Message from the President

By Laura Jackson

I attended a state wind energy forum organized by the American Wind Energy Association (AWEA) in Harrisburg, Pennsylvania on October 14, 2015. This will be PART 1 of my report.

John Hangar was the keynote speaker. He is the current Pennsylvania Secretary of Planning and Policy, serving under Gov. Tom Wolf. He said, “Gov. Wolf wants to be a partner with wind” and the state’s Clean Power Plan (under development) will give Pennsylvania a real chance to show how clean energy can be achieved at little or no cost to the consumer.

Sec. Hangar’s comments were echoed throughout the day by other speakers. Their claim is that Pennsylvania will benefit from more wind development as the Clean Power Plan becomes implemented sometime in the 2020s, as this will necessitate a new wind policy in Pennsylvania. Andrew Gohn, Eastern Director for AWEA, said that wind is the “will of the people;” a Gallup poll in March of 2015 showed that 87% of Americans agree that renewable energy is important to the country’s future. Gohn said that Pennsylvania is “well-positioned to benefit” from more industrial wind development. He pointed out that our state has 24 wind projects with 720 turbines and that wind contributed to 1.62% of Pennsylvania’s electricity production in 2014, compared to 4.4% of U.S. electricity from wind. This means CO₂, SO₂, and NOₓ pollution have fallen and that water usage has dropped by 36.5 billion gallons.

The vision that the wind industry has for our state for 2050 is amazing: electricity prices and pollution will drop, and jobs will increase. There will be $4.71 billion in savings through 2050.
Message from the President, Laura Jackson, continued

*Images: Wind turbines in Pennsylvania & Virginia

All agreed that we need a new wind policy in Pennsylvania to strengthen the AEPS (Alternative Energy Portfolio Standards) to require more wind and solar development.

Gladys Brown, chair of the Pennsylvania Public Utility Commission (PUC), pointed out that wind is important to our state, but the PUC has a mission to make sure service is reliable and affordable. Energy efficiency is the cheapest way to save on costs and that wind is a zero carbon emission resource. However, PUC only analyzes economic impacts, not environmental.

Members of a panel discussion on new wind and natural gas development in Pennsylvania predicted that coal usage would continue to fall as costs increase, there would be a slight downturn in nuclear (but an overall increase due to increased efficiency), and natural gas would show a dramatic increase. Solar and wind could also possibly increase.

Robert Frick, of GE Power and Water, stressed that wind is a game-changer. Since wind is not dispatchable, and is intermittent, it must be integrated with natural gas. Although gas prices are low and currently hurting wind development, he predicted that wind power purchase agreements would fall below the cost of natural gas and would make wind competitive with gas. Gas can pick up the slack in the grid caused by wind and solar.

Gas was once considered a “bridge fuel,” but it is now a “destination fuel,” as it is necessary for renewables.

It was clear by the end of the forum that the Clean Power Plan, a federal and state partnership to reduce carbon pollution, will be the main driver for wind development within the next 5 years.

Additionally, as a Gamesa spokesman pointed out, the technology will also be a key driver, since the industry is building taller towers, bigger rotors, and longer blades. This will make wind viable in more areas and reduce risk to wildlife. A discussion on risk to wildlife was a small part of the program, but I’ll save that for the next newsletter. The expired wind Production Tax Credit was also brought up several times as a real challenge toward wind development.
Views about Wind Energy
Clean and Green?
by Roxanne Parrott
SOAR Vice President

It is that time of year where my mailbox gets cluttered with a million holiday catalogues. And offers from energy companies that promise to save me money come in the flurry as well. Or, if they don’t promise to save me money, they imply that switching will make me a more responsible citizen by “having all your electricity come from renewable sources like solar and wind.” Just sign and switch to “Clean Energy...” they say. I find myself talking back to their flyers, asking questions such as, “What does ‘clean’ mean?” “What does green mean?” Ahh, yes, efforts to invoke an automatic response without any careful thought seem to guide the selection of these words. Like health and health care, which everyone wants but little agreement seems to exist about achieving these goals, few disagree that we want our environment to be ‘clean’ of emissions related to producing energy [not to mention, using the energy]. Yet the discussions about achieving a clean environment often fail to include important information.

If we want to promote ‘clean’ and green,’ we have to support resources to improve coal plants’ generation of electricity. And we have to continue to reduce emissions from transportation, personal and societal. Here is why:

First, carbon dioxide emissions related to producing electricity in the US for the year 2014 equaled 38% of total emissions, with coal contributing to 76% of that total: www.eia.gov/tools/faqs/faq.cfm?id=77&t=11

Second, coal generated 39% of US electricity in 2014, while wind generated only 4.4%: www.eia.gov/tools/faqs/faq.cfm?id=427&t=3

Third, the harms related to using coal to produce electricity relate to the planet, in terms of climate and global warming, as well as our health. www.ucsusa.org/clean_energy/our-energy-choices/coal-and-other-fossil-fuels/how-coal-works.html#bf-toc-5

Fourth, we have enough coal to outlast many sources of energy, with some estimates indicating at least 200 years: www.geocraft.com/WVFossils/Energy

Conclusion: SOAR members must emphasize that our dependence on coal will only slowly change. In the meantime, the science to reduce the harms from plants generating electricity from coal is evolving. We need to insist that states give support and adopt regulations to apply the science and reduce coal emissions to promote ‘cleaner’ energy. Yes, SOAR members want to limit construction of wind farms. Preserving the environment lessens pressures to do so: www.ucsusa.org/clean_energy/our-energy-choices/coal-and-other-fossil-fuels/how-coal-works.html#bf-toc-5
One thing SOAR members can do relating to wind energy research and development is to encourage a focus on research related to new questions:

“Wind energy can also negatively impact birds and other wildlife by fragmenting habitat, both through installation and operation of wind turbines themselves and through the roads and power lines that may be needed. This has been raised as an issue in areas with unbroken stretches of prairie grasslands or of forests. More research is needed to better understand these impacts.” [Source: www.ecogen-energy.com/windfaqs.html#24]

We need to seek resources for this kind of research. The report too often tries to prove a point through a negative, such as stating that bird deaths from wind turbines are so much less than bird deaths from other causes such as cats. Risk communicators know that people tend to view a hazard as greater when they are exposed to it involuntarily, they are unfamiliar with it, it is imposed on them, and/or it is new. In all these ways, communities that have wind turbines/wind farms arising must assert their rights to limit or ban these events.

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**Wind Energy Research & Development**

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**Penn State and Sustainability**

By Roxanne Parrott

Penn State, as Pennsylvania’s land grant institution of higher education, has adopted a focus on sustainability education: sustainability.psu.edu/. SOAR members may find resources and assignments from the new field guide to teaching sustainability to be useful. Environmental sustainability includes, according to www.thwink.org/sustain/glossary/EnvironmentalSustainability:

1. **For renewable resources**, the rate of harvest should not exceed the rate of regeneration (sustainable yield);

2. **[For pollution]** The rates of waste generation from projects should not exceed the assimilative capacity of the environment (sustainable waste disposal); and

3. **For nonrenewable resources** the depletion of the nonrenewable resources should require comparable development of renewable substitutes for that resource.
Penn State’s Energy, the Environment and Our Future MOOC

To consider what a MOOC course related to being a SOAR member might be, take a look at:

www.coursera.org/course/energy

Watch the video to the right hand margin in the above link to get an introduction to the class and the teacher. The outline of lessons includes these topics:

- Lesson 2. What is Energy—Units and Such; What we use, and how much good it does
- Lesson 3. Oil, Coal and Natural Gas, Drilling and Fracking and Reserves
- Lesson 4. Global Warming I—Physics
- Lesson 5. Global Warming II—History and Impacts
- Lesson 6. Options: Solar, Wind
- Lesson 7. Options: Geothermal, Waves, Tides, Nukes
- Lesson 8. Options: Conservation

SOAR members may find that some of the video segments on earththeoperatorsmanual.com/feature-video/earth-the-operators-manual site are useful to prepare to talk with energy officials.

Education and Wind Energy

In the last issue of On the Wind, the meaning and popularity of MOOC, a massive open [free] online course, was mentioned. On average, such courses are enrolling 43,000 students in a single class, with about 6.5% completing a class:

techcrunch.com/2014/03/03/study-massive-online-courses-enroll-an-average-of-43000-students-10-completion/

Taking such classes provide one way to gain vocabulary related to energy and energy policies.
Health Effects of Wind Turbines

Noise

Sound generated by wind turbines depends on meteorological and ground conditions. At wind speeds of 8 m/s, turbines produce 104 dB(A), which equals 33-40 dB(A) at a dwelling 500 m away. *


The World Health Organization has said that sound levels should be less than 30 dBA during sleeping periods to protect a child’s health. Children’s autonomous nervous system is 10 to 15 dB more sensitive to noise than adults.**

**Source: www.acousticecology.org/docs/AEI%20Wind%20Turbine%20Noise%20FactSheet.pdf

8 m/s is defined as a gentle breeze [m/s = meters per second]. Thus, even in a gentle breeze, noise is significant. Multiply that by increases in wind for a sense of the disturbing effects when winds are stronger.

To compare noise levels with more familiar items: www.dot.ca.gov/dist2/projects/sixer/loud.pdf

Jill Stull says about the 2000 foot turbines that are 600m from her house in Juniata, township, Altoona, PA:

“You know when you’re standing outside and you hear a plane coming about 30,000 feet overhead, then it goes off in the distance? It sounds like those planes are 5,000 feet above your house and circling and never land.”*, p. 4

Sleep disturbance

While about 76% of residents near wind turbines complain of noise, 36% complain about sleep disturbance leading them to feel tired and tense.*

A topographical effect that is reported in Maine may be observed along our Allegheny Ridges:

“...noise from atop a ridgeline is made ‘worse’ by the fact that the ridge blocks the wind at homes along its foot, eliminating the masking effect that is often assumed to drown out the sound of turbines in high wind conditions.”*, p. 6
**Wind and Environment and Energy Events**

**Jan 14, 2016: Arctic Matters Day**, which is free and open to the public, will feature engaging presentations and discussions with leading scientists and decision makers, and an array of interactive exhibits and displays. It will be a unique opportunity to learn about cutting-edge scientific findings and policy perspectives, in a format that's accessible to all. Please visit our website [nas-sites.org/arctic/] to register for the event.

**2016 INTERNATIONAL WORKSHOP ON ACOUSTIC TRANSDUCTION MATERIALS AND DEVICES**

Date: Tuesday, May 10, 2016 (All day) to Thursday, May 12, 2016 (All day)  
Event Website: [www.mri.psu.edu/mri/events/2016-iwatmd](http://www.mri.psu.edu/mri/events/2016-iwatmd)  
Location or Building Name:  
Penn Stater Conference Center

This workshop provides a forum for reports on, and discussions of, the state-of-the-art in materials and devices to **generate, detect, and suppress sound**. Experience teaches that informal discussions provide the most fruitful exchanges; accordingly, interaction time exceeds presentation time.
Proposed Wind Projects in Pennsylvania, West Virginia, and Maryland

Information was obtained from these two websites:

1. **PJM Active Queues:**
   Project feasibility and impact study documents for each project are found on this site.

2. **FAA Obstruction Evaluation/Airport Airspace Analysis:**

### Pennsylvania Queue

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* Belleville - The FAA extended their permit for 18 turbines, which ends on 12/18/16. 2 were denied, but are being re-evaluated; those are the 2 listed under proposed. The project was 20 turbines until the summer of 2015, when a new landowner of leased property bought the lease, reducing the project to 16 or 17 turbines.
IN CASE YOU MISSED IT...

“This post from the Dan’s Mountain FB page: The Board of Zoning Appeals voted 3-0 to DENY the 26 variance requests as well as the request for Special Exception!!

The Board indicated in their comments that they felt it their duty to uphold the current ordinance and protect the Citizens of Allegany County.

Thank you, BOZA! And thanks to all who supported the efforts to bring awareness to this project and voiced their concerns!”

www.facebook.com/SaveDansMountain/

“New industry guidelines aim to save tens of thousands of bats each year by idling turbines at low wind speeds during peak bat migration season. They could reduce by a third the number of bats killed at wind farms.

Seventeen members of the American Wind Energy Association, a trade group, have agreed voluntarily to begin idling, or feathering, turbines in the next year or two. Together, the companies produce nearly 90 percent of the wind power generated in the United States.”

More details here:
news.nationalgeographic.com/energy/2015/09/150902-wind-industry-feathering-to-help-protect-bats/

WINDFALL: OFFICIAL MOVIE TRAILER

www.youtube.com/watch?v=cBYjZG8O6qE
SOAR is a nonprofit organization dedicated to the preservation and protection of the historic, natural, and scenic integrity of Pennsylvania’s Allegheny mountain ridges.

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<td>President: Laura Jackson, <a href="mailto:mljackson2@embarqmail.com">mljackson2@embarqmail.com</a></td>
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<tr>
<td>Mailing Address:</td>
<td>Vice President: Dr. Roxanne Parrott, <a href="mailto:roxparrott@gmail.com">roxparrott@gmail.com</a></td>
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<td>Save Our Allegheny Ridges</td>
<td>Treasurer: Mike Jackson, <a href="mailto:mljackson2@embarqmail.com">mljackson2@embarqmail.com</a></td>
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<td>P.O. Box 178</td>
<td>Secretary: Dr. Terry Doran, <a href="mailto:doran71@verizon.net">doran71@verizon.net</a></td>
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Membership in SOAR runs from January to December. Dues are needed to cover attorney fees, publicity, meeting costs, postage, and travel expenses charged by consultants. As a SOAR member, you will receive email updates on current conservation issues, especially industrial wind development, and you may send posts to the email group via mljackson2@embarqmail.com. Remember, SOAR is a 501(c)3 organization. This means you can deduct your contributions.

The following Contributing Membership Levels are per individual or family:

- **Small-footed Bat**: $25 - $99
- **Osprey**: $100 - $199
- **Indiana Bat**: $200 - $499
- **Golden Eagle**: $1,000 and above
- **Bald Eagle**: $500 - $999
- **Student Membership**: $10

We would like to thank you for supporting our efforts to keep turbines off forested mountains. **Make check payable to “SOAR”**. **Mail to: SOAR, P.O. Box 178, Everett, PA 15537**. Or, use PayPal to renew online at www.SaveOurAlleghenyRidges.org. Include your name, mailing address, phone number, and email address to receive SOAR news.