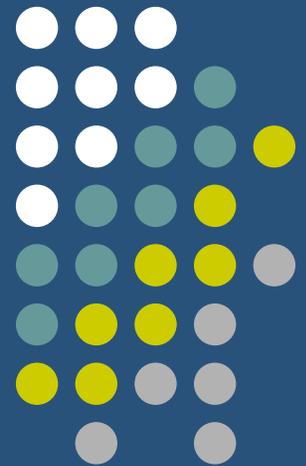


# Virginia Joint Commission on Technology and Science

## Underground Transmission Lines



# Background



Transmission Lines: Carry power from generating plants to local substations, where they are connected to distribution lines

- Overhead: On towers (generally 80-140 feet in height)
- Underground: Buried lines. Two types of underground lines:
  - HPFF (uses fluid insulation)
  - XLPA (solid polyethylene insulation)



# Background

- State Corporation Commission (SCC) reviews and approves applications for proposed transmission lines
- Traditionally, SCC does not favor the use of underground lines, and generally only approves undergrounding when an overhead line is not viable

# Background



- Relevant Code:
  - § 56-46.1 of the Code of Virginia – Commission to consider environmental, economic and improvement in service reliability factors in approving construction of electrical utility facilities



# Background

SCC considers and weighs 5 factors in proposed lines:

1. Need for new line & its impact on reliability of electric service
2. Impact on the environment (includes scenic assets, historic resources, human health & safety)
3. Impact on economic development
4. Local comprehensive plans (when requested by locality)
5. Estimated Cost

The Code does not indicate how to balance these factors

# JCOTS 2005



## Issue first on JCOTS agenda in 2005

- Emerging Technologies Advisory Committee
  - Heard from Engineers, Power Companies, SCC Staff, Citizens
  - Briefing by Chairman of Connecticut Siting Council on Connecticut's undergrounding experience
  - Recommendation: JLARC should review issues

# JLARC



- HJ 100 (2006):
  - Directed JLARC to study the criteria and policies used by the SCC in evaluating the feasibility of undergrounding transmission lines in Virginia, including the costs considered by the SCC and the impact on property values of installing underground transmission lines
  - Resulting Report: House Document 87 (2006) – available at <http://jlarc.state.va.us>

# 2007 General Assembly



- HB 2614
  - As passed, requires notice of proposed transmission line to include a GIS map (available on SCC website)
  - Requires SCC to verify applicant's load flow modeling in making determinations about need, corridor, route, and method of installation

# 2007 General Assembly



- HB 2614
  - As introduced, would have also required SCC to consider the economic impact that the proposed structure would have on the value of land or structures adjacent to the proposed location
  - **Would have required JCOTS to convene a working group to develop recommendations for the necessary factors to be considered by the SCC in reviewing applications for utility facilities\***

# 2007 General Assembly



- HB 3115 – Did not pass
  - In determining just compensations for takings in right-of-way situations, would have allowed owner of property to motion for consideration of damage to viewshed
  - Negative easement issue