New Mexico Solar Energy Association

SunPaper

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William A. Gross, 1925-2011

By Gary Vaughn, NMSEA Vice-President

As many of you already know, Dr. Bill Gross passed away on February 20th. He was 86. A Quaker Memorial Service was held for him on April 3rd. Many NMSEA members attended.

Bill and Sharon Gross moved to Albuquerque in 1974, when Bill accepted the position as Dean of Engineering at the University of New Mexico. They immediately began providing support and encouragement to a young organization called the New Mexico Solar Energy Association. Bill committed much of his professional career to community, state, national and international renewable energy issues and solutions.

The mid-to-late ’70s and the early ’80s were boom times for alternative energy and for NMSEA. The world was facing an “Energy Crisis,” and New Mexico’s

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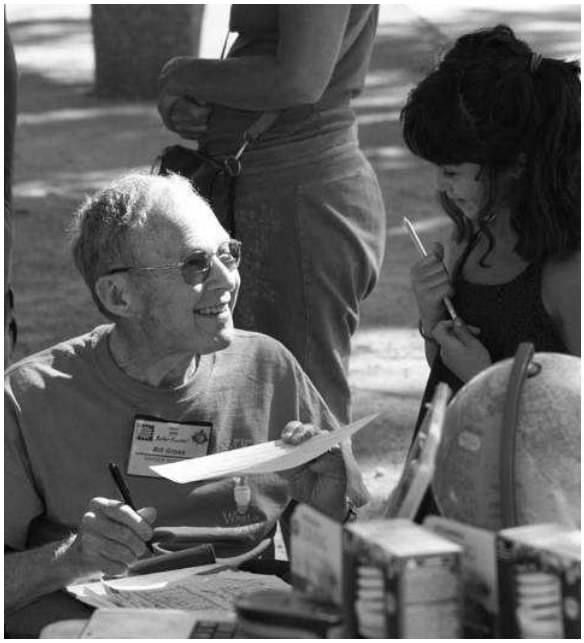
David Griggs photo



Bill Gross at the 2010 NMSEA Solar Fiesta.

Solar Fiesta 2011!

By Rose Kern, Solar Fiesta Manager

The Solar Fiesta will take place this year at Albuquerque Academy on August 27th and 28th. The Academy is located on land northeast of the intersection of Academy and Wyoming Boulevards in Albuquerque.

Solar Fiesta 2011 shines a light on the broad view of sustainable solar energy in all its myriad colors. A truly sustainable lifestyle begins with building or retrofitting your home to take advantage of passive solar heating and cooling for water and home comfort. It involves creating a comfortable and healthy living space by making small changes in your surroundings, bringing added value to your lifestyle.

The Albuquerque Academy in the northeast heights promotes and embodies many of these concepts. It has a new one-megawatt photovoltaic system onsite, they

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The NMSEA SunPaper

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Preference is given to articles on solar energy topics (PV, passive, technology, performance histories, incentives, cost benefits, etc.), but we will also consider other renewable energy subjects as space allows.

Advertising Rates

All advertising is in black and white, and photos and graphics must have a resolution of at least 250 dpi in JPEG, TIF, or PDF format. Text-only ads may be provided in MS Word format. Ad copy must be e-mailed by June 15 for the July/August SunPaper. Circulation is typically 800. The size requirements and prices for individual ads are as follows:

		May/June
Full Page:	9½" H X 7" W	$122.00
Half Page:	4¼" H X 7" W	$66.00
Quarter Page:	4¼" H X 3½" W	$36.00
Biz Card:	2" H X 3½" W	$20.00

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Words of Sol

A Mentor Leaves Us His Guidance

Peace. That seemed to be the primary goal that Dr. William "Bill" Gross strived for by living his belief that he should leave the world a better place than he found it. Attending the wonderful Quaker Memorial Service for Bill, we all learned so much about how Bill touched and helped other people and organizations around the world. When asked why he joined the Coast Guard as a young officer he said, "to help people." And so it was throughout his life, much of which he shared with his wife, Sharon, a partner in his vision. Yet beneath the kind and gentle nature that we knew so well, there was a fighter dedicated to accomplishing the objectives that he believed were right. After learning about many of the other people and accomplishments in Bill's life, I felt sad that I didn't get to know him better, yet fortunate to be blessed by his guidance over the last 15 years.

Whether as a gifted engineer guiding a research group through the process of inventing a leading edge product in his younger years or as a professor and active member of a number of volunteer organizations in his later years, Bill had the ability to genuinely listen to all those giving input. Then at the right time he would relate a little story about a similar situation and offer some insightful words of wisdom and heartfelt encouragement. Bill attended many of our organization's meetings and volunteered at our special events wherever he was needed. He was a great mentor to all who met him.

In carrying Bill's work forward I believe the majority of our membership would agree that the goal of leaving our planet in a better state than we found it should be part of our mission. Bill's approach should be woven into the mission of our organization, as we face the daunting task of educating and leading by example towards a world living in peace and powered by truly clean, renewable and sustainable energy from the sun.

It's becoming more apparent each day that we are going to have to "fight" with powerful entities just to assure the survival of clean renewable energy. With enough grit and determination we may be able to slow down the greed and pollution just enough that some species will avoid extinction, including those pesky Homo Sapiens.

("Words" Continued on next page)

IGIS and Solar Socials

NMSEA volunteers manned a large booth at the 2011 International Green Ideas Show (IGIS) held at the Manuel Lujan Building at the State Fairgrounds in Albuquerque on March 19 and 20. IGIS organizer Rick Shoudt, who is also an active NMSEA member, reserved a choice location for NMSEA, and we filled it with demos and information about renewable and sustainable energy. NMSEA collaborated with the New Mexico Electric Vehicle Association (NMEVA) to display and give talks about electric vehicles. Skip Dunn, the President of NMEVA brought his 914 Electric Porsche, and we had two electric trucks and a converted extra-range plug-in Prius Hybrid. Lots of interest and inquiring minds!

Late that Saturday afternoon NMSEA hosted a "Solar Social," which was attended by about 60 NMSEA members, show exhibitors, and guests. We want to thank Rick Shoudt for arranging for us to participate in IGIS and Mike Mattioli at Consolidated Solar Technology (CST) for sponsoring the Solar Social. (Note that CST is offering new Schott 230W PV panels for $1.89 a watt!) Large public events like this one require lots of time and energy from NMSEA volunteers. We couldn't have pulled this off without the help of Carl Axness, Mandy and TJ Scarberry, Dave Patterson, Jim Ritchie, Gary Vaughn, David Griggs, and Robert Nelson.

Jim Barrera will be representing NMSEA at the ASES 2011 conference May 17-21 in Raleigh North Carolina. Thanks, Jim!

We are planning on having the next Solar Social around June 21; suggestions and volunteers appreciated.

The 2011 Solar Fiesta will be held at Albuquerque Academy on August 27th and 28th. Thanks, Rose!

Sincerely,
Monte Ogdahl
NMSEA President

NMSEA Board Meeting May 14

The next meeting of the NMSEA Board of Directors will be on Saturday, May 14, in the conference room at the NMSEA office, 1009 Bradbury Dr. SE, Albuquerque, 87106, from 12:00 noon to 3:00pm with a potluck before at 11:30am. Members welcome. Call 505-246-0400 by May 10 if you have an item for the agenda.

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Larry Mapes

(Solar Fiesta 2011, Continued from page 1)

compost all the cafeteria's food waste, and they use rainwater storage systems. These are but a part of this educational facility's ongoing programs, making it the ideal partner for the southwest's largest renewable energy fair.

As always, the Solar Fiesta will provide exhibits and workshops on a plethora of popular topics, such as how to install solar and wind energy systems, biofuels, transportation alternatives, lighting and shading options, and energy efficiency. An expanded kid's area will use a multiplicity of both static displays and interactive games to teach energy concepts.

The Fiesta's educational offering will provide several tracks, wherein a group of related topics will be available sequentially. For instance, the demand for techniques related to passive solar homes and commercial buildings has risen over the last few years. New Mexico boasts more award-winning solar architects than any other state in the U.S., and we have gathered them together to discuss methods for creating homes which are self-heating and cooling.

What about homes already in existence? The track on retrofitting your home will offer advice on such things as creating open spaces with creative lighting and window options and reusing your gray water. One of the most popular methods of saving money on utilities is the installation of a solar hot water heating system – lots of hot water with a short payback time!

A special track on Sunday will highlight the cutting edge research and development being done by universities and laboratories here in New Mexico. The Fiesta will culminate with a 2-hour panel discussion concerning the future of distributed generation and renewable energy credits (RECs). Participants will include members of environmental watchdog groups and representatives from PNM Resources. If you have grid-tied solar on your roof, you will want to be here for this!

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Veterans Hospital Gets PV System

The first phase of 3.2 MW photovoltaic installation has gone into operation at the U.S. Department of Veterans Affairs and hospital south of Gibson near San Mateo. The prime contractor is Eaton Corporation, an engineering systems and services company. Subcontractors include Consolidated Solar Technologies (an NMSEA business member), Mosher Enterprises, Inc., and ProtekPark Solar, a carport canopy supplier. My photo at left shows just a portion of the carport installations. Additional panels will be installed on roof-tops.
- Editor

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LINEAR CITY CONCEPTS

http://www.imagine-city.info

(Bill Gross, Continued from page 1)

innovators responded. Bill founded a renewable energy program at UNM, served on various prestigious state and regional committees and panels, and championed the construction of a new mechanical engineering building, which was designed to be (and to a surprising extent still is) a working example of state-of-the-art RE innovations.

The "Energy Crisis" was completely sidelined during the Reagan Administration, and financial support for RE development and advocacy plummeted. NMSEA's yearly budget of almost $250K, along with 21 full-time staff positions, disappeared. Similar reductions were made to RE programs at the National Labs. NMSEA membership shrank from thousands across the country to a handful. Board meetings convened in member's living rooms – including Bill and Sharon's.

One of Bill's most striking characteristics was his steadfast dedication to principled action no matter how personally challenging. In spite of his many other responsibilities, Bill took on the role of leading NMSEA in '85, and he succeeded in sustaining and revitalizing the organization.

Bill and Sharon have been fixtures at countless NMSEA Board meetings and retreats, and at every Solar Fiesta, except when they were traveling and teaching abroad. The photo on page 1 was taken at the 2010 Solar Fiesta last September. It's obvious that Bill was as fully and enthusiastically involved as ever.

Bill was a "gentle-man" in the literal sense. But he was also a true warrior. He was small of stature, but his quiet presence was huge, and his footprints pressed deeply into the earth. His many friends and colleagues were well aware of the significant contributions he made in their sphere, but many were surprised by the depth and breadth of the work he did in other arenas to help to make the world a better place. At his memorial, he was variously described as a giant, a leprechaun, a fighter, a brilliant engineer, and a deeply spiritual man who strove to live, speak and practice his truth every single day.

Take a good look at that photo on page 1. It captures the classic Bill Gross. The young girl was asking him for his autograph, so that she could get extra credit on her Solar Fiesta Scavenger Hunt Questionnaire. Neither had ever met before. This brief interaction could have been routine and completely forgettable. But you can tell by the expressions on their faces that Bill had managed to transform that brief encounter into something genuinely meaningful for both of them.

I have been in that young girl's shoes, as have legions of others who had the opportunity to work with Bill. And every one of us came away from that experience feeling just as acknowledged and special as that young student did. We were all Bill Gross's students, and we are all grateful for that gift.

The following are remembrances by some of Bill's NMSEA colleagues:

Bill Gross was an amazing man with a wonderful spirit who made an inestimable contribution to the solar movement and to the lives of countless people. I will always remember his inspiring presence at NMSEA meetings, and his gentle efforts at steering the organization over the years. Likewise for Sharon. My best wishes to Sharon and family. May we all celebrate Bill's life and legacy.
- Ben Luce, past NMSEA President

I too am sad to learn of Bill's passing. He was caring and creative in his work for a better and sustainable world. He and Sharon established friends worldwide who benefited from their commitment to improve the quality of life of others. His loss will be felt globally as well as here at home. Bill reinvigorated NMSEA in the late 1980's, and that likely saved the organization and the amazing work that has been and is now happening through the commitment and volunteer time of many. I extend my best wishes and thoughts to Sharon and family during this time of grieving.
- Julie Stephens, past NMSEA President

Bill was very much a part of my tenure at NMSEA's helm in the late 90's. I was always amazed to see how vibrant he still was!
- Karlis Viceps, past NMSEA President

Bill Gross was a special person. He clearly worked to make a better world, and succeeded. He did it with love and his light showed it. He was an inspiration to many of us. He was enthusiastic about community energy-related projects, as well as supporting individual Renewable Energy work. He came to my open house some 6 years ago. It was the kind of support that he showed us all. He will be missed. Thanks, Bill.
- Don Miller, past NMSEA Vice-President

NMSEA and I owe a lot to Bill and Sharon. They taught us that solar alone was not going to solve all things, and that a holistic approach needed to be developed. I have been inspired and educated by Bill Gross, and I appreciate that very much. My love and prayers go out to Sharon and the rest of Bill's family. He will be missed by many.
- Mark Chalom, NMSEA Board Member

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NMSEA SunPapers are now online
at our website:
http://nmsea.org/Sunpaper

NMSEA and PNM Representatives Meet to Strengthen Communications

By Howard Stephens and Rose Kern

On March 21 Rose Kern and Howard Stephens, representing NMSEA, met with Amy Miller, PNM Stakeholder Relations, and Ron Darnell, PNM Vice President for Regulatory Affairs. The invitation to meet with PNM was prompted by public comment presented by NMSEA at the January 21 Public Regulation Commission regarding PNM's proposed "solar access" charge, opposed by NMSEA. (See "PNM Drops Request for 'Solar Access' Charge" in the March/April 2011 SunPaper.)

PNM Wants to Understand Stakeholder Interests

According to Amy Miller's invitation, "My initial intention was to provide an informal opportunity to get to know your organization better and to give Ron (Darnell) a chance to meet with key individuals from your organization. In the past, most of the regulatory feedback we have gotten on renewables and specifically solar issues has come from the Renewable Energy Industries Association (REIA). One of my jobs here at PNM is to broaden our outreach and conversations with those interested in what PNM is doing, and around broader energy issues in our state. I hope this is a good first step for us in understanding the interests of your organization and to discuss some of the issues you may have concerns around."

PNM Describes Their Constraints

During the hour and a half luncheon meeting with Ms. Miller and Mr. Darnell, we exchanged thoughts on expectations, organizational goals and concerns regarding the development of solar energy in New Mexico.

Ron Darnell briefly described some of PNM's operating and regulatory constraints. Many of these involve complex business, legal and regulatory issues. In-depth explanation is beyond the scope of this brief article. A few of these include:

- Ensuring system capacity always meets peak load demand;
- The obligation to deliver a return on shareholder investment and to maintain an investment-grade rating to borrow money at a reasonable interest rate;
- Regulatory conflict between satisfying the renewable portfolio standards and delivering power under the established reasonable cost threshold; and
- Revenue decoupling (guarantees of revenue when sales of energy decline) has been rejected, which could have solved many of these constraints.

NMSEA Expectations and Concerns

We presented a few general NMSEA expectations for building a relationship with PNM, which were discussed at our March 12 Board Meeting:

- for PNM to continue to foster development of New Mexico's largest energy resource – solar energy, and
- for PNM to continue to support NMSEA outreach and education programs.

We also mentioned some concerns of NMSEA members, including these:

- Long-term PNM support for customer-generated grid-tied distributed solar PV electric (DE) systems;
- Stable state policy for advancing distributed solar energy in New Mexico;
- Repeal of the provisions of 2010 House Bill 181 that enable levying a solar rate rider;
- The best way to approach outreach and education for solar energy;
- The scheduled rate of reductions in REC payments for DE systems; and
- The fate of power from DE systems when those customer contracts with PNM expire.

Facilitating Communications

At the conclusion of the meeting, Ron Darnell said he appreciated learning more about NMSEA, and that the meeting was a start at fixing communications with stakeholders like NMSEA. We expressed a desire for further discussions regarding solar energy development, especially a forum involving a broader scope of stakeholders, including legislators, regulators, businesses, industry associations and system owners.

To facilitate a start for this forum, Rose Kern proposed a panel discussion on solar issues at the next NMSEA Solar Fiesta and invited a PNM representative to attend as a panelist.

This meeting with PNM was a start for developing a broader discussion of the issues facing expansion of solar energy in New Mexico. Clearly PNM as the state's largest electric utility has regulatory, business, stockholder and public obligations it must meet. And, NMSEA has an obligation to serve its members, who envision a future powered by clean, renewable and sustainable energy from the sun. Let's keep communications with PNM open to continue advocacy for NMSEA's solar energy vision and mission.

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Electric Vehicle Classes in May

May 7: Electric Vehicles Basics and Safety Class. 9am -12:30 at the NMSEA boardroom at 1009 Bradbury Dr. SE in Albuquerque, 87106. This is a prerequisite for all subsequent EV classes. Get professional assistance and learn how to convert your favorite truck or car body to an EV! NMSEA member cost $75; non-members $85.

May 21, 22, 28: NMSEA Electric Vehicles Conversion Class for Small Trucks and Cars: 3 full days in

(Continued on page 10)

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Solar Fiesta Call for Volunteers!

By Rose Kern, Solar Fiesta Manager

Be a part of the 2011 Solar Fiesta by giving time to help run it! It will be held this year at Albuquerque Academy on August 27th and 28th. Donating four hours of your time gets your car and its occupants (any number!) into the exhibit grounds free. Four to eight hours also earns you the choice of a T-shirt or one all-day workshop pass, which you can choose to use or give to a friend.

We need help in these areas:

- Setup on Friday evening from 3pm to 7pm. (includes dinner)
- Breakdown on Sunday evening from 4pm to 8pm.
- Entry and ticket gates, traffic directing, security
- Ticket sales
- Staff the NMSEA sales and information booth
- Classroom monitors
- Cooking with the big solar oven
- Kids area demonstrations
- First aid

If you'd like to participate, just call the NMSEA office at 246-0400 and if necessary leave a message with your name and phone number. A volunteer coordinator will call you. Thanks for making the Solar Fiesta the premier energy fair in the southwest! ☼

(May EV, Continued from page 8)

Albuquerque, starting in the NMSEA boardroom, then moving to a shop. Registration and payment must be received by 5/18. NMSEA member cost $300; non-members $325.

Highlights of this class include procedures to ensure a safe efficient conversion, different combinations that best suit specific needs, and demonstrations of high and low voltage and analog wiring techniques. Students will be divided into small teams that will rotate through workstations for hands-on experience with wiring and applications to motors, controllers, etc. (No student will be in contact with electricity.) At the field/shop presentations, students will observe the actual installation of the motor, controller, charger, and batteries. The final day will include a vehicle test-drive and evaluation.

You may apply as a candidate to have your vehicle converted, and the discount on the standard parts you will need for your conversion will about offset the cost of the classes, effectively making the class free in that case.

An advanced EV class will be offered at a later date. If you have any questions about these classes, write to Monte at solpwr@plateautel.net. To register and pay for either class, call the NMSEA office at (505) 246-0400 Mondays, Wednesdays, Thursdays, or Fridays, 9am – 12 noon. ☼

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www.CleanEnergyNM.org

Your Source for Energy Efficiency and Clean Energy Information

ECMD, the state Energy Conservation and Management Division, provides advisory support to New Mexico's general public, tribes, public schools, state agencies and institutions of higher education. If you have questions, whether professional or in general, start looking for directions to energy efficiency and clean energy at our website.

- *Renewable Energy*
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Albuquerque Chapter Meetings

By Athena Christodoulou

Albuquerque NMSEA members! Join us on the fourth Tuesday of every month for a couple of hours of "energy" and education. We will be having a mix of speakers and expert-led discussions. Come hang out with other concerned citizens and learn how you can do your part to bring us all to a more sustainable lifestyle, or … share your successes. Experts and novices are all encouraged to attend.

Upcoming meeting details:

- **Locations**
  May: Affordable Solar, 4840 Pan American Frontage Road
  June: REI, 1550 Mercantile Ave NE , 87107
- **Date, time**
  Tuesdays, May 24, and June 28, 6 – 8 pm
- **Topics**
  May: "Local Green Manufacturing – Proud to be made in New Mexico" and mini tour of Affordable Solar.
  June: "SOL-MOD" – Modular Solar homes. Bringing solar to everyone under the sun.
- **Bring a Friend** - You will be entered into a drawing with a winner every meeting. ☼

Solar Energy Investments

Closing share prices compared to the DOW index (approximate, rounded):

04/21/11	02/25/11	04/23/10
First Solar (FSLR):		
$137	$156	$134
Market Vectors, Solar Energy ETF (KWT):		
$12.30	$13.49	$13.27
Dow Jones Industrial Average ($INDU)		
12,506	12,130	11,204

Selected prices provided for relative information, only; NMSEA does not recommend specific investments. All investments involve risk, so invest cautiously.

PNM Dedicates PV Plant

Members of NMSEA were on hand at the dedication of PNM's 2.0MW solar photovoltaic plant at the Reeves Station near Paseo del Norte and Jefferson in Albuquerque on April 20. L-R in the photo below are Athena Christodoulou, Rose Kern, Gary Vaughn, and Mary McArthur. Among the speakers at the dedication were Mayor Richard J. Berry and U.S. Representative Martin Heinrich. For more information on this PV installation, go to http://www.pnm.com/news/2011/0420_abq_solar_dedication.htm.

- Editor

Harry Caldwell photo

Renewable Energy and Public Service

By Gary Vaughn, NMSEA Vice-President

It's common for large electric utilities to include "Public Service" in their names. Here in New Mexico the two largest electric utilities are PNM, formerly known as the Public Service Company of NM, and SPS, still Southwestern Public Service Company. We also have a number of cooperatives that supply electricity to rural areas of the state. Our "modern" lifestyles and economic health are totally dependent upon a reliable and affordable supply of electrical energy, so in that sense these companies are providing a critically important "service" to the "public."

Electrical cooperatives are actually owned by their customers. PNM and SPS are publicly traded investor-owned companies, so while they are both owned by "members of the public," the vast majority of their customers don't own their stock. While federal, state, and local governments – the public sector – are major utility customers, they aren't utility investors, nor do they directly bankroll utilities with tax dollars. In the larger sense of "public service," i.e., "serving the best interests of the people of New Mexico," there are fundamental contradictions built into these relationships.

Large utilities own most of their generating facilities and energy transmission and distribution infrastructure. The sheer size and cost of this infrastructure mean that classic "competition" for customer accounts is out of the question. Utilities are, by their very nature, regional monopolies.

Investor-owned companies in this country are required by law to serve the best interests of their stockholders, i.e., to maximize earnings and return on investment. On the other hand, monopolies are illegal for obvious reasons. We deal with this contradiction by requiring states to "regulate" these utilities, i.e., to act as arbiters to balance the often competing interests of the utility's officers and stockholders against those of its "captive" customers. In New Mexico, the designated arbiter is the NM Public Regulatory Commission (PRC). In the larger view, the actual arbiter is the NM legislature, because it establishes the "rules of the game." And from an even larger perspective, there's always the U.S. Congress watching over everything.

So how is this game played? An electric utility makes money by generating and/or purchasing electrical energy at the lowest possible cost and selling as much of that electrical energy as it can for the highest price it can get. Everything else is smoke and mirrors. The utility has to secure expensive long-term loans to maintain its existing infrastructure and meet the ever-increasing demand for its "product." Utility stockholders want the highest possible return on their investment. On the other side, the NM public - voters like you and me - want low electricity rates. Businesses across the state push hard for the lowest possible electricity rates, even though the companies that consume the most electricity get huge breaks on their rates. And finally, town, city, and county governments - not to mention state and federal governments - are major customers and also powerful advocates for low electricity rates. Various attempts to devise schemes that reward utilities for supporting the "public interest" by promoting "energy conservation" and "clean energy" haven't been successful in replacing those utilities' main profit stream. Energy efficient and/or net-zero PV-powered homes, businesses, and government buildings pose obvious threats to a utility's bottom line.

PRC commissioners and state legislators are elected by the citizens of their districts. Businesses spend big bucks lobbying and supporting candidates behind the scenes. Utilities typically have a huge influence on the state legislature and also spend lots of money lobbying behind the scenes. Many other special interest groups spend serious money lobbying behind the scenes. State and federal statutes shape the possibilities. Lawsuits based on those statutes force specific outcomes. Statutes change with the political winds. As you might imagine, all this regulatory bumping and grinding is extremely complex and steeped in legalese. "Energy Sausage" gets made. Based on my attempts to decipher the PNM rate case documents, I'm convinced that "bait and switch," "intentional deception," and pure fantasy are standard practices employed by all sides. In theory, this messy process serves the best long-term interests of "the public." In practice – not so much.

NMSEA is not, nor has it ever been, a lobbying organization. We are, and always have been, a non-profit educational organization. As such, we cannot be involved in political campaigns or partisan activities. We have a strict 20% limit on how much of our budget can be devoted to lobbying. There are also additional reporting requirements and accounting standards that may apply or not, depending on how non-profit statutes are interpreted. We can, and do, publicly advocate/speak out about renewable energy related issues. Our strong showing at February's PRC Public Hearings on the PNM rate case is a perfect example of that. Can we do more? Yes.

Attempting to influence PRC decisions isn't considered lobbying, but attempting to influence or draft specific legislation is. Where is the line for us? We'll have to hire an attorney not to know for sure. The other constraint we face is purely budgetary. Our grant awards are almost always targeted specifically at educational outreach. I don't recall a single grant that offered any support at all for NMSEA advocacy or lobbying efforts. We run on pure sunshine.

The current state of the still-pending PNM rate case is as follows:

*PNM's proposed 22% rate increase has been reduced. A 10.82% general rate increase will be phased in over the next 2 years. PNM won't seek another general rate increase before 2014.

* PNM will implement a rate rider to cover costs associated with PRC approved Renewable Energy (RE) procurement plans. (This is in addition to the general rate increase. Presumably this will apply to all PNM customers, but not necessarily equally.)

* The "decoupling tariff" has been withdrawn. This had to do with reallocating fixed and variable costs of supplying electricity and, in my opinion, would have greatly discouraged electrical energy conservation efforts.

* PNM had proposed adding a surcharge for all grid-tied PV system owners of 8 cents for every kWh they supply to the grid. This "PV interconnect customer rider" has been withdrawn, but "PNM may seek such a rider in future rate cases as provided for in state statute." (That is, PV owners are safe from interconnect riders 'till 2014.)

House Bill 181, passed in 2010, enabled third-party financed PV systems to be added to PNM's grid – a major win for PV advocates. But it also gave PNM and SPS the right to recover any and all costs they determined were associated with grid tied PV systems. The PRC cannot deny those requests. It's interesting to note that PNM justified their 8 cent per kWh PV interconnect rider on the basis of what they claimed were increased costs associated with maintaining PNM's overall system reliability. (PNM documented that in their service area sunlight is variable and the sun doesn't shine at night.) At the same time, PNM was in the process of bringing on line large PNM-owned PV arrays (see one of them on p. 11), which apparently will have no such costly side effects. SPS, serving the southern part of the state, proposed an interconnect rate rider of only ½ cent per kWh. It's also interesting to note that a similar large rate rider proposal by Arizona Public Service was dropped when an independent study found that grid tied PV systems actually were, in fact, financially beneficial to the utility. PNM was fully aware of that study before they proposed their interconnect rate rider. It seems that someone is seriously out of touch with reality. Who could that be?

Some other recent PNM proposals also fit into the "very interesting" bin. Consider the following:

1) PNM is planning on "investing" some of that rate increase money in our new energy future - coal- powered generating plants. Coal is and will always be the cheapest possible fuel for conventional power plants, if you disregard its catastrophic side effects. As long as PNM can legally ignore those side effects, they are inclined - and even obligated - to do so. PNM can be counted on to lobby for minimum pollution controls and lax regulatory enforcement.

2) PNM is proposing changes to its all-wind Sky Blue program, whereby customers will pay much higher elective rates for "clean energy" based on the cost of a 50/50 mix of wind and solar. (Solar electricity is still several times more expensive than wind electricity.) But PNM won't even come close to being able to deliver a 50/50 mix of wind and solar-derived renewable energy. One estimate has it more like 94% wind and 5% solar. Is this deceptive? PNM says not.

3) The original NM Renewable Portfolio Standard (RPS) was passed in early 2004, and it required that 10% of PNM's electricity come from renewable sources by 2011. In 2007 the RPS was expanded to include a 15% target for 2015 and a 20% target for 2020. There are no real penalties for not meeting these targets. PNM's "2011 Renewable Energy Portfolio Procurement Plan" states just how far behind the renewable power curve PNM is in meeting the original 10% RPS requirement. PNM's conclusion is - oh my gosh, it's 2011, and we need to come up with 250,000 MWh (yes, that's MEGAwatt-hours) of RE to meet the 2011 RPS requirements!!!!! To meet the 2011 RPS, PNM wants approval to purchase leftover "vintage wind RECs" from 2007 and 2008 out there in wind-land, at a cost to be determined, to be credited to their 2011 totals. PNM wants approval to pass the entire cost of these last minute wind REC purchases directly to customers via rate riders. PNM wants a waiver for the "diversity" part of the RPS, i.e., the requirement that the 10% RE piece be composed of at least 20% wind and 20% solar (in addition to biomass, etc.). And PNM wants "all other approvals and all variances and waivers from any rules, regulations and prior orders necessary to implement the 2011 Plan."

My own conclusion is that PNM has delayed and postponed meeting the RPS as much as possible, hoping that the RPS would be relaxed and/or that there would be a low limit placed on the associated cost impact to customers. (They've lobbied hard for both.) Since that hasn't happened yet, they're proposing to buy large quantities of archived wind REC credits at the last minute at what will be, no doubt, a high price, and then pass that cost on to customers. NM customers will end up paying for old wind REC credits, not actual renewable energy generated in 2011. When customers and state legislators realize the cost impact of this plan on electricity rates, PNM is betting that there will be a major pushback against the RPS. Keep in mind that the RPS is scheduled to ratchet up to 15% by 2015 and 20% by 2020. Do you think PNM has a realistic plan to meet those targets?

It may seem that I'm singling out PNM for extra-special criticism here, but that's not really the case. Utilities have a well-deserved reputation for being EXTREMELY risk averse and both technologically and financially ultraconservative. At the rate case hearings, a PNM VP testified that PNM's Reeves plant still depends on a control system that uses vacuum tubes! PNM is

(Continued on page 14)

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(Renewable Energy, Continued from page 13)

acting no better and no worse than almost every other large electric utility in the country – indeed, in the world. If our energy future demands that we make a "great leap forward" in harnessing RE, then electric utilities will have to fundamentally re-invent themselves. They are justifiably terrified of that prospect. You can bet that utilities will do whatever they can to be the very last to change their ways.

It's hard to accept that trying to make New Mexico, the U.S., and the world a better place has to be such a contentious and adversarial process, but that's the way our system works – or doesn't work. Public Service? Don't bet on it! ☼

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Any special solar interests?_____

_____

How did you hear about us? _____

☐ Yes, I would like to volunteer on occasion!

NMSEA Membership Dues

☐ Individual and Family, 1 year	$30
☐ Business, 1 year	$75
☐ Individual Lifetime	$250
☐ Business Lifetime	$400
☐ Teacher/Student/Senior (62 & up) w/copy of ID (circle one)	$10

NMSEA Chapter Options

All NMSEA members are invited to participate in our local chapters around the state. When you register, you will be placed in the chapter nearest to you geographically, or you may contact the office to change your chapter, if you desire. (Note: members are not limited to the chapter in their area and are welcome to visit other chapter events.)

Check if you would like to be affiliated with and/or donate an additional amount to any of the following chapters or to the main office general fund:

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☐ Main Office / General Fund	$ _____

ASES Membership

NMSEA is a chapter of the American Solar Energy Society, and we encourage our members to join ASES as well. ASES members receive SOLAR TODAY magazine, Solar Action Network (SAN) alerts, the Sunbeam e-newsletter, discounts on publications, and more! Five percent of your ASES dues are dedicated to special outreach programs including ASES Legacy Schools, library gift subscriptions and the purchase of Green Tags.

For more information and for ASES business membership categories, please visit **www.ases.org**.

Check category if you want to renew/subscribe to ASES with your NMSEA membership. Fill in total below:

☐ Professional	$89	☐ Supporting	$125
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ASES Options

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Mission Statement

We promote clean, renewable energy and sustainability in New Mexico through education, empowerment, collaboration and advocacy.

Please consider investing your time and/or money toward solar energy education through NMSEA.

Vision Statement

We envision a thriving, bio-diverse earth, with civilization powered by clean, renewable and sustainable energy from the sun.

Coming Events

May 7	**Electric Vehicles Basics and Safety Class** in the NMSEA boardroom, 1009 Bradbury Dr. SE, Albuquerque, 87106, 9am -12:30. (See p. 8 for details.)
May 14	**Board of Directors Meeting**, Saturday, NMSEA office, 1009 Bradbury Dr. SE, Albuquerque, 87106. Members welcome. Meeting is 12:00 noon to 3:00pm; potluck before at 11:30am.
May 21, 22, 28	**Electric Vehicles Conversion Class for Small Trucks and Cars**. Meet at 1009 Bradbury Dr., SE, at 9:00 for class, then for the conversion work at a shop site until 4:30. (See p. 8 for details.)
May 24, June 28	**Albuquerque Chapter Meetings**. May 24 at Affordable Solar, 4840 Pan American Frontage Road, and June 28 at REI, 1550 Mercantile NE , 87107, 6:00 to 8:00pm. (See p. 11 for details.)
June 21 (tentative)	**NMSEA Summer Solstice *Solar Social***. Watch for e-mail Blasts or call the office for details.
August 27, 28	**NMSEA 2011 Solar Fiesta!** Albuquerque Academy, 10am to 5pm. (See pp. 1 and 10 for details.)