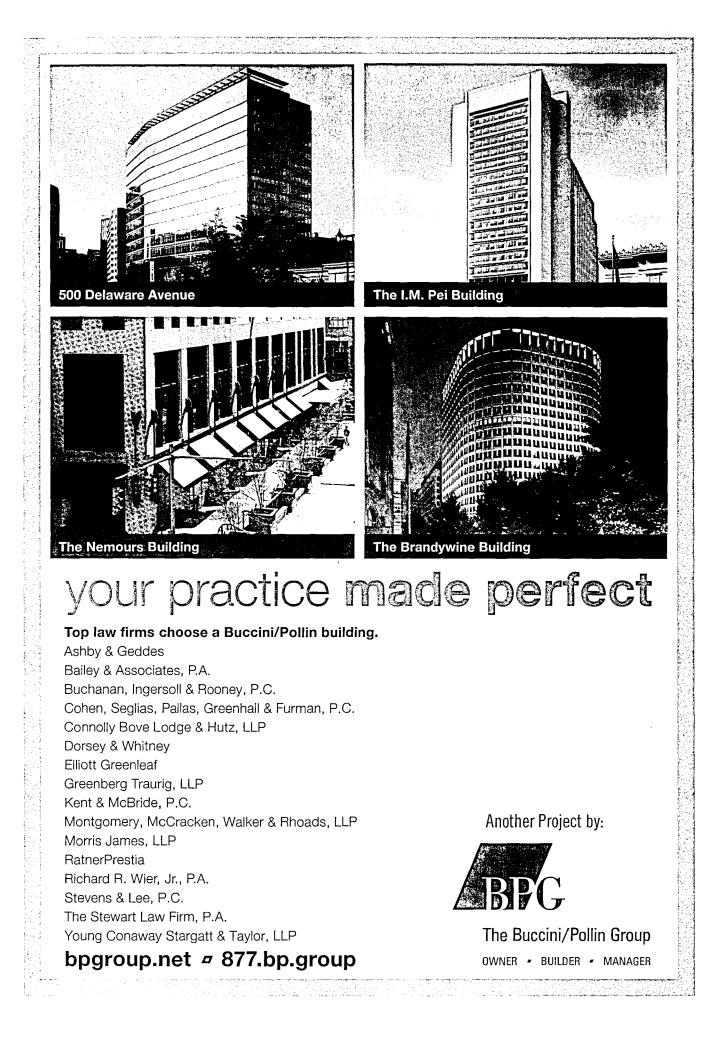
5. Last year, the federal government provided a 30% tax credit — but capped at \$2,000 for residential projects. Late last year, the federal government removed the cap so now a system costing a total of \$60,000 would be eligible for \$18,000 in refundable federal tax credits; before the federal change, that same system owner would only receive \$2,000.

6. For projects on the current waiting list, the State developed a "rapid payment" option where customers have one of two choices. They can take a 25% rebate immediately, or remain on the waiting list for a full 50% rebate, where the wait time may stretch for 2-3 years (or longer) before there's adequate money in the Green Energy Account to make payment.

7. Energy Information Administration, Office of Coal, Nuclear, Electric and Alternative Fuels, *State Electricity Profiles 2006* (Nov. 2007).

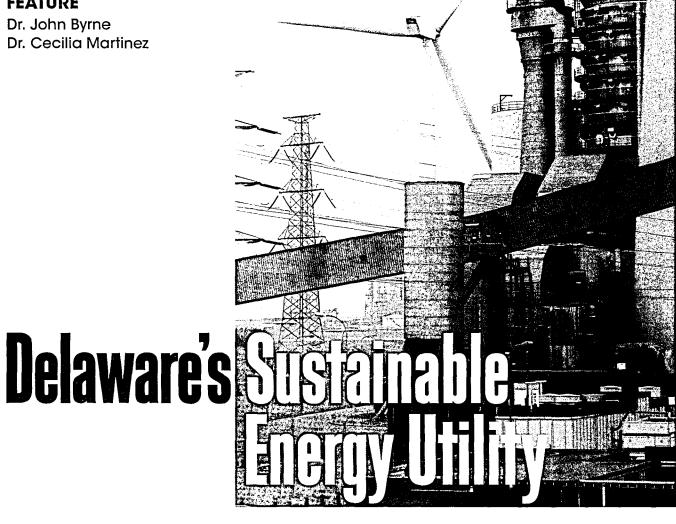
8. Energy Information Administration, 2006 data.

9. PJM -- Personal communication.



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The first-in-the-nation SEU offers a comprehensive approach to managing energy and the environment.

As each day dawns, the Earth performs a service essential to life itself it recycles carbon. As a chemical element, carbon is released from many sources, including human activity. Our contributions are principally from the use of fossil fuels and changes in land use (such as road paving and the removal of forested areas for residential development).

he extent of carbon recycling by the biosphere is vast, far beyond anything human-made technolo-10.00 gy could accomplish. The planet's natural carbon cycle allows for gigatons of this gas to be released without harm. For humans, the earth's expectation is that each of us annually emits not more than 3.3 tons of carbon dioxide ( $CO_2$ ) is the most common molecule in which carbon is found).

Most of Africa, Asia and Latin America have observed this budget. Europe has not --- the continent releases more than 14 tons per person per year; Japan

- our most efficient industrial economy --- releases nearly 11 tons; and the U.S. overshoots its budget by more than any country on earth — we emit upwards of 21 tons of carbon dioxide per person per year, and our per capita amount is growing.1

The challenge of addressing the most global and complex threat to the life web could not occur at a more difficult time. With a worldwide recession that includes a staggering local manifestation - Delaware faces a deficit that is 20% of its state budget - it can be hard to muster the collective

will to tackle climate change. Yet, we must do so.

By mid-century, the best estimates of the Intergovernmental Panel on Climate Change are that we must cut worldwide  $CO_2$  emissions by 60% to 80%.<sup>2</sup> Now, that is a budget crisis. Americans, in particular, must substantially reduce their emissions of this gas if humanity is to forestall the large and risky consequences of global warming. Without U.S. action, reductions by the rest of the human population cannot be sufficient to reverse the threat.

The problem seems so immense, one wonders what can be done.

Actually, we can meet the challenge, even in troubling economic times. We must dig ourselves out of the current economic mire, and the way forward is to rebuild our economy and way of life according to sustainability principles we need to chart a course so that we live within a balanced budget of 3.3 tons of CO<sub>2</sub> per person per year. And, interestingly, Delaware is leading the way.

Once again we have the opportunity to make history as the First State. Through path-breaking legislation written by Senator Harris B. McDowell III, the "dean" of state energy policy, the General Assembly passed State Bill 18 creating the nation's first Sustainable Energy Utility (SEU).<sup>3</sup>

What is the SEU and what makes it so significant? Put simply, the SEU is a comprehensive model for tackling the energy and environmental challenges facing Delaware and the world. The energy utility of the 20th century was invented to rapidly and continuously increase energy supply. This utility served us well — it allowed economic growth at unparalleled rates in human history. But it also is the key contributor to the climate-change problem.

The 21st-century energy utility must have a different focus: to help every citizen and every business conserve energy and, when energy is needed, to utilize the energy gifts of our planet — sunlight, vegetation, the winds and the constant temperature of the earth's mantle just three meters below the surface. The SEU is the first effort at inventing the energy utility of the 21st century.

The benefits of the SEU are rapidly gaining attention. In testimony before Vice President Biden's Middle Class Task Force, John Podesta, President of the Center for American Progress,<sup>4</sup> cited the SEU as a showcase model to lead the country in achieving a clean energy economy and green workforce.<sup>5</sup>

In Spectrum, the international magazine of the Institute for Electrical and Electronic Engineers, Delaware's SEU is heralded as "perhaps the most comprehensive energy savings and distributed renewables program in the United States."<sup>6</sup>

And the April 2009 issue of the *Bulletin of Science, Technology and Society*, a scholarly journal, reports on applications of a Delaware-grown idea in Europe, Africa, Latin America and Asia, including a new initiative of the United Nations Environment Program (UNEP) to spread the concept throughout the world.<sup>7</sup>

Development of the SEU began in 2006, when Delaware's General Assembly created a bipartisan Sustainable Energy Task Force to research and recommend best-practice sustainable energy policies for the State. An impetus for the Task Force was the prospect of significant energy price increases looming on the horizon.

Price caps on electricity, which were established in 1999 as part of the state's electricity restructuring, were due to expire in 2007. Estimates forecast that residential electricity rates could rise by more than 50%.<sup>8</sup> Gasoline and natural gas prices were projected to spike at high levels as well, becoming unaffordable to many Delawareans.

With research support from the Center for Energy and Environmental Policy at the University of Delaware, the SEU architecture was designed and presented in the Task Force's final report. The report, *Sustainable Energy Utility: A Delaware First*,<sup>9</sup> outlined the key features of the SEU along with the Task Force's legislative recommendations.

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The Delaware SEU has ambitious goals: a 30% reduction in energy consumption by 2015 for its participants, installation of 300 MW of customer-sited renewable energy for residences and businesses, average annual savings of \$1,000 on energy bills for participating customers and a statewide reduction in  $CO_2$  emissions that would return Delaware to 2003 levels by 2019. We would, in this way, begin the journey to reverse our carbon intensity.

The significance of the SEU is that it offers a structural reform of the energy sector along four dimensions: 1) a transition to carbon-free energy sources; 2) a reorientation from energy as a commodity to energy as a service; 3) the transition to a distributed energy infrastructure; and 4) the direct involvement of energy users in energy decisions.<sup>10</sup>

Most proposals for an energy transition are primarily based on the first two items, almost exclusively focusing on replacing fossil fuels with renewable energy and energy efficiency (albeit within the existing energy market and regulatory structure).

Facilitating a societal shift in technologies and fuels is certainly a critical step. However, the SEU goes much further. It provides the vehicle for reconfiguring the energy system from a centralized model with little opportunity for individuals to participate in energy decisions toward a community trust model in which individuals and communities become active participants in defining their energy futures.

Families and businesses are encouraged to "think about energy as a …service, rather than a utility,"<sup>11</sup> and to design their own customized energy services ultimately contributing to a more

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wide-ranging, varied and diverse energy infrastructure.

The Delaware SEU is a non-profit organization unaffiliated with the state's electric or gas utilities, but it works with them, the business sector, other nonprofits and communities throughout the State to change the energy destiny of Delaware. Its mission is to design and deliver comprehensive end-user energy efficiency and customer-sited renewable energy services to Delaware's households and businesses.

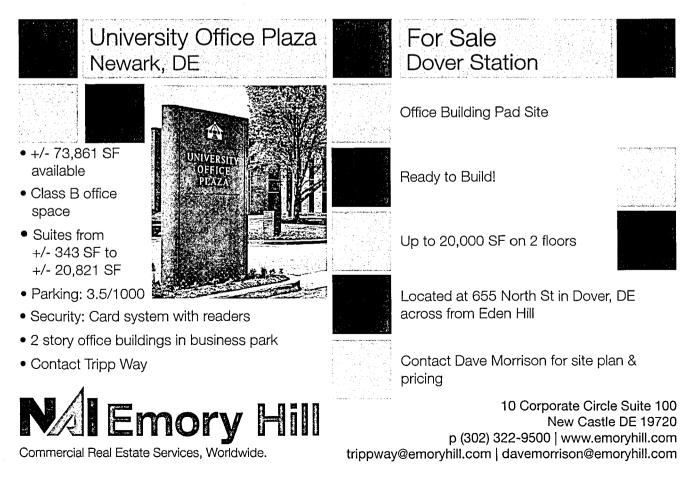
As stated in the statute, Delaware "has an opportunity to create new markets for customer-sited renewable energy generation that will help build jobs in the State of Delaware, improve our national security, keep value within the local economy, improve energy reliability, and protect Delawareans from the damaging effects of recurrent energy price spikes." In this way, the legislation clearly and specifically ties energy reform to a new environmental, social, policy and economic future for the State.

As a non-profit agency, the SEU is governed by an Oversight Board and the Delaware Energy Office. The Oversight Board is intended to bring together a mix of public officials, energy experts and citizens with general oversight, evaluation and goal-setting responsibilities. Board members include the Secretary of the Department of Natural Resources and Environmental Control, the Delaware Public Advocate, seven members appointed by the Governor, and one appointee by both the President Pro Tempore of the Senate and the Speaker of the House of Representatives.

Through a competitive-bid process, the Oversight Board has selected an SEU Administrator with energy planning and management expertise for the day-to-day operations of this innovative utility. The Administrator Contract Team includes firms with extensive experience in energy conservation and renewable energy markets and technologies, green energy marketing,<sup>12</sup> sustainable energy financing and "clean cities" transportation planning.

This third-party management model relies on competitive contracting and performance incentives to meet the standards set forth by the Oversight Board. In this manner, the SEU is the point of contact for efficiency and selfgeneration in the same way that utilities are the point of contact for energy supply.

A critical element of the SEU is that individual energy users throughout the State can access energy services through a single organization that offers these services for the benefit of the energy user and the Delaware community. It combines Delaware's private and public



sector assets in an energy organizational structure that is publicly accountable, financially self-reproducing and entirely focused on energy and environmental sustainability.

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The SEU expands upon other sustainable energy models, offering greater flexibility and the inclusion of all fuel types and income levels into the sustainable energy service stream. By law, the Delaware SEU is required to provide a comprehensive array of sustainable energy services which are customized to community and individual needs. This includes providing services at different decision points.

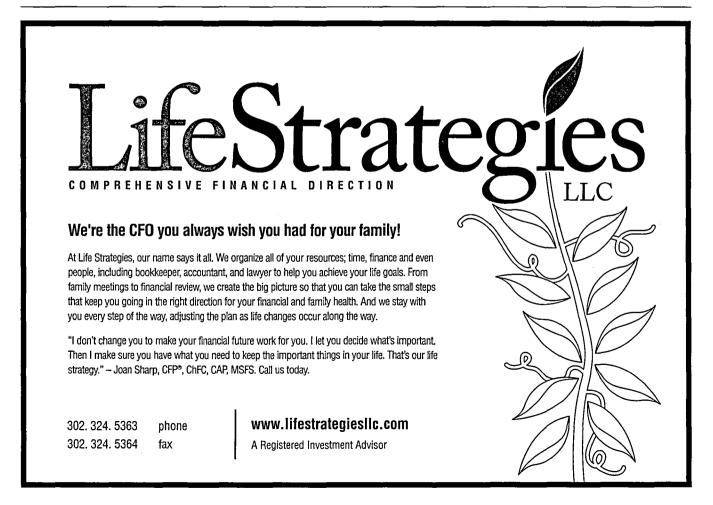
For example, some individuals may seek advice and assistance with appliance or equipment replacement, others may be interested in retrofitting existing buildings, and still others may be at the stage of new, "green" construction or looking for sustainable transportation opportunities.

The SEU coordinates the array of private and public services so that all needs and fuel uses can be made available. Policymakers and the Oversight Board establish high-level performance targets for the SEU; its contribution is that it has the flexibility to respond to customer needs and market changes to achieve these objectives.

The statewide shift to energy sustainability is further supported through a selfsustaining financing scheme. Two fundamental challenges that have plagued an energy transition are the upfront capital cost of sustainable energy measures and the longer-term goal of growing sustainable energy programs without significant energy price increases.

To tackle these problems, the SEU has the mandate to develop innovative approaches using third-party financing, federal incentives, program revenues, and leveraging sustainable energy funds available through other public sector and philanthropic sources. The SEU has the authority to issue tax-exempt bonds to contribute to the financing of its program activities, and is designated as the administrator of existing public-purpose energy funds and Regional Greenhouse Gas Initiative (RGGI) emissions auction proceeds.

The financing model allows the SEU to do two vital things for a 21stcentury energy utility: 1) it has the capacity to secure sufficient capital to invest in the infrastructure of sustainable energy (rather than simply a suite of programs); and 2) it is capable of taking the "long view," rather than having to mostly produce short-term benefits. Its tools — tax-exempt bonds, revolving funds and cooperative investments — are the same ones the U.S. successfully used to build its public



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schools, water facilities and other social infrastructure.

The SEU's unique legal construction creates a new foundation for the organization and delivery of energy as a community trust. Instead of the older model of billing for energy used and the associated plants and distribution network to deliver energy, the SEU invests in a future of lower and more efficient energy use. It pledges the capital necessary to allow Delawareans to choose energy conservation and efficiency as their first priority.

The energy cost savings created through community investments made by the SEU are then shared between the household, farm or business, on the one hand, and the SEU on the other. For example, when the home refrigerator fails, a household can choose between the *Energy Star*<sup>®</sup> model which uses 20% to 30% less energy and the less-efficient (and less-expensive) model.

In the past, the less-expensive model which uses more energy over its 15-year life, might be chosen over the "green" model. The SEU removes the advantage that inefficiency currently enjoys in the marketplace by covering the cost difference for the buyer. In return, the household sees its refrigerator-based energy costs decline, and a portion of those savings flow to the SEU to recover its investment. In this way, a revolving fund is created to serve the needs of future community members.

Similarly, the SEU stands ready to utilize community capital to provide rebates toward the purchase of a solar power system and recover costs from the sale of "Renewable Energy Credits" paid by the state's utilities to meet legal obligations for a percentage of their sales to be supplied by renewable energy.<sup>13</sup>

While low-income household energy burdens tend to be higher than their middle-income counterparts, they also tend to be an underserved population in energy programs. Federally funded lowincome energy assistance and weatherization services can help, but these programs have historically been unable to meet existing demand. The SEU specifically addresses this problem through its Affordable Energy Services Program. Working with Delaware's well-performing Weatherization Assistance Program, the SEU is creating a partnership that will help the state to double its annual rate of weatherized homes.

The Center for Energy and Environmental Policy has estimated that efficiency and renewable energy investments through the SEU can reduce the state's carbon footprint by 33% by 2020. This achievement certainly places Delaware in a leadership role in the global effort to stabilize the climate. Just as importantly, the SEU is an essential tool for creating a green economy that prospers by investing in long-term sustainability.

Investment in conservation and renewables creates green jobs faster than any other option in the energy sector and is a key reason why we can address the economic and environmental crises together.<sup>14</sup> Additionally, the SEU establishes the legal and democratic space for an energy system that uses less, and when use is desired, supplies energy from renewable sources organized locally by and for the community.

An ongoing mutual promise of reciprocity and shared responsibility for investment and sharing of benefits opens the way for collective action for a healthy environment *and* a more democratically and socially governed energy system.<sup>15</sup>

Under the leadership of Governor Jack Markell, the State is now well positioned to use the SEU to its fullest. The Governor's "climate prosperity" agenda is helping the SEU to blossom as a tool in the efforts to battle significant economic problems for our families and communities by using SEU strategies to invest in a green economic future and workforce.

The path to such a future will not be

easy and cannot happen overnight. But the vision and support of our elected and appointed officials is critical and Delaware, fortunately, now has the ability to lead.

Since its implementation in Delaware, the SEU is fast becoming the model for other jurisdictions. In July 2008, the City Council of the District of Columbia passed the Clean and Affordable Energy Act, empowering its Department of Environment to create an SEU for the comprehensive delivery of energy efficiency and customer-sited renewable energy services to residences and businesses in the nation's capital.

Philadelphia Mayor Michael Nutter has cited the SEU as "a great idea" that his city can utilize for "engaging in the needed changes at all levels of government" and in support of Green Jobs and an "Earth-friendly approach to sus-. tainability."<sup>16</sup>

At its fall 2008 meeting, the National Council of State Legislatures passed a resolution seeking federal support for SEU-style financing.

And internationally, the Center for Energy and Environmental Policy was recently commissioned to undertake an SEU design study for Seoul in South Korea,<sup>17</sup> and the island nation of Bermuda has prepared a "Green Paper" recommending the adoption of an SEU.<sup>18</sup>

Clearly, there can be no single panacea for solving the global energy and environmental challenges that lie before us. However, the SEU and its community trust-green economy approach to engaging these problems offers a legal and policy framework from which democratic, citizen-based participation in the decisions regarding our energy and environmental futures can be made.

If successful, the SEU can contribute to a future when our grandchildren can enjoy playing under the sky without worrying about the carbon consequences.  $\blacklozenge$ 

#### FOOTNOTES

1. The Center for Energy and Environmental Policy at the University of Delaware published the original calculations, based on 1990 world population levels, in a paper entitled "An Equity- and Sustainability-Based Policy Response to Global Climate Change" (1998) Energy Policy, Vol. 26, No. 4 (March): 335-43 (co-authored by John Byrne, Young-Doo Wang, Hoesung Lee and Jong-dall Kim). Updated estimates were published in a book chapter — John Byrne, Lado Kurdgelashvili and Kristen Hughes, "Undoing Atmospheric Harm: Civil Action to Shrink the Carbon Footprint." (2008), in Urban Energy Transition: From Fossil Fuels to Renewable Power. P. Droege ed. Oxford, UK: Elsevier. Pp. 27-54.

2. Intergovernmental Panel on Climate Change (IPCC) (2001), Climate Change 2001: The Scientific Basis (2001); and IPCC (2007), Climate Change 2007: The Physical Science Basis — Summary for Policymakers (2007). Available at http://www.ipcc.ch/ ipcreports/assessments-reports.htm

3. Delaware State Senate 144th General Assembly Senate Substitute No.1 for Senate Bill No. 18. Available at http://www.seude.org/docs/legislation/DE\_Senate\_Bill\_ SS1toSB18\_2007.pdf

4. Mr. Podesta was chief of staff for the Clinton Administration, and headed the transition team for President Barack Obama. 5. John Podesta, Testimony before Vice President Biden's Middle Class Task Force (February 27, 2009). Available at http://www.americanprogressaction.org/ issues/2009/02/podesta\_task\_force.html

6. Susan A. Chang, "The Rise of the Energy Efficiency Utility," *IEEE Spectrum* (May 2008). Available at http://www.spectrum. ieee.org/may08/6216

7. Bulletin of Science, Technology and Society Volume 29 (2), including the paper by Dr. Lawrence Agbemabiese of UNEP. Available at http://bst.sagepub.com/content/vol29/issue2/

8. Cabinet Committee on Energy. "Ensuring Delaware's Energy Future: A response to Executive Order Number 82," Dover, DE (2006).

9. Sustainable Energy Utility Task Force. *The Sustainable Energy Utility: A Delaware First.* A report to the Delaware General Assembly.

10. Jason Houck & Wilson Rickerson. "The Sustainable Energy Utility Model for Energy Delivery." *Bulletin of Science, Technology and Society* Volume 29 (2), 95-107 (2009).

11. Catherine Mitchell. Renewable Energy: Step Change in Theory and Practice. Proceedings of the Economic & Social Research Council Energy Research Conference, London, UK (2003).

12. The Administrator team includes Cadmus Group, which serves the marketing arm of the U.S. Department of Energy and U.S. Environmental Protection Agency's jointly developed *Energy Star®* label.

13. The SEU can combine rebates from state funds with its own rebates or financing packages drawn from capital funds secured through bond sales and other methods in order to support renewable energy purchases. This approach increases the overall support of the renewable energy purchase. Renewable Energy Credits are bought and sold in markets by utilities in order to comply with state laws requiring fixed percentages of their sales to be supplied by renewable energy systems. The SEU has the authority to aggregate RECs on behalf of residents and businesses whose systems often generate small amounts of renewable electricity and, as a result, cannot attract high (or any) REC prices. Because participation in the SEU is voluntary, households and companies can choose to allow the SEU to aggregate their RECs or they can elect to sell them without the SEU's assistance.

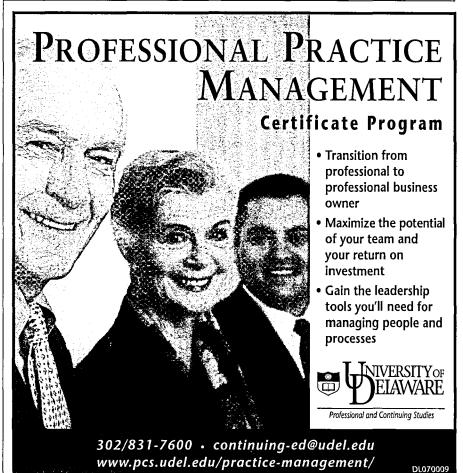
14. Roger Bezdek. Renewable Energy and Energy Efficiency: Economic Drivers for the 21st Century. Boulder, Colorado: American Solar Energy Society (2007); Karen Ehrhardt-Martinez & John A. Laitner. The Size of the U.S. Energy Efficiency Market: Generating a More Complete Picture. Washington, D.C.: American Council for a Energy-Efficient Economy (2008). 15. John Byrne, Cecilia Martinez & Colin Rugerro. "Relocating Energy in the Social Commons: Ideas for a Sustainable Energy Utility." *Bulletin of Science, Technology and Society.* 29 (2), 81-94 (2009).

16. Jerry Rhodes. "Philadelphia Mayor Sees Hope for Urban America," UDaily (March 4, 2009). Available at http:// www.seude.org/docs/2009\_media\_ UDaily\_Mayor%20Nutter\_March%20 12%20speech%20in%20honor%20of%20 Louis%20Redding\_highlighted.pdf

17. John Byrne, Lado Kurdgelashvili, Eric Partyka & Wilson Rickerson. Sustainable Energy Utility Design: Options for the District of Columbia. Newark, DE: Center for Energy and Environmental Policy (2008). Prepared for the District Department of Environment, Washington, DC. Available at http://ccep.udel.edu/energy/publica-

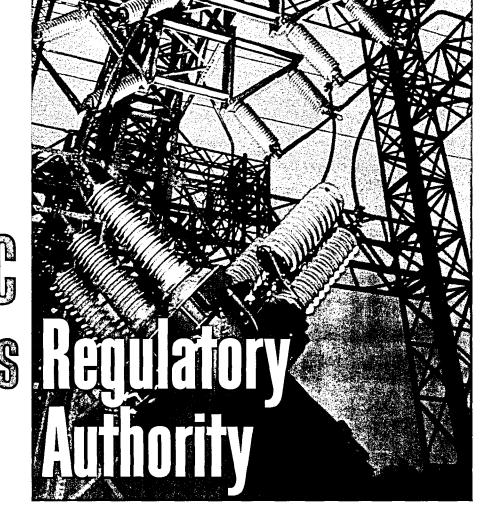
tions/2007\_es\_Wash%20DC\_SEU\_report\_final.pdf

18. Government of Bermuda, Energy Green Paper: A National Policy Consultation on Energy (February 2009). Available at http:// www.gov.bm/portal/erver.pt/gateway/ PTARGS\_0\_2\_12327\_311\_1794\_43/ http%3B/ptpublisher.gov.bm%3B7087/ publishedcontent/publish/gov\_top\_ level\_\_org\_\_house\_/government\_ information/articles/bermuda\_energy\_ green\_paper\_\_3mb\_\_0.pdf



#### FEATURE I. David Rosenstein

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Competitive wholesale electric markets require more federal rules and enforcement.

Most of the electric energy consumed in Delaware is purchased from the competitive wholesale electric market. While Delaware is considering alternatives that could reduce its reliance on the wholesale market, operation of that market will continue to influence the supply and prices of electricity for Delaware consumers.

("PJM"), the operator of the interconnected transmission grid serving 13 states and the District of Columbia, manages the wholesale electric market that serves Delaware. Sellers in the PJM market include fossil fuel generators, renewable energy resources and providers of energy conservation opportunities.

Interconnection, LLC

All such sellers must comply both with the specific rules of the PJM market and with the more general Federal Energy Regulatory Commission ("FERC") regulations governing acceptable forms of market behavior. Violation of either can subject sellers to "disgorgement" of unjust profits, forfeiture of their marketbased rate authority and/or assessment of civil penalties.

FERC has, on several occasions, acknowledged the need to establish welldefined "rules of the road" within which sellers can operate without fear of retroactive sanctions. Existing and prospective suppliers may be concerned that regulatory certainty is still a work in progress. However, through its continuing development of a body of law that applies and interprets its own rules and regulations, the FERC is mitigating any such concerns.

#### The Demise of the Vertically Integrated Utility

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Historically, electric utilities owned the generating plants, the transmission lines and the distribution facilities required to produce and deliver power to their wholesale and retail customers. This vertically integrated model of utility service began to break down in the 1960s.

First, in response to the Great New York City Blackout of 1964, utilities partially yielded control of the transmission function by interconnecting their transmission lines and joining regional coordination counsels.

Then, in 1978, utilities began to lose control of the generation function when Congress passed the Public Utility Regulatory Policy Act ("PURPA")<sup>1</sup> requiring that they purchase the output of certain types of energy-efficient, nonutility generation.

Throughout the 1980s, utilities began to use the interconnected transmission grids for transactions between noncontiguous counterparts. By the early 1990s it had become clear that power produced at any point on the grid could be delivered to virtually any other point on the grid.

Members of the independent power industry fostered by PURPA sought the opportunity to use the grid to sell their output beyond the boundaries of their interconnected utility. And electricity customers (especially those on the East and West Coasts where power was most expensive) sought the opportunity to use the grid to buy their power from an entity other than their local utility.

Utilities were, at first, reluctant to give up this last vestige of their control. However, Congress opted for competition by passing the Energy Policy Act of 1992 ("EPAct 1992").<sup>2</sup>

Pursuant to EPAct 1992, on April 24, 1996, FERC issued Order No. 888<sup>3</sup> requiring utilities to unbundle their transmission and generation functions and to provide open access transmission service. FERC declared that mandatory

open-access service would "remove impediments to competition in wholesale trade and bring efficient, lower cost power to the Nation's electricity customers."<sup>4</sup>

To prevent the potential for discriminatory use of transmission facilities, on December 20, 1999, the FERC issued Order No. 2000<sup>5</sup> in which it strongly encouraged utilities to join Regional Transmission Organizations ("RTO"). PJM is the RTO that controls transmission facilities in the Mid-Atlantic Region and ensures that they are operated in a nondiscriminatory manner.

PJM is managed by an independent board of directors elected by groups of stakeholders representing large and small customers, utilities, public power entities and generators. Like most other RTOs, PJM has also established structured markets, within which buyers can purchase power to meet their energy requirements and sellers can sell their energy output.

#### FERC Regulation of Competitive Markets

The Federal Power Act, which governs the sale of electricity in interstate commerce, requires that all rates and charges shall be "just and reasonable" and empowers the FERC to oversee ratemaking and other proceedings.<sup>6</sup>

When utilities were vertically integrated, FERC complied with the "just and reasonable rate" requirement by basing rates upon the cost to provide service plus a reasonable return on investment. In an age of competition made possible by open-access transmission, FERC could no longer rely upon "cost-plus ratemaking."

Instead, FERC began to meet the just and reasonable requirement through use of a two-prong approach. First, it granted Market Based Rate ("MBR") tariffs (the authorization required to participate in wholesale competitive markets) only to sellers who could show that they could not exercise market power. Second, it approved market rules that provide clear price signals for where and when energy and new investment is needed.7

The late 1990s were a time of intense activity in this area. Rules for the structured markets were written and approved, new merchant generation and marketing companies were created, and existing utilities either divested their generation assets or separated their generation and transmission facilities into separate operating businesses.

Like much of the rest of the industry, Delmarva Power & Light and its sister affiliate, Atlantic City Electric, sold certain of their generating plants to third parties and transferred the remainder to Conectiv Energy. Since that time, through both construction of its own facilities and acquisition of rights to the output of others' facilities, Conectiv Energy has been adding natural-gasfired facilities, wind generation and solar generation to its merchant generation fleet.

It was not surprising that the new generation and marketing companies might search for opportunities to participate profitably within the new rules of the structured markets. Few people, however, could have anticipated how blatantly Enron Marketing and its affiliates would exploit perceived loopholes in the California Power Exchange's market design in their pursuit of profits.

From 1998 through 2001, Enron and its affiliates used strategies with names like "Ricochet," "Death Star" and "Get Shorty"<sup>8</sup> to artificially increase congestion at certain points and to then receive payments for "relieving" the artificial congestion; to wheel power out of California and to then wheel the same power back into California for the purpose of receiving premium prices paid for imported power; and to receive payment for services that they did not have the facilities to provide.

These strategies all had one thing in common — they created revenues for Enron without serving any real purpose in the market-clearing function of a competitive marketplace.

At the time, FERC only had a limited number of enforcement tools to t tř<u>al na postova s</u>

respond to Enron's actions. First, it could terminate Enron's MBR authority and thus prevent it from engaging in further transactions in the competitive market. Second, it could require Enron to "disgorge unjust profits" that it had recovered through use of "anomalous market behavior" and "gaming," both of which were prohibited by the California Power Exchange rules.

To protect customers from a repeat of an Enron-type experience, FERC needed to provide its own guidance on permissible market behavior.

Toward that end, on November 17, 2003, FERC issued its Order Amending Market Based Rate Tariffs and Authorizations<sup>9</sup> in which it required all holders of MBR tariffs to include in those tariffs certain Market Behavior Rules.<sup>10</sup> Those Rules (i) required sellers to comply with applicable market rules, (ii) prohibited sellers from engaging in certain types of trading activities, (iii) required sellers to provide accurate and factual data, (vi) required that sellers who provide pricing information to publications make sure that that information is accurate, (v) imposed certain record retention requirements, and (vi) required sellers to comply with all applicable codes of conduct.

In adopting its Rules the FERC said

"...that sellers, while accountable for their actions, need and deserve clearly-delineated rules governing their conduct so that both sellers, buyers, and other interested entities will know what is and what is not acceptable market behavior."<sup>11</sup>

#### FERC Regulation After the Energy Policy Act of 2005

Shortly after FERC adopted its Market Behavior Rules, Congress imposed its own view of acceptable market behavior. Specifically, in the Energy Policy Act of 2005 ("EPAct 2005")<sup>12</sup> Congress prohibited "any manipulative or deceptive device or contrivance" in the wholesale electricity markets.<sup>13</sup>

Based upon Congress's directive that

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the phrase "manipulative or deceptive device or contrivance" be used like the same phrase is used in Section 10(b) of the Securities and Exchange Act of 1934, the FERC issued Order No.  $670^{14}$  adopting the following, modeled after the SEC's Rule 10(b)-5:<sup>15</sup>

"(a) It shall be unlawful for any entity, directly or indirectly, in connection with the purchase or sale of electric energy or the purchase or sale of transmission services subject to the jurisdiction of the Commission,

(1) To use or employ device, scheme or artifice to defraud,

(2) To make any untrue statement of a material fact or to omit to state a material fact necessary in order to make the statements made, in the light of the circumstances under which they were made, not misleading, or

(3) To engage in any act, practice, or course of business that operates or would operate as a fraud or deceit upon any entity.<sup>216</sup>

The FERC continued to express its commitment to certainty for market participants by explaining that use of the SEC's Rule 10(b)-5 as the basis for the anti-manipulation regulations

"... should benefit the industry because it will provide greater certainty to entities subject to the new rules because the Commission intends to rely upon the large body of case law interpreting and applying section 10(b) and Rule 10(b)-5 when applying its new authority."<sup>17</sup>

Sellers need to be careful, however, not to assume, from the FERC's stated commitment to regulatory certainty, that they can avoid an investigation or prosecution under the new antimanipulation regulations merely by conforming to an RTO's market rules. This issue of a possible relationship between conformance with market rules and compliance with the antimanipulation regulations has come up on three occasions since adoption of the anti-manipulation regulations.

#### Edison Mission's High Bid Strategy

The first such case involved Edison Mission's bidding of generating units into PJM's energy market ("Edison Mission").<sup>18</sup> The generating units at issue qualified as "capacity resources" and thus were available for use by Edison Mission as capacity credits.<sup>19</sup> The PJM market rules require owners of capacity resources to bid available capacity from those resources into PJM's day-ahead energy market.<sup>20</sup> In addition, the market rules prohibit sellers from submitting bids into the day-ahead or real-time energy market in excess of \$1,000/MWh.

As required by the PJM market rules, Edison Mission bid available capacity from its units into the day-ahead energy market at a price less than the 1,000/MWh cap. However, by bidding a price just under the cap, Edison Mission assured itself that its bid would exceed the market-clearing price in the day-ahead market.<sup>21</sup>

Neither the PJM market monitor, nor the FERC, nor the FERC's enforcement staff ever alleged that Edison Mission's High Bid Strategy violated the PJM market rules. And, if conformance with the market rules was the same as compliance with FERC anti-manipulation regulations, then FERC would only have been able to respond by modifying the market rules to prevent future use of the High Bid Strategy.

However, Edison Mission's conformance with the PJM market rules did not limit FERC's options. Instead, the FERC's enforcement staff initiated an investigation into the High Bid Strategy,<sup>22</sup> and that investigation led to a Stipulation and Consent Agreement within which Edison Mission agreed voluntarily to discontinue use of the Strategy.<sup>23</sup>

Since the FERC did not issue an order on the merits, it did not provide the industry with any clarification regarding when, or if, actions in conformance with market rules might, at the same time, constitute actions in violation of the anti-manipulation regulations. All that the industry received was a strong indication that this apparent inconsistency may exist in some, as yet undefined, circumstances.

#### NYISO Counterflow Trading

The second case involving a possible relationship between conformance with market rules and compliance with the anti-manipulation regulations concerned a number of energy trades beginning in January 2008, which were scheduled on a circuitous path for delivery from the New York ISO to PJM (the "NYISO Counterflow Matter").

The traders executing these transactions were taking advantage of an opportunity to sell energy purchased in the NYISO at a profit in PJM only if they wheeled it around Lake Erie through the systems of the Independent Electric System Operator of Ontario ("IESO") and the Midwest Independent System Operation ("MISO").

Although the energy was scheduled to bypass the congested NYISO-PJM interconnection point, the actual electrons followed the shorter path directly across that point. These unscheduled deliveries exacerbated the existing congestion and increased the power costs for customers using power near the interconnection point.

Upon learning of these activities, the NYISO filed an application with the FERC seeking authority to implement temporary market rules that prohibit the circuitous scheduling. In its application, the NYISO stated that market participants who used the circuitous path had not violated any NYISO rules.<sup>24</sup>

However, when the FERC issued its order approving the temporary rules change, it noted that its enforcement staff had already initiated an investigation and that it would consider further action once it received the results of that investigation.<sup>25</sup> Any such action by the FERC may provide additional regulatory certainty for market participants seeking to comply with both the market rules and the FERC regulations.

#### Power Edge Default

The third case involving a possible relationship between conformance with market rules and compliance with the anti-manipulation regulations involved alleged manipulation of PJM's Financial Transmission Rights ("FTR") market by a group of affiliated companies called the Tower Companies.

FTRs represent a right to specific transmission paths on the PJM system and will increase or decrease in value depending upon congestion that exists on those paths.

In December 2007, the value of the FTRs held by Power Edge, LLC, one of the Tower Companies, had significantly decreased in value and Power Edge was unable to provide the collateral required by the PJM rules to cover its losses. Power Edge, therefore, defaulted in the amount of \$51.7 million.

PJM brought a complaint at FERC against the Tower Companies alleging

that they had defrauded PJM by establishing offsetting positions for FTRs in different companies, placing the losing positions in Power Edge and planning for Power Edge to default on those losing positions.<sup>26</sup>

In its complaint, PJM did not allege that the Tower Companies violated any specific PJM market rule. Nevertheless, in response to the complaint, as in Edison Mission and in the NYISO Counterflow Matter, the FERC directed its enforcement staff to conduct an investigation into whether the Tower Companies had violated any FERC regulations.

The results of that investigation, and the resulting FERC Order, provide the first insight into application of the anti-manipulation regulations to actions that otherwise appear to comply with the market rules. In its Order Denying Complaint, the FERC held that the Tower Companies would be in violation of the anti-manipulation rules only if



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 (1) they used a scheme or artifice to defraud, (2) they acted with scienter, and
 (3) they engaged in an action subject to the FERC's jurisdiction.<sup>27</sup>

Based upon its enforcement staff's report, the FERC concluded that the Tower Companies did not plan for Power Edge to default on its obligations and, thus, its actions did not constitute a scheme or artifice to defraud with the requisite scienter.<sup>28</sup> Thus, at least in the Tower Companies case, the FERC found that actions in compliance with market rules did not violate FERC regulations unless there was also proof of an intent to defraud.

#### Conclusion

The next several years are going to be challenging times for those who operate in competitive wholesale markets like PJM. The rules for those markets will provide opportunities for energy conservation and renewable energy resources to compete on a level playing field with traditional forms of power supply for the chance to provide reliable supply at competitive prices.

Suppliers in these markets will do what suppliers always do — they will try to efficiently provide their preferred form of supply in response to the markets' price signals.

However, in order to avoid possible exposure to sanctions from the FERC, suppliers will also have to be careful that they adhere to FERC's market behavior regulations as those regulations, and their interpretation, continue to evolve.

The FERC's continuing oversight will ensure the operation of efficient markets where all potential suppliers will fairly compete for the opportunity to provide electricity (or energy conservation) to consumers at competitive prices.  $\blacklozenge$ 

The opinions expressed are those of the author and not those of Pepco Holdings, Inc., or Conectiv Energy.

#### FOOTNOTES

1. Public Utility Regulatory Policies Act of 1978, Pub. L. No. 95-617, 92 Stat. 3117 (1978).

2. Energy Policy Act of 1992, Pub. L. No. 102-486, 106 Stat. 2776 (1992).

3. *FERC* Order No. 888, Final Rule (April 24, 1996).

4. Id. at 1.

5. Regional Transmission Organizations, Order No. 2000, 89 FERC ¶61,285 (December 20, 1999).

6. 16 U.S.C. § 824d(a) (2000).

7. See Market Based Rates For Wholesale Sales of Electric Energy, Capacity and Ancillary Services by Electric Utilities, Order No. 697, 119 FERC ¶ 61,295 (June 21, 2007). It is worth noting that a remnant of cost-based ratemaking survives in the market rules. Those rules base energy prices on "marginal costs" at times and at locations where transmission constraints limit the ability of competitive forces to set market prices.

8. Order Revoking Market Based Rate Authorizations and Terminating Blanket Marketing Certifications, p. 10, 103 FERC ¶ 61,343 (June 25, 2003).

9. Order Amending Market Based Rate Tariffs and Authorizations, 105 FERC ¶ 61,218 (November 17, 2003).

10. In addition to promulgating the Market Behavior Rules, the FERC has continued to work closely with wholesale market operators like PJM and their stakeholders to develop well-designed market rules.

#### 11. Id. at 5.

12. Energy Policy Act of 2005, P.L. No. 109-58, 119 Stat. 594 (2005).

13. EPAct 2005 did far more than simply provide a definition of impermissible market behavior. It also gave the FERC a powerful new enforcement tool for its regulation of market behavior. In addition to FERC's existing authority to terminate a violator's market-based rate authority and to require the violator to disgorge its unjust profits, EPAct 2005 gave the FERC authority to assess penalties of up to \$1,000,000 per day for virtually any violation of the Federal Power Act.

14. Prohibition of Energy Market Manipulation, Order No. 670, 114 FERC 61,047 (January 19, 2006).

15. 2 C.F.R. 8240.10b-5 (2005).

16. 18 C.F.R. § 1c.2 (2007). FERC completed its conversion of the Market Behavior Rules from tariff provisions to formal Regulations in *Conditions for Public Utility Market-Based Rate Authorization Holders*, Order No. 674, 114 FERC ¶ 61,163 (February 16, 2006). See 18 CFR § 35.37 (2007).

17. Notice of Proposed Rulemaking, p. 8, 113 FERC ¶ 61,067 (October 20, 2005).

18. Order Approving Stipulation and Consent Agreement in Docket'No. 123 FERC ¶ 61,170 (May 18, 2008).

19. Generating units can be thought of as producing three products — "capacity," which commits the capability of the unit to the RTO; "energy," which constitutes the

actual megawatt hours that are produced by the units; and "ancillary services," which are used to maintain the reliability of the transmission system. PJM Rules require that each PJM member that serves customer load (referred to as a "load serving entity") must have rights to enough capacity to meet its obligation. The rights to capacity are represented by capacity credits that can be purchased from capacity resources such as the Edison Mission units.

20. Units that are not sold in the day-ahead energy market at the day-ahead energy prices (clearing prices from an auction of projected supply and demand held the prior day) are available to sell in the real-time market at real-time energy prices (clearing prices from the actual operation of the system during the day).

21. Edison Mission may have implemented its Strategy to hedge a commitment to make energy sales at the real-time market clearing price. Alternatively, the Strategy may have reflected Edison Mission's expectation that real-time energy prices were likely to be higher than day-ahead energy prices. However, Edison Mission's failure to disclose the basis for its High Bid Strategy to staff was part of the basis for the conclusion in the Settlement and Consent Agreement that Edison Mission failed to cooperate with staff. See footnote 24.

22. This is just one of many investigations that the FERC's enforcement staff has conducted since enactment of EPAct 2005. Pursuant to those investigations, the FERC has approved 19 Stipulations between its enforcement staff and public utilities resulting in civil penalties totaling over \$50 million. Most of the violations addressed in the Stipulations involved violations of the FERC regulations other than those dealing with market manipulation.

23. The agreement to terminate the High Bid Strategy was actually a minor component of the Stipulation and Consent Agreement. Most of the Stipulation and Consent Agreement deals with Edison Mission's failure to cooperate and be forthcoming during the Staff investigation. Edison Mission ultimately agreed that its failure to cooperate violated a "duty of candor" required by 18 C.F.R. § 35.41(b) (2007). As a result, Edison Mission agreed to pay a penalty of \$7 million and to adopt a compliance program at a cost of at least \$2 million.

24. Order Accepting Tariff Sheets, Docket No. ER08-1281-000, p. 10, 124 FERC ¶ 61,174 (August 21, 2008).

#### 25. Id. p. 11.

26. PJM Interconnection, LLC v. Accord Energy, LLC et. al., 123 FERC ¶ 61,103 (2008).

27. Order Denying Complaint in Part, p. 2, 127 FERC ¶ 61,007 (April 2, 2009).

28. *Id.* It should be noted that other portions of PJM's allegations against the Tower Companies are still under investigation.



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