



Friends of Frederick County hosts the Issue Insiders' Forum to bring together people concerned about local issues with those who shape them.

The **Issue Insiders' Forum** is held the first Monday of each month at 7:30 p.m. in the Community Room of our office building (ground floor, Kemp Hall, 4 E. Church Street). It is free and all interested parties are invited to participate. The proposed agenda for each meeting will be made available on the Friends of Frederick County website <http://www.friendsoffrederickcounty.org> one week prior to the forum. Topic suggestions are welcome by email to friends@friendsoffrederickcounty.org.

November's Forum featured special guest speaker Russell Frisby, Potomac Appalachian Transmission Highline Education and Awareness Team (PEAT) for Allegheny Power, and Jan Gardner, President of the Frederick County Board of Commissioners (BOCC). **The Sugarloaf Conservancy's excellent research provided background information for citizen questions; their website is:** <http://www.sugarloafconservancy.org>.

MORE QUESTIONS THAN ANSWERS

Over 50 citizens attended November's Forum with excellent questions about the Potomac Appalachian Transmission Highline (PATH) and supporting Kemptown Sub-Station. The table below has citizen questions, Allegheny Power's answers and citizen rebuttal. Mr. Frisby was unable to answer a number of technical questions (that list is beneath the table below); he will provide Friends of Frederick County with the names of people who can answer them. When available that information will be posted at <http://www.friendsoffrederickcounty.org/path/>

Question	Allegheny's Answer (delivered by R. Frisby)	Citizen Research and Rebuttal
1. Can High Voltage Direct Current (HVDC) Lines be buried over the length of the PATH project in Frederick County?	There has never been an underground system of this length built, and if it were it would increase the cost by a factor of ten. Cable repair time is longer and reliability less. Conversion stations are necessary at endpoints and disruption for excavation for the lines and conversion stations could impact sensitive natural areas. Overhead 765 kV lines are more reliable than other voltage classes, with less outages.	<ol style="list-style-type: none"> 1. Lines are buried for great distances in other areas around the world¹ 2. Depending on local conditions cost for buried HV underground could be equal to traditional overhead lines. Burying cable can be similar to burying fibre-optics² 3. Buried cable can be opened and repaired³ 4. HVDC Light is designed in modules, smaller voltage substations are part of the enclosures and higher voltage stations can be designed to fit into the landscape (such as in a farmhouse; required sizes are small⁴ 5. As of Mar 2008 the Murraylink, built in 2002 has had one fault. The Cross Sound Submarine Cable has had zero faults since 2002⁵. AC averages one fault/year per 100 miles⁶

¹ It's time to Connect (Technical Description of HVDC Light technology) ABB, March 2008 (5 p 78 – "F").

² Light and Invisible: Underground Transmission with HVDC Light: 2005 (3).

³ It's time to Connect (Technical Description of HVDC Light technology) ABB, March 2008 (5 p 78 – "E", Table of Contents and p. 9-"D").

⁴ Reliable electrical transmission over long distances using ABB cable systems 2006-2007 (4).

⁵ It's time to Connect (Technical Description of HVDC Light technology) ABB, March 2008 (5 p 78 – "F").

⁶ Planning Considerations for 765 kV (Presentation created by AEP on Jan 19, 2009); Original Source: 1993 IEEE Paper "An IEEE Survey of US and Canadian Overhead Transmission Outages at 230 kV and Above".



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2. Is peak demand on the rise, making rapid implementation of PATH necessary?	We will be at full capacity by 2014. Unless we have PATH there is a probability of brownouts and blackouts. The federal Base Realignment and Closure (BRAC) Program will increase demand as more people move to Ft. Detrick.	<ol style="list-style-type: none"> 1. In April 2009 PJM (our regional transmission organization) showed critical need by 2014, however they released figures showing actual use down 2.7% in 2008 and 4.4% in the first half of 2009. Dept of Energy (DOE) projections for the country show increases of just 1% per year prolonging critical need to 2025 (Mar 2009)⁷ 2. Ten east coast governors have written congress opposing construction of transmission lines from the mid-west as it is counter productive to efforts promoting local, clean, renewable sources of power generation. 3. Fort Detrick would not receive any power from the PATH line.
3. What research is available on Electro Magnetic Field (EMF) health risks of 500 kV versus 765 kV power lines	According to scientific experts EMF levels on or near a transmission line right of way will be similar to household appliances. No studies indicate a health risk from power lines.	<ol style="list-style-type: none"> 1. Home appliances range from .1 to 4 mill gauss; transmission lines in New Jersey ranged from 8-130 mill gauss⁸ 2. People living within 50 meters are 1.24 more likely to die of Alzheimer's Disease; if they live there for five years minimum there is a 1.51 fold increase; if for a decade 1.78 more likely to die than the rest of US population⁹ 3. People who live within 328 yds of a power line up to age five were 5x more likely to develop cancer; and at any point within first 15 yrs of life were 3 x more likely to develop cancer as an adult¹⁰
4. How does renewable energy fit into your PATH project?	For renewable to be viable transmission like PATH are necessary, particularly to carry wind and solar from Midwest, and will play a part in transmitting renewable energy from remote areas to populated areas across the nation.	<ol style="list-style-type: none"> 1. According to the DOE the best source of wind power is off the eastern shore. Why bring wind energy thousands of miles from the Midwest when the best source is so close?¹¹ 2. Governors of MD, Virginia, & Delaware signed a memorandum of understanding on a partnership to deploy east coast wind energy¹² 3. The public has been informed by Allegheny Energy that the John Amos coal-fired plant is the source of power for the PATH line.

Unanswered questions:

1. What are the projected EMF levels from the lines and the substation at 50 yards away, 100 yards away etc?
2. What is the projected energy need for 2010-2012?
3. Why are the ten governors incorrect about using local generation of renewable to meet peak need?
4. Does Allegheny Power have independent research to substantiate PJM's statement of power demand?
5. Why haven't other types of power been considered?
6. What specific renewable plant will supply PATH with renewable energy from the Midwest?
7. How many watts of renewable energy will be brought to the east by PATH?
8. What about bringing readily available wind energy off east coast through HVDC submarine cable and supplying east coast cities rather than bring it from the Midwest?
9. How will Allegheny mitigate damage caused by fire or tornado?
10. In all official Allegheny Energy information and open houses the PATH Substation was called "Kemptown" when it was really to be located in the center of five Mt. Airy neighborhoods. Why weren't citizens told that the "Kemptown" substation wouldn't actually be in Kemptown? And, why haven't the Mt. Airy neighbors to the station been officially notified? If this has been PJM and AE's plan for some time, why weren't home buyers in the area informed of the impending substation?
11. The Kemptown substation was bought before PATH was approved, with very little evaluation (one paragraph). For other sites alternatives are researched and evaluated; why wasn't Kemptown given the same analysis?
12. Have you considered the Eastalco site?
13. Who at Allegheny evaluated and oversees costs and expenditures for the PATH project?
14. Since most of the electricity is headed for the northeastern coast why didn't you consider a route through Pennsylvania?
15. Who funds PEAT and what is its purpose?

The Sugarloaf Conservancy (www.sugarloafconservancy.org) has identified 89 HVDC buried cable projects completed before 2000 and 44 projects since – reinforcing the point that this technology is not a gamble. MAPP, in planning, will bury cable across the Chesapeake Bay. To contact *citizens advocating underground high voltage lines in Frederick County* go to <http://www.nomore towers.org>.

⁷ Energy Information Administration Annual Energy Outlook 2009 with Projections to 2030.

⁸ NJ Department of Environmental Protection, "60 Hertz Electrical Power"

⁹ Am J of Epidemiology (1a)Residence near Power Lines, Mortality from Neurodegenerative Diseases: Longitudinal Studies of Swiss Population (1b) 2008

¹⁰ Internal Medicine J, Sept 2007, University of Tasmania and Britain's Bristol U (2a).

¹¹ United States Wind Resource Map, US DOE National Renewable Energy Laboratory

¹² Mid – Atlantic Governors Commit to Offshore Wind Partnership – MD Governor's Press Release – Nov. 10, 2009