UND.
ficate in
nplete a
ersity in
D) and
THIS
r of the
l escape

from its urbanized neighbors. To this end, the County is proposing a pilot program that would allow for strategic undergrounding of a sensitive portion of the proposed Aspen-Golden Line in Dominion's SCC applications. This is a forward-thinking initiative designed to effectively meet the County's ever-growing electricity needs while preserving the scenic and historic assets that define the community. The looming presence of overhead power lines has been shown to significantly decrease property values and further detracts from the natural beauty and historic charm of the County.

By undergrounding power lines, we not only protect these valuable assets, but also gain numerous benefits. As severe weather events become more common, underground power lines will provide a more resilient and reliable power infrastructure. This enhanced reliability is crucial for serving both the data center industry, which plays a vital role in the County's economy, and the residents who call Loudoun County home. This pilot program represents a significant step towards a more sustainable and visually appealing future for the community.

Additionally, the pilot program will produce data and observational insights that will provide electrical providers with critical technical experience and familiarity with undergrounding high-voltage transmission lines. This is going to be critical for the longterm economic prospects of an expanding data center industry in Virginia.

Finally, the planning component of the County's proposed pilot program will provide greater predictability in infrastructure development and transmission line placement. Certainty and predictability are catalysts for economic growth, and their absence threatens that same growth.

52 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. I am familiar with the data center industry and how it intersects and interacts with
the operations of the County. I am here to provide the County's perspective on
Dominion's proposal and application and offer an alternative that the County believes
will meet everyone's needs.

57 **Q.**

WHAT IS THE BASIS OF YOUR KNOWLEDGE FOR YOUR TESTIMONY?

A. I have proudly served Loudoun County for more than 17 years, during which I
have envisioned and promoted the meteoric rise of data centers in the County and the
consequent expansion of electrical infrastructure needed to support them. Further, I
actively participated in the development of the Loudoun County 2019 Comprehensive
Plan and am charged with ensuring its successful implementation. My experience has
given me a deep understanding of the balance between fostering economic growth and
preserving the unique character of the community.

65

II. TESTIMONY

66 Q. CAN YOU PROVIDE AN OVERVIEW OF THE GROWTH OF THE DATA 67 CENTER INDUSTRY IN VIRGINIA OVER THE LAST DECADE?

Loudoun County began proactively attracting data centers in 2008 as a targeted 68 A. 69 industry, and by 2016, Northern Virginia became the largest data center market in the 70 world. We created a strategic plan to capitalize on the digital infrastructure that came to 71 be starting with the relocation of AOL to Loudoun in 1997 and relocation of the MAE-72 East internet hub shortly after. In 2009, the General Assembly first enacted sales tax 73 exemptions on computer equipment designed to incentivize data centers to locate in the 74 state. These incentives have expanded over the last sixteen years, and in 2022 the General 75 Assembly extended robust tax exemptions out to 2040 and beyond for projects that commit to a certain threshold of capital investment and job creation. In 2023, data centers
in Virginia supported over 75,000 jobs and \$31.4 billion dollars in economic output. Over
the last 15 years, over 40 million square feet of data centers have been built in Loudoun
County alone, with 4 million additional square feet currently under development.
Loudoun is known world-wide as "Data Center Alley", due to the concentration of
critical digital infrastructure, particularly in Ashburn.

Q. YOU SAY LOUDOUN IS CALLED "DATA CENTER ALLEY." COULD YOU EXPLAIN WHY THIS COUNTY HAS BECOME SUCH A FOCAL POINT FOR DATA CENTER DEVELOPMENT?

85 Loudoun was one of the first jurisdictions in the country to proactively target data Α. 86 centers as a targeted industry. When I arrived in Loudoun, only 19 percent of our tax base 87 was commercial. Loudoun Economic Development identified data centers as a great opportunity to grow the commercial tax base without a significant drain on county 88 89 infrastructure, such as schools and roads. We created programming to support a fast and 90 predictable time to market. Because there was already a history of technology in the 91 County, starting with AOL but also including Equinix, Dupont Fabros, UUNet, 92 MCI/WorldCom and others, we were able to get traction fairly quickly. The County 93 worked with the industry and members of the General Assembly to offer one of the first 94 sales tax incentives for data centers, and while that incentive remains effective, more than 95 30 states now offer a similar incentive program. Northern Virginia continues to be 96 perhaps the most important data center market in the world, given its close proximity to 97 Washington D.C., where many major customers of data centers have a large presence.

98 Northern Virginia also has a dense and expanding fiber infrastructure; a well-educated
99 and skilled workforce; and, historically, relatively low power cost rates.

100 Q. HOW MANY DATA CENTERS ARE CURRENTLY OPERATIONAL IN 101 LOUDOUN COUNTY?

- 102A.It is challenging to talk about data centers in terms of numbers. If the question is103about number of buildings, there are nearly 200 data centers in Loudoun, which house104over 3,500 technology companies. A better measurement is square feet, where we105currently have about 40 million square feet of data centers with another 4 million square106feet in some stage of development.
- 107 Q. HOW MANY ARE PLANNED FOR THE NEAR FUTURE?
- A. As I mentioned, there is about 4 million square feet in development with another 8 10
 million square feet likely beyond that.

110 Q. WHAT EFFECTS DOES THIS CONTINUED GROWTH HAVE ON THE 111 COUNTY?

112 The growth of the data center industry has completely transformed our economy, A. 113 from being 81 percent dependent on residential taxes for government operations to about 114 51 percent today. Revenue from data centers have allowed Loudoun to lower the real 115 estate tax rate by 42 cents, per \$100 of assessed value, over the last 15 years while 116 allowing for increased spending on roads, schools, county services and education. Data 117 centers represent a significant impact on the County's tax revenues and provides for over 118 12,000 jobs in Loudoun. Data centers have also accelerated the formation of other 119 businesses throughout Northern Virginia. The growth has also impacted infrastructure 120 needs, most significantly the demand for electrical infrastructure. Electrical demand in the area has grown exponentially, right alongside the number of data centers. According
to the U.S. Department of Energy, a single data center consumes anywhere from 10 to 50
times the energy per floor space of a typical commercial office building. Collectively,
data centers account for almost 2% of electricity use in the United States.

It has been estimated that 70% of global internet traffic goes through "Data Center Alley," and the internet does not have set hours. These facilities are running 24 hours a day, seven days a week. A recent report from PJM Interconnection, the entity that coordinates electricity transmission throughout the mid-Atlantic, projects that demand growth for electricity in Virginia will more than double peak load by 2040. This unprecedented demand will require major infrastructure updates and construction of new substations and transition lines to accommodate.

132 Q. WHAT ARE THE CURRENT PLANS FOR THE CONSTRUCTION OF THESE133 LINES?

A. The PJM Board of Managers approved a set of proposed projects to expand the regional transmission system to accommodate demand growth, specifically tied to the impacts of new data centers, in December of last year. In early August, PJM approved a route that proposed to use existing rights-of-way that cut across the tip of Loudoun toward Maryland and then swing south toward Leesburg. The majority of that project will be undertaken by First Energy with portions built by Dominion and Exelon.

140 Q. WHAT IS THE PUBLIC SENTIMENT ON THESE PROPOSALS?

A. The citizens of Loudoun County are expressing significant concern about the
impact that further above-ground transmission lines will have on their community. With
hundreds of miles of these lines already crisscrossing the County, citizens are hoping for

144 a thoughtful approach to future development. Numerous comments from the community 145 reflect a growing movement to explore alternatives to traditional transmission lines. 146 Organizations such as the Lansdowne Conservancy, Waterford Foundation, Loudoun 147 Transmission Line Alliance, and Piedmont Environmental Council have organized public 148 meetings to oppose these proposals, driven by a strong desire to prevent overhead 149 transmission lines from dominating the landscape and causing irreparable harm to 150 historic, economic, and natural resources in Loudoun. The community opposition was 151 key in PJM's decision to approve an alternate route for delivery.

152 Q. WHAT MEASURES CAN BE TAKEN TO PROTECT LOUDOUN COUNTY'S

153 SCENIC ASSETS FROM THE IMPACT OF HIGH-VOLTAGE POWER LINES?

154 Where appropriate and feasible, undergrounding may provide a reliable and long-A. 155 lasting energy transmission solution that is less prone to outages with minimal disruption 156 to the look and feel of the community at large. This approach will preserve the landscape 157 for current and future residents and maintain the history and beauty of the County. 158 Additionally, it supports a reliable and sustainable path forward as Virginia works to 159 meet its energy production and transmission goals. By placing power lines underground, 160 impact to scenic assets can be minimized while ensuring a resilient and efficient power 161 infrastructure.

162 Q. WHAT ARE THE MAIN OBSTACLES TO MORE FREQUENT AND 163 SYSTEMATIC UNDERGROUNDING OF TRANSMISSION LINES?

A. Electrical companies cite the excess costs associated with undergrounding, as well as feasibility issues, including a real or perceived lack of comparable projects and familiarity with the technologies necessary to achieve underground placement.

167 Dominion has cited both cost and a lack of comparable projects as grounds for its 168 decision not to consider undergrounding the projects the Commission is considering 169 today.

170 Q. HOW DOES THE COUNTY'S PROPOSED PILOT PROGRAM SEEK TO 171 ADDRESS THESE OBSTACLES?

A. Regarding the shortage of comparable projects, the County proposes the identification of between three (3) and five (5) pilot projects which will provide the comparable projects needed to develop standards and familiarity with requisite technologies. In the County's opinion, the underground project the County proposes in this case would make an ideal first project in that cohort.

177 As for the excess cost, the County believes that a special customer class, made up 178 of high-wattage customers, would be proper for the Commission to consider. The 179 increase in electrical demand can be directly traced to the connection of an identifiable 180 class of such high-wattage users to the grid. It is in the public interest for the 181 Commission to shift the cost of undergrounding some of these lines to the high-wattage 182 customers creating the demand for them. The electrical providers have proven unwilling 183 to adopt undergrounding at the rate needed to prevent irreparable damage to community 184 assets, scenic, cultural, and historical.

185 Q. WHY IS IT IMPORTANT FOR LOUDOUN COUNTY TO INVEST IN THE

186 RESEARCH AND DEVELOPMENT OF NEW UNDERGROUNDING 187 TECHNOLOGIES FOR POWER TRANSMISSION?

188 A. There is a compelling need to further explore and learn about new189 undergrounding technologies to drive down costs and expand our knowledge base.

190 Advancements in underground power transmission can significantly reduce the financial 191 barriers that currently limit the widespread adoption of this approach. By investing in 192 research and development, we can discover more cost-effective methods and materials, 193 making undergrounding a more feasible option for protecting our scenic, cultural, and 194 historic assets. Additionally, expanding our understanding of these technologies will 195 enable us to implement best practices to ensure that our infrastructure is not only reliable 196 and resilient but also aligned with the community's commitment to a sustainable future. 197 Embracing innovation in energy generation, storage, usage and delivery technologies will 198 position us at the forefront of sustainable and aesthetically considerate power solutions, 199 without a prohibitive increase in power costs landing on the average consumers' 200 shoulders.

201 Q. DO YOU HAVE ANYTHING FURTHER TO ADD?

A. Not at this time.

203 Q. THANK YOU, MR. RIZER.