

Western Loudoun Stakeholders

Prepared remarks by Patrick J. Sloyan, Chairman, for the Virginia Joint Commission on Science & Technology's Advisory Panel on Emerging Technology Issues hearing May 18, 2005.

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Good morning members of the Joint Commission on Technology and Science and ladies and gentlemen. Thank you for inviting me to provide an overview on Loudoun County residents trying to prevent the rolling foothills of the Blue Ridge mountains from being permanently scarred by high voltage transmission lines.

I like to begin with a scene many of us have experienced when electricity is suddenly drained from our lives, often with a snap and a pop. It is usually a storm that causes limbs to break and trees to fall. Winter or summer. A transformer is destroyed or a line torn down and the commodity so vital to our lives is interrupted. Even more dramatic is the repair. At night, the big trucks come feeling their way with searchlights, looking for

the break. There were nights when high winds and slanting rain seemed to shake the linemen as they would climb and make potentially lethal repairs. And then light would suddenly fill the bedroom; the furnace motor resumes heating the house. Life is returned to normal and all at pennies per kilowatt-hours.

That is a brief portrait of the brighter side of Dominion Virginia Power that I have experienced for almost 40 years. I shared with Dominion's 2.2 million customers a limited knowledge of my supply of electricity except for the monthly bill and the inconvenience of the occasional outage. And when I say Dominion, I also mean its corporate predecessor, Virginia Electric Power Company.

But in recent years, I have glimpsed a different side of Dominion Virginia Power. I traced the start of these changes to the winter of 1998 when an ice storm left me and 285,000 other customers without electricity not for hours but for 3 days or more. I prowled the county looking for repair crews, pressing them for answers on the delay. One reason a foreman told me was a corporate decision to end night work during emergency repairs. But the major reason for the extent and duration of the outage was uncovered months later by the Virginia Legislature, the State Corporation Commission and other government investigators. They focused on a Dominion decision to reduce the trimming of trees and limbs thus saving millions of dollars over a period of years. This shortsighted, penny-wise, pound-foolish corporate management led to a round of criticism that really stung. So much so that Dominion has declared a war on trees. Forget costly trimming by crews that need to frequently travel lines to saw a limb here a branch there. Dominion chainsaws are taking down whole trees that will never again threaten power lines despite protest from nearby residents.

Last year, when Dominion first proposed a new 230-kilovolt transmission line through western Loudoun, corporate representatives announced the trees would have to go. Specifically, Dominion said it would clear-cut all trees along its existing right-of-way, the Washington & Old Dominion Park Trail. The 12-mile stretch is used each year by more than 2 million bikers, hikers, rollerbladers and horse riders. Even on the hottest day, this old railroad bed is cooled by thousands of maples, walnuts, oaks, sycamores—trees that have been untouched for almost a century. Using aerial photography and techniques by lumbermen to estimate the yield of a forest, the Loudoun Board of Supervisors said the Dominion transmission line proposal would destroy more than 25,000 trees. That was based on Dominion's need for a path for 128 towers, each at least 110-feet high. The

line would need a corridor at least 100-feet wide and in some places, 140-feet.

As you know, these trees are a vital part of the photosynthesis cycle that reduces carbon monoxide from automobiles clogging Loudoun roads. As the fastest growing county in the nation and the primary route for West Virginians commuting to jobs in northern Virginia, Loudoun traffic and resulting air pollution becomes worse every year. The loss of that narrow forest of 25,000 hardwoods would add to Loudoun pollution problems. Right now, the County is unable to meet Environmental Protection Agency limitations for carbon monoxide and other toxic pollutants, a violation that threatens countywide driving restrictions.

An almost total disregard for the environment is certainly the darker side of Dominion management. The corporation owns eight coal-fired power plants that have rained billions of tons of sulfur dioxide and nitrogen oxide pollutants on its customers, including the very young and the very old who were the prime candidates to die from such smog. Perhaps there was a period during the 20th Century, when Dominion was ignorant of the damage done to human health through coal-fired power generation. But the installation of industrial scrubbers to reduce that pollution dates back to the 1950s. And, the health effects of this pollution were well documented in the 1960s. And, it was against the law to expand the output of coal-fired plants in the 1970s without first installing the scrubbers and other innovations to protect human health.

Yet between 1980 and 1988, Dominion overtly violated the law and expanded their coal-fired plant capacity without any addition of pollution control devices as required by federal law. This behavior signaled Dominion's contempt for its customers, contempt for constituents of the Virginia House of Delegates and the Virginia Senate and contempt for Virginia agencies, including the State Corporation Commission, which ostensibly regulate Dominion Virginia Power. This criminal behavior led to a federal court settlement in 2003 that required Dominion to acknowledge its illegal activity and to budget \$1.2 billion for installation of pollution control systems on its coal fired plants. It was a record settlement for pollution cases. And, customers such as you and me, had to cover legal expenses and penalties that total more than \$20 million. You didn't see it itemized in your monthly bill, but I guarantee it was there.

Making air pollution worse in Loudoun County was only part of the environmental insult from Dominion's proposed high-voltage transmission line. Felling 25,000 trees was just the beginning. Radiation from the corona surrounding each of six lines to be strung along the monster towers is also

the source of ozone, the key ingredient in photochemical smog that attacks the lungs and the eyes. And, electromagnetic fields remain a source of controversy even though only one study by Swedish researchers connected the radiation from power lines with increased incidences of leukemia in children living nearby.

Undoubtedly, most damaging to the environment by overhead transmission lines is their visibility. They range from big and ugly to bigger and uglier. Some are less offensive than others but they all offend the eye and destroy nature's surrounding beauty. There are 6,100 miles of these monstrosities criss-crossing Virginia cities, towns and villages, striding across highways, towering over parkland and shopping malls, overshadowing schools and playgrounds. They are all eyesores, whether these lines are in some farmer's field or through the main intersections of Richmond, Arlington, Fairfax or Reston.

There is an alternative and it is part of the focus to your hearing today. I am here today as Chairman of the Western Loudoun Stakeholders, a group of government and citizen groups who want Dominion to place the proposed transmission line underground. Underground, the line would be invulnerable to surface storms that routinely wreck overhead lines. Underground, the line would be invisible to the human eye. Underground, the line would not make a permanent scar on the rolling hills of Loudoun. Underground is a position repeatedly endorsed by the Loudoun Board of Supervisors, two separate votes by a Board that can agree on little else. The towns of Hamilton and Purcellville and some members of the Leesburg town council also want the line underground. Dominion has the know how. Just look at the underground natural gas lines it controls. We want the same burials for transmission lines.

Dominion's replies seem to echo its positions on pollution controls for coal-fired plants from decades ago: Too expensive, too difficult and it won't really work. Most recently, Dominion has adopted a policy of silence on underground technology, refusing to even discuss the issue in Loudoun County. Once more, Dominion is maneuvering to stave off a new technology that would preserve Virginia's environment. Dominion has only limited experience is putting transmission lines underground. Out of 6,100 miles there are only 55 miles underground. And, those 55 miles reflect a technology that was introduced in the 1920s. Dominion has ignored technological advances in underground transmission line technology that have resulted in plummeting costs and soaring reliability rates that far exceeds its overhead sisters. I will leave these details to Harry Orton, who will speak later today. He is an engineer and one of the world's leading experts on both overhead and underground transmission systems.

By contrast, my expertise is limited to changing light bulbs. My knowledge about these issues comes from a career as a journalist who can find and interview experts such as the transmission engineers of Los Angeles. The city has installed underground transmission lines since the 1940s, which have withstood five major earthquakes.

The Los Angeles Water and Power Department also just opened a new underground line featuring XLPE cables that are constantly monitored by a fiber optic line. A hotspot indicating a potential failure can be located quickly within three feet of this 5.5-mile long, 230 KV line.

That Los Angeles line, buried in land far more expensive and congested than Loudoun County, cost \$4.9 million a mile. Dominion put the cost for underground in Loudoun at \$10 million a mile. Who do you believe?

It is the low cost and reliability that has pushed XLPE to the forefront in Europe, Asia and now other areas in the United States.

With XLPE—the cable is sheathed and buried in concrete—there is no need for a costly cooling system flowing along the underground line. It is so rugged that Murraylink Transmission company simply dumped two lines in a dirt trench over 109 miles for 220 MW cable between South Australia and Victoria. The technology that Dominion favors requires pumping stations to push an oil-based coolant along the line. And, potential oil leaks threaten the water table.

Other utilities are embracing XLPE. It has become the cable of choice for new underground transmission lines in Connecticut, Massachusetts, Long Island, New York, the San Francisco bay area in California and Chicago. I will submit some additional details.

I have included a copy from Sumitomo Electric USA, a Japanese cable manufacturer, of 27 XLPE line installations totaling more than 400 miles and all with voltage in excess of 200KV. These lines are installed in Japan and China.

I am certain there is a longer list for Europe but I just don't have it. Italy and England pioneered underground transmission lines and Germany and the Netherlands are in a race to see who can put most of its power lines underground.

There have been some setbacks for underground transmission lines. Ask Harry Orton what happened in Singapore where he was called in as a consultant.

However, most of these projects in the United States and abroad point to a new technology that Dominion has been unwilling to embrace much less discuss. There are a number of reasons, I think. If the proposed line for

Loudoun is ordered underground by the State Corporation Commission, then other areas will be clamoring to bury these eyesores. That is a key issue for the Legislature: At what point should there be a shift from overhead to underground.? When 1,000 people are exposed to an overhead line everyday? Or, 10,000 people. Perhaps 50,000. Proposed lines could be a mix: partial overhead, partial underground.

If the decision is made strictly as a matter of capital cost, then the overhead alternative wins out. One rule of thumb is that the actual construction cost for an underground line is five times the amount to erect the overhead. Now, that number has changed in recent years when other costs are factored. The underground line is safe from storms and other weather that routinely knocks out overhead lines. Corona and electromagnetic radiation is virtually eliminated from the atmosphere. Routine maintenance costs are sharply reduced and reliability is dramatically improved. Then, instead of 5-to-1, it is 2-to-1 or roughly double to buy underground when viewed as lifetime costs.

So, who should pay the extra costs? Well, as a ratepayer, I am bound to pay more along with Dominion's 2.2 million customers. Another source is Dominion. It can dig into last year's profits of \$2.4 billion --that's b as in boy for billion--for a burial program. The line proposed in Loudoun is the first of two and perhaps three transmission lines in the county that will be taken over by PJM Inc. This is a regional marketing network that Dominion just joined where low-priced Virginia power can be sold at higher prices in 13 other states. Maybe PJM is a source of burial fees. Dominion could even cutback tree trimming along the underground transmission line and reallocate the money. Perhaps local governments can offer property tax relief as an incentive to preserve vistas from being deformed. Underground lines will not ruin property values and erode local real estate taxes as do overhead lines.

These are just some of the political decisions for this Commission, the Legislature and the SCC to sort out in the coming months. With Dominion's formal submission of a proposed new route in western Loudoun, the SCC hearing process is underway and could last two years or more. Dominion no longer prefers using the W&OD Trail but that is still a distinct possibility because the Trail remains an existing right-of-way that state laws says the SCC must consider.

Today, Dominion's new first preference is a longer and more costly route that would come close to the home of Del. Joe May, the chairman of today's hearing. Mere coincidence, perhaps. Nevertheless, it has been Del. May who led objections to Dominion's use of the W&OD Trail. And, it was

Del. May who has used his influence with the Virginia Department of Transportation to locate the proposed line underground along Route 7, a major artery through Leesburg. VDOT, in turn, was willing to accommodate the 12-foot wide trench needed for the underground line.

Perhaps Dominion's decision to run this line past Del. May's kitchen window reflects something other than corporate arrogance. Maybe it was made by the same guy who saw bigger profits by eliminating tree trimming. Might have been the same fellow who expanded coal-fired power stations while ignoring the law and pollution controls to protect public health.

These concerns about the corporate culture at Dominion are often swept away with millions of ratepayer dollars spent on lobbying and political contributions to politicians in both Richmond and Washington. But I wonder about Dominion judgment in this political arena as well. Putting ex-Governor and now Sen. George Allen's spouse on the Board of Directors was a bit much.

Even so, when push comes to shove before the SCC, Dominion gets its way. Look at last year's SCC decision involving Dulles Gateway and Dominion. The SCC staff, including its most experienced hearing examiner, recommended a portion of that transmission line be placed underground. Yet the Commissioners voted against the underground portion and in favor of Dominion's position.

The matter is now before the Virginia Supreme Court and an eventual ruling may broaden views all around. But I am apprehensive. As a recent letter to me from a senior SCC counsel said:

"...to date, the Commission has not required 'undergrounding,' where environmentally acceptable and less costly overhead routes were available."

So I turn to this Commission to come up with a new definition of real costs and just what is environmentally acceptable. Perhaps you can find a way to open Dominion's mind to a new technology where transmission lines are acceptable in everyone's backyard.

I would be happy to answer any questions you have.

